United States Department of Agriculture

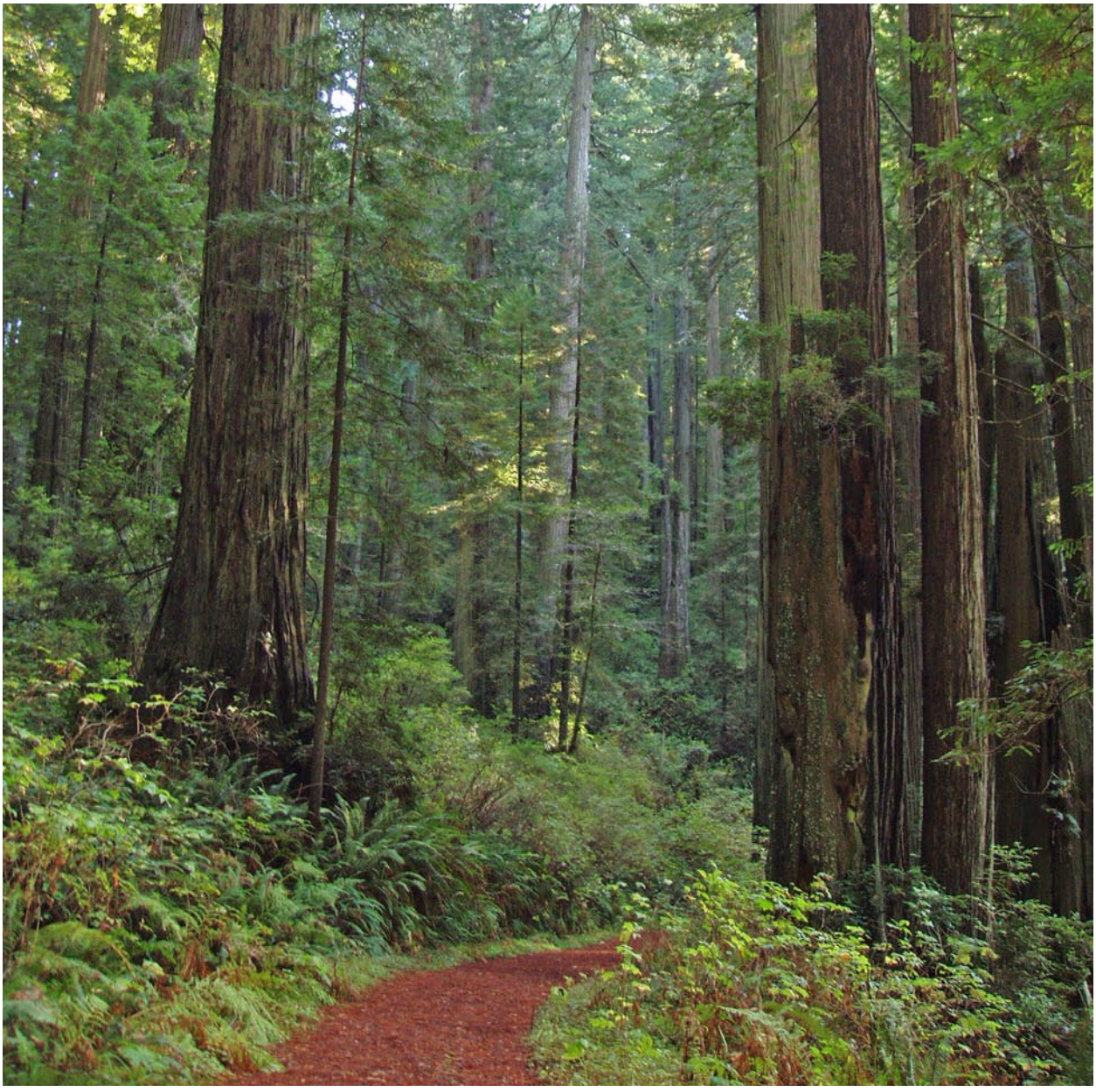
Natural Resources Conservation Service

United States Department of the Interior

National Park Service

In cooperation with California Department of Parks and Recreation; California Department of Forestry; Humboldt State University; and United States Department of the Interior, Bureau of Land Management

Soil Survey of Redwood National and State Parks, California



How To Use This Soil Survey

General Soil Maps

The general soil maps, which are color maps, show the survey area divided into groups of associated soils called general soil map units. These maps are useful in planning the use and management of large areas.

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

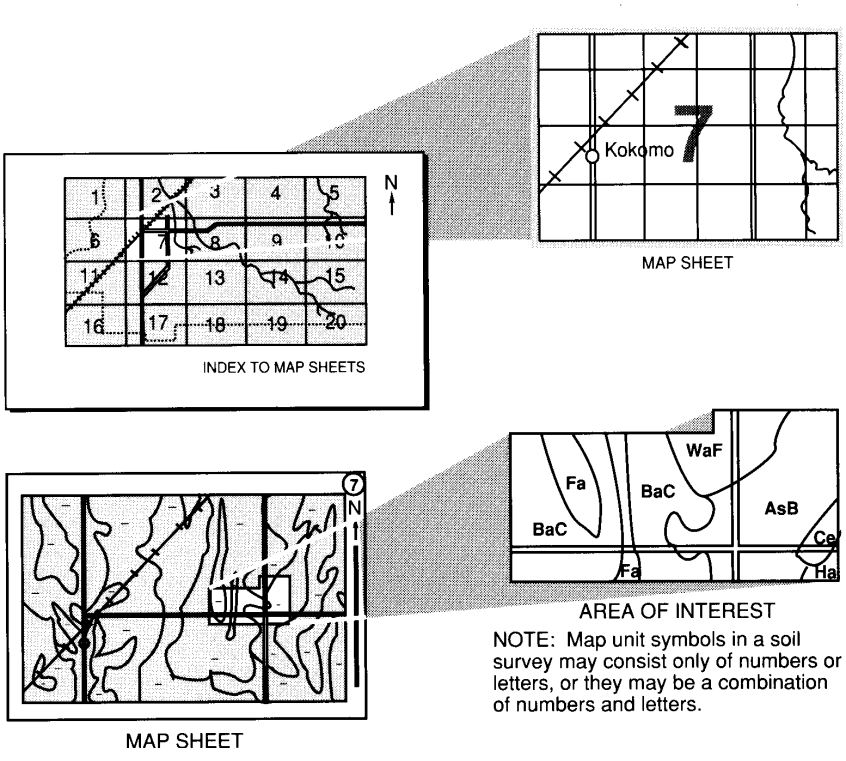
Detailed Soil Maps

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

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

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

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



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

National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the California Department of Parks and Recreation; the California Department of Forestry; Humboldt State University; and the United States Department of the Interior, National Park Service and Bureau of Land Management. The survey is part of the technical assistance furnished to the Redwood National and State Parks.

Major fieldwork for this soil survey was completed in 2005. Soil names and descriptions were approved in 2006. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2005. The most current official data are available on the Internet.

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.

Nondiscrimination Statement

Citation

The correct citation for this survey is as follows:

United States Department of Agriculture, Natural Resources Conservation Service. 2008. Soil Survey of Redwood National and State Parks, California. Accessible online at: http://soils.usda.gov/survey/printed_surveys/.

Cover Caption

Redwood forest in Del Norte Coast Redwoods State Park, which is along the coastal trail (old Highway 101). This is an area of Sasquatch-Sisterrocks-Ladybird complex, 30 to 50 percent slopes.

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

Contents

Issued June 2008

Foreword

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

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

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

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

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

Lincoln E. Burton
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Soil Survey of
Redwood National and State Parks, California

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United States Department of Agriculture,
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General Nature of the Survey Area

This section provides general information about the survey area. It describes history and settlement; physiography, relief, drainage; and climate.

The survey area consists of the Redwood National and State Parks and the Lower Park Protection Zone (fig. 1). The Redwood National and State Parks are comprised of five units: Redwood National Park, established in 1968 and expanded in 1978; Prairie Creek Redwoods State Park, established in 1923; Del Norte Coast Redwoods State Park, established in 1925; Jedediah Smith Redwoods State Park, established in 1929; and the Mill Creek and Rock Creek watershed, acquired in 2003. The Lower Park Protection Zone consists of private lands where the landowners have entered into partnership with the National Park Service to minimize erosion and stream sedimentation. The Lower Park Protection Zone was established in 2001.

The survey area is along the coast in the northwestern part of California (fig. 2). The area is bounded on the west by the Pacific Ocean, on the north by the Smith River and private land, on the east by Six Rivers National Forest and private land in Humboldt and Del Norte Counties, and on the south by private land in Humboldt County. The survey area is approximately 161,933 acres. It is 60 miles in length and varies from 0.5 to 8 miles in width. Elevation ranges from sea level along Gold Bluffs beach to 3,262 feet (994 meters) at an unnamed summit south of Coyote Peak.

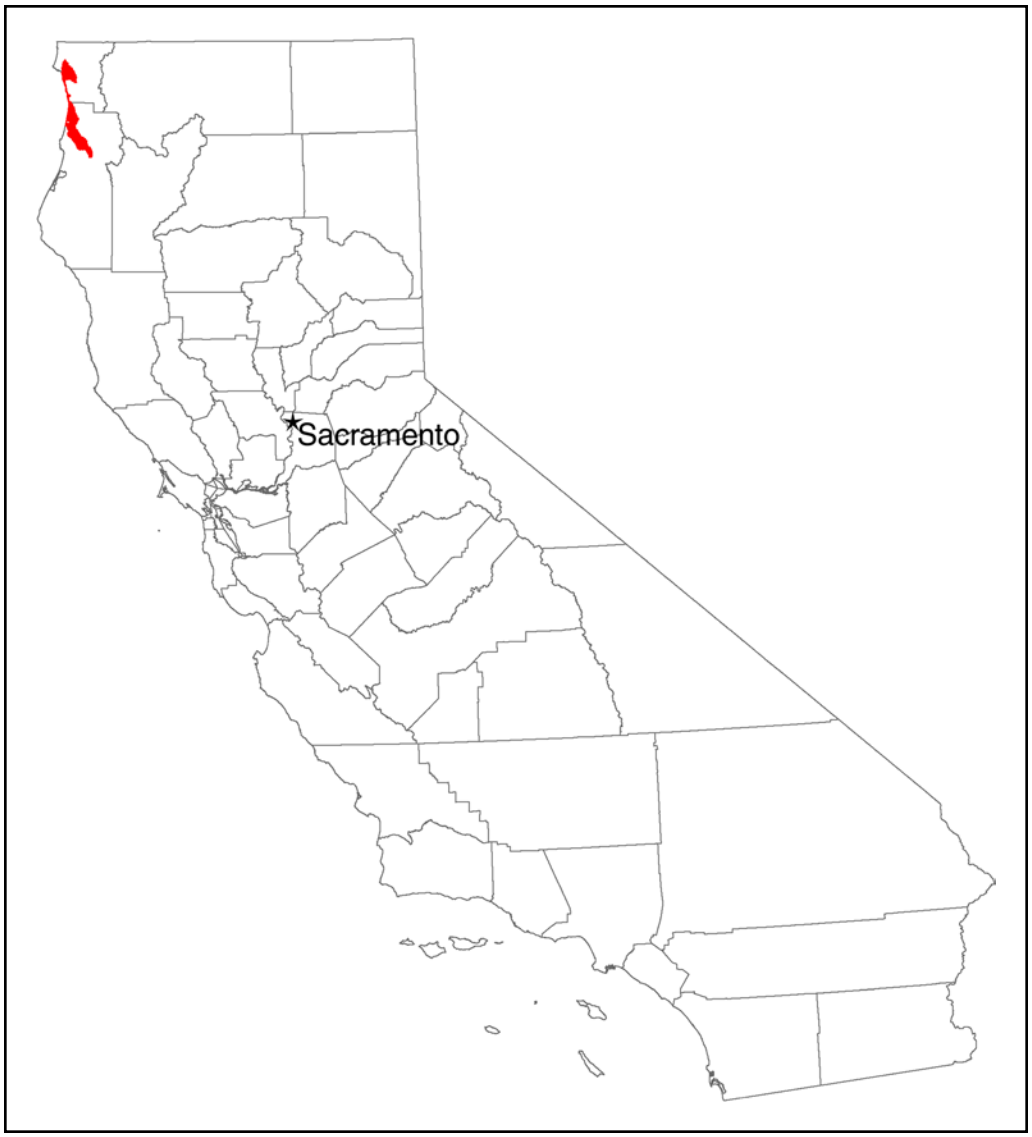

Figure 1.—Location of the survey area in California.

The coastal town of Crescent City is the largest community adjacent to the survey area. Crescent City is home to the Redwood National Park Headquarters. The population of the city was approximately 4,000 in 2000.

Most of the survey area consists of strongly sloping to very steep mountains that are used for watershed, wildlife habitat, and recreation. Past land uses in the mountainous areas included timber production and livestock grazing. The southern coastal areas, near the town of Orick, consist of nearly level to moderately steep, nonmarine and marine terraces that are also used for watershed, wildlife habitat, and recreation. Past land uses in the coastal areas also included timber production and livestock grazing.

Previous soil surveys, inventories, and studies have been published regarding portions of the survey area. This survey maps all lands within the current boundaries of the parks and associated areas using contemporary standards of the National Cooperative Soil Survey (Soil Survey Staff, 2001).

The first soil survey in northwestern California was by Watson, Cosby, and Smith (1925) and covered the Eureka area. Although fragmentary by modern standards, the

Figure 2.—View of the rugged coastline near False Klamath Cove and the Pacific Ocean. Pictured are areas of Sisterrocks-Sasquatch-Houda complex, 30 to 75 percent slopes, dominated by Sitka spruce and red alder; Flintrock-Highprairie complex, 15 to 75 percent slopes, dominated by coastal scrub and prairie; and on ridges farther inland, areas of Sasquatch-Yeti-Footstep complex, 5 to 30 percent slopes, covered by redwood and Douglas-fir.

soil descriptions are adequate for the recognition of series concepts based on major diagnostic horizons and particle-size classes. The map units adequately characterize typical conditions, variability, and inclusions.

The “California Cooperative Soil-Vegetation Survey” (Alexander and others, 1952–1978) mapped the upland soils of northwestern California on the basis of USGS quadrangles. This survey remains a primary source of soil information for most lands within the parks and associated lands of interest. The “Soils of Coastal Del Norte County, California” (McLaughlin and Harradine, 1966) and “Soils of Western Humboldt County, California” (McLaughlin and Harradine, 1965) effectively describe the soils, map units, and taxonomic units in a standard format for alluvial and terrace soils in the investigated areas.

In addition to the previous soil surveys and inventories, several specialized studies provide pertinent background data for this publication. Investigations in the Redwood Creek Basin, Redwood National Park, Bald Hills prairies, and Bond Creek subbasin have included determinations of clay mineralogy and particle-size distribution, studies of soil properties related to specific serial vegetation interpretations, and laboratory characterizations of soil properties (Winzler and Kelly, 1975; Ficklin, Harward, and Youngblood, 1977; Durgin and Tackett, 1981; Gordon, 1980; Hauxwell, Bulkin, and Hanson, 1981; Muldavin and others, 1981; Marron, 1982; Popenoe, 1982; Veirs, 1982; Begg and others, 1984; Marron, 1985; Popenoe, 1985; Marron and Popenoe, 1986; Popenoe, 1987; Popenoe, 1990; Popenoe and others, 1992; and Popenoe, 1998). Relevant independent studies and National Park Service studies began around 1975 and continue today.

History and Settlement

The archeological pattern of pre-European settlement in the survey area indicates a record of approximately 4,500 years of continuous habitation. From 4,500 y.b.p. (years before present) to 2,800 y.b.p., cultural practices consisted mainly of hunting and gathering by small, highly mobile family groups. The primarily food sources were deer, elk, small game, and acorns and other edible seeds. From 2,800 y.b.p. to 1,100 y.b.p. increased population and migration from other areas, primarily the Pacific Northwest, led to the development of new food-storage technology, which allowed for the development of more permanent village sites near salmon bearing streams and near harvestable seed crops, such as acorns. From 1,100 years y.b.p. to the time of European contact in the early 1800s, numerous permanent tribal settlements were located in the coastal zone and along low-elevation waterways. There was an extensive trade network among coastal villages and inland regions through the rugged, densely forested interior (USDI, 1999).

Prior to European contact, the uplands, streams, and coastal areas were important fishing, hunting, and gathering areas for the Yurok, Tolowa, Chilula, and others. Principal settlements were along the coast, coastal lagoons, rivers, creeks, and major ridges.

In 1579, English explorer Francis Drake may have been the first European to look upon the Humboldt Coast. There is, however, no evidence that Drake and his crew came ashore. The Spanish made other sea expeditions to the Humboldt coast in the late 1700s. In 1775, Juan Francisco de la Bodega y Quadra claimed the port of Trinidad. Around 1800, trade in sea otter furs attracted American, Russian, and British explorers. The fur trade led to an American effort to chart Humboldt Bay in 1806 (USDI, 1999).

In 1828, Jedediah Smith led the first successful overland expedition to the rugged, densely forested mountains of northwestern California. The expedition made its way to the coast near the area that would become Crescent City before heading north. In 1848, gold was discovered by Major Pierson B. Redding in the upper Trinity basin. The discovery triggered the north-coast gold rush, which resulted in a mass migration of miners and traders to the area. Crescent City, Eureka, Arcata, and other smaller communities were established as supply centers for gold miners. Farmers and ranchers soon followed. Dairy farms and commercial fisheries were established in the late 1800s. The timber industry was established around the turn of the century. It became the main means of economic sustenance and growth until the 1970s (USDI, 1999).

Physiography, Relief, and Drainage

The survey area is primarily in the California Coast Range. The area consists of tectonically active, steep and very steep, northwest-trending mountains and hills. The intricately dissected drainage basins are characterized by high relief, steep and very steep, unstable mountain slopes and hillslopes. The basins comprise about 90 percent of the survey area and are composed primarily of sandstone, mudstone, and schist of the Franciscan assemblage and weakly consolidated marine and fluvial sediments of the Prairie Creek Formation. Narrow valleys are between mountain ridges and hillcrests. The valley floors are recent alluvium.

Numerous nearly level, marine and nonmarine terraces, beaches, secluded coves, lagoons, and vertical cliffs characterize the near-coast portion of the survey area.

Much of the survey area is located along the lower, downstream sections of the Klamath River, Smith River, and Redwood Creek and their tributaries (fig. 3). The steep and very steep forested uplands in the area receive large amounts of winter precipitation, primarily as rain. The large amounts of winter precipitation, tectonically active landscape with numerous major faults (Grogan, Lost Man, South Fork Mountain,

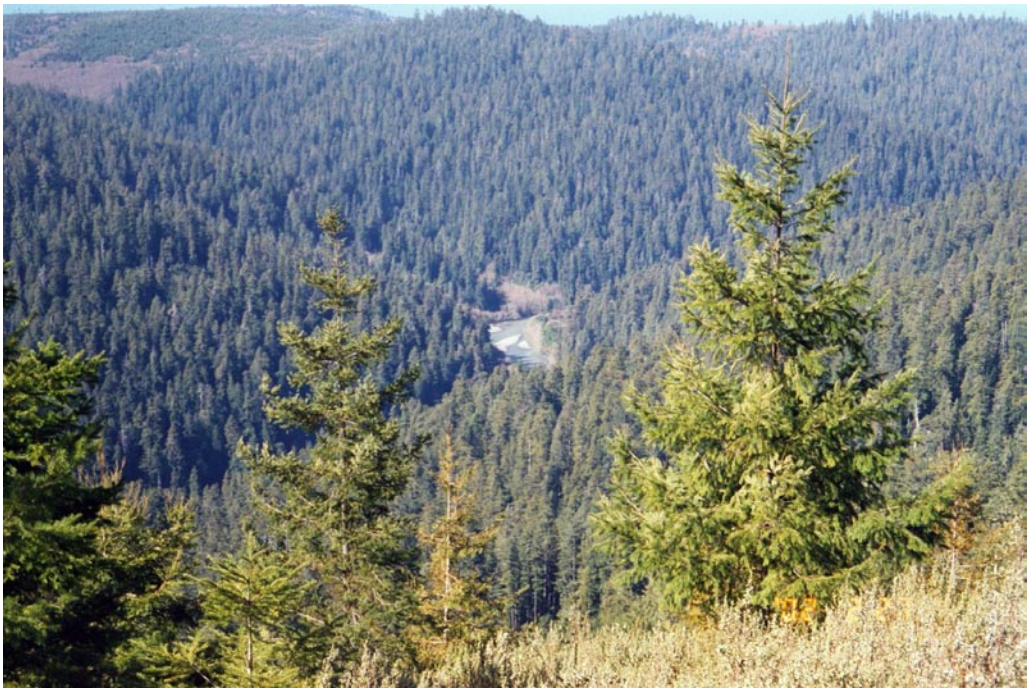

Figure 3.—Strongly sloping areas covered by redwood and Douglas-fir. Such areas dominate the landscape throughout the Redwood Creek watershed. Pictured are areas of Coppercreek-Slidecreek-Lackscreek complex, 30 to 50 percent slopes, which are underlain by sandstone and mudstone (to the right of Redwood Creek); Coppercreek-Ahpah-Lackscreek complex, 30 to 50 percent slopes and Trailhead, 15 to 30 percent slopes, which are underlain by schist (to the left of Redwood Creek); and areas of Surpur, 2 to 9 percent slopes, on uplifted marine terraces (in background).

and Coastal thrust), steep terrain, and medium textured soils are major contributing factors to high erosion rates (Weaver, Kelsey, and Madej, 1979; Harden and others, 1982).

A very small portion of the survey area is in the Klamath Mountains. The area is made up of very steep mountain ridges composed of metamorphosed sedimentary, ultramafic, and mafic rocks.

Climate

Mild temperatures, rainy winters, and nearly rainless but foggy summers characterize the climate of the survey area. The Pacific Ocean produces a moderating effect, which diminishes eastward. The more inland areas, therefore, have colder winters and warmer summers. Marine fog is common in coastal areas, especially during the nearly rainless summer. The fog frequently moves inland up river and creek drainages (fig. 4) in the evening but usually burns off by midday. Fog reduces moisture stress on vegetation to the extent that fog drip may be an important source of water for redwood trees during the dry summer months.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Orick Prairie Creek Redwoods State Park and Crescent City in the period 1948 to 2004. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring.

In Prairie Creek Redwoods State Park, the average winter (December, January, and February) temperature is 45 degrees F and the average daily minimum winter temperature is 37 degrees F. The lowest temperature on record, which occurred on November 11, 2002, is 2 degrees F. In summer (June, July, and August), the average

Figure 4.—Coastal fog in the Redwood Creek watershed. Pictured are areas of Pasturerock-Coyoterock-Maneze complex, 30 to 50 percent slopes, dominated by oak woodlands; Dolason-Countshill-Airstrip complex, 9 to 30 percent slopes, dominated by prairie; Dolason-Countshill-Airstrip complex, 9 to 30 percent slopes, dominated by Douglas-fir invaded prairie; and Coppercreek-Slidecreek-Lackscreek complex, 30 to 50 percent slopes, covered by Douglas-fir and redwood.

temperature is 58 degrees F and the average daily maximum temperature is 68 degrees F. The highest recorded temperature, which occurred on June 6, 196, is 99 degrees F.

In Prairie Creek Redwoods State Park, the total annual precipitation is about 67.5 inches. Of this, 11.7 inches, or 17 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 0.3 inch. The heaviest 1-day rainfall during the period of record was 11.5 inches on October 25, 1950. Thunderstorms occur on about 4 days each year and are most common from November through February.

In Crescent City, the average winter (December, January, and February) temperature is 48 degrees F and the average daily minimum winter temperature is 41 degrees F. In summer (June, July, and August), the average temperature is 58 degrees F and the average daily maximum temperature is 65 degrees F. The total annual precipitation is about 66 inches.

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

Snowfall is rare throughout the survey area. In 90 percent of the winters, there is no measurable snowfall. In 10 percent, the snowfall, usually of short duration, is more than 0.5 inch. The heaviest 1-day snowfall on record was more than 6.5 inches.

The average relative humidity in midafternoon is about 65 percent. Humidity is higher at night, and the average at dawn is about 80 percent. The sun shines 55 percent of the time possible in summer and 43 percent in winter. The prevailing wind at Crescent City is from the south and southeast. Average windspeed is highest, 10.4 miles per hour, in February.

Additional climate information is available at http://www.wrcc.dri.edu/summary.

How This Survey Was Made

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

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

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

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

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are

modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

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

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

This survey area was mapped at two levels of detail. At the more detailed level, map units are narrowly defined. Map unit boundaries were plotted and verified at closely spaced intervals. At the less detailed level, map units are broadly defined. Boundaries were plotted and verified at wider intervals.

General Soil Map Units

The general soil maps in this publication show broad areas that have a distinctive pattern of soils, relief, and drainage. The map units on the general soil maps are unique natural landscapes. Typically, they consist of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. They are named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map cans be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the maps. Likewise, areas where the soils are not suitable can be identified.

Because of their small scale, the maps are not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

Included in this section are block diagrams showing the distribution of general soil map units by watershed. Figure 5 is an index map showing the location and viewing angles of the diagrams.

Udic Soils on Hills, Beaches, and Dunes

1. Sisterrocks-Sasquatch-Samoa, very deep, nearly level to very steep (fig. 6)

Very deep, nearly level to very steep, well drained and somewhat excessively drained soils that have little seasonal fluctuation in soil temperature; that formed in residuum and colluvium derived from sandstone, mudstone, and marine sand on hillslopes, ridges, beaches, and dunes adjacent to the ocean; and that have a very strong influence from coastal fog

This map unit is on hillslopes, ridges, beaches, and dunes along the immediate coast from directly south of Orick to Crescent City. The vegetation is mainly Sitka spruce, red alder, western hemlock, and Douglas-fir with an understory dominated by deciduous shrubs or ferns or coastal grasses, forbs, and shrubs. Elevation ranges from sea level to 970 feet (0 to 295 meters). The average annual precipitation is 35 to 90 inches (89 to 2,300 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 250 to 365 days. A strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 2 percent of the survey area. It is about 25 percent Sisterrocks and similar soils, 15 percent Sasquatch and similar soils, 15 percent Samoa and similar soils, and 45 percent soils of minor extent.

The Sisterrocks soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is very gravelly clay loam or very gravelly loam. The

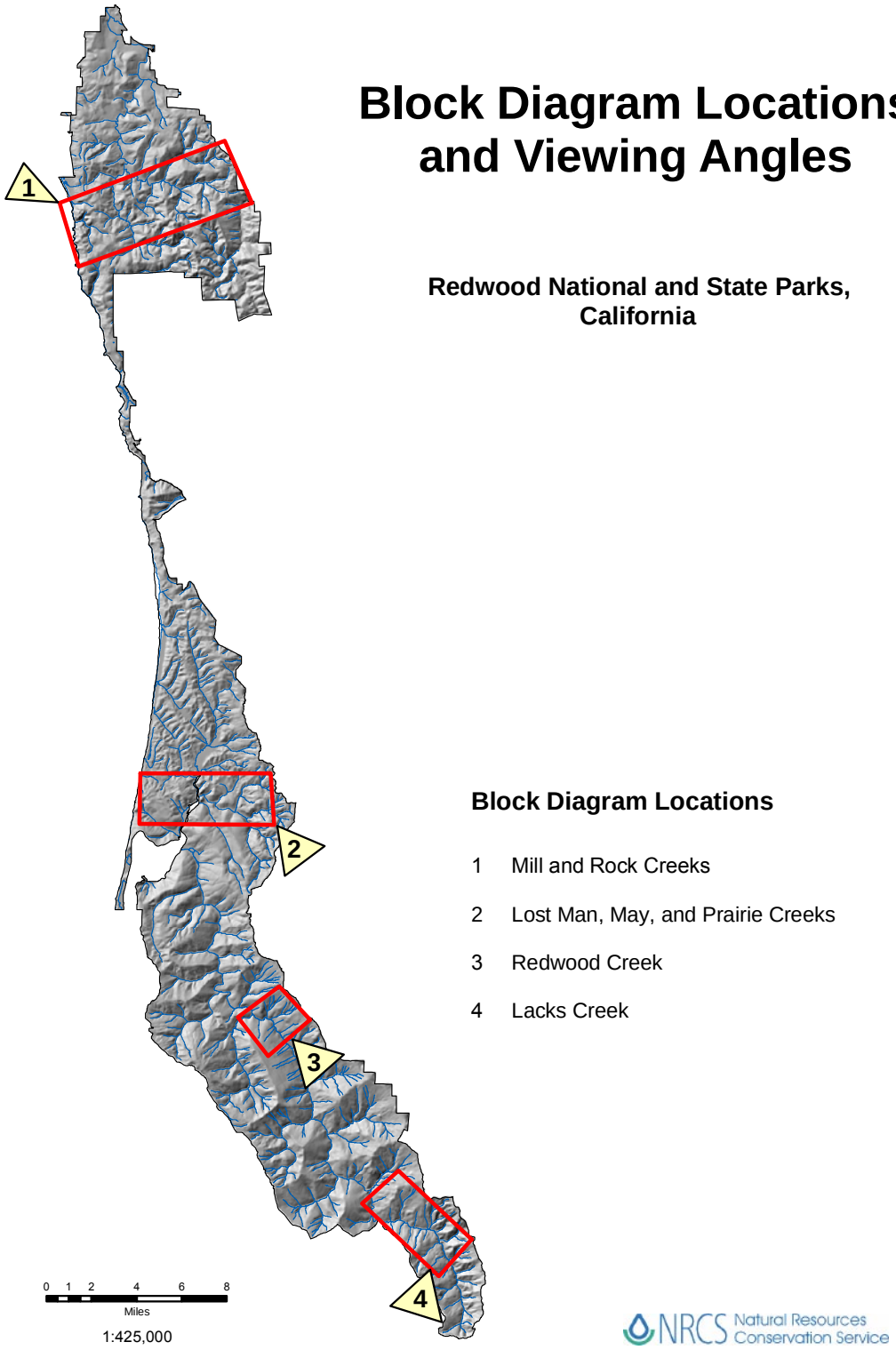

Figure 5.—Locations and viewing angles of the block diagrams.

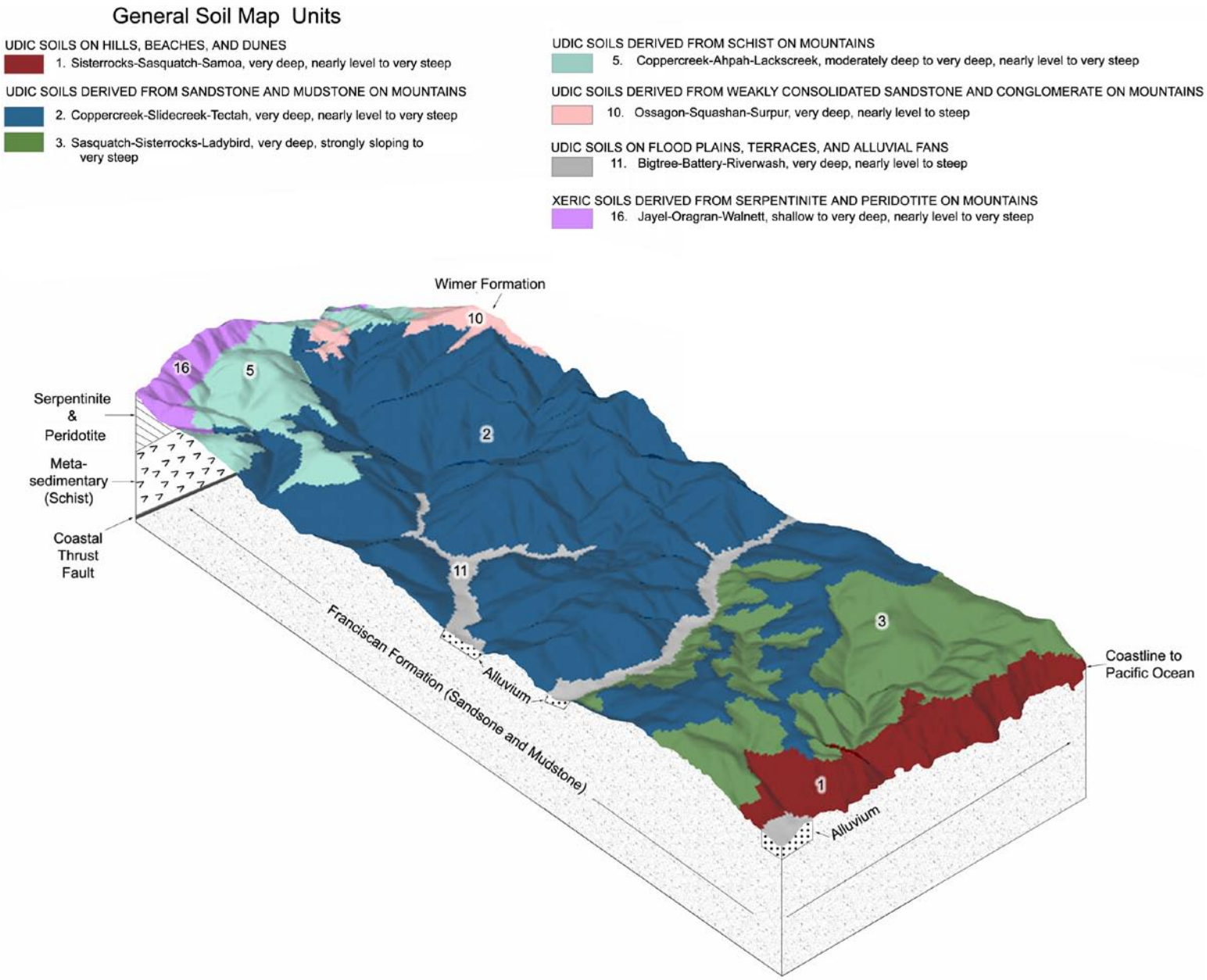

Figure 6.—Block diagram 1. Generalized pattern of soil distribution and conceptualized geology in the Mill Creek and Rock Creek watersheds viewed from the Pacific Ocean southeast towards Childs Hill and Rattlesnake Mountain.

substratum is very gravelly loam or very gravelly clay loam. Slopes range from 15 to 75 percent.

The Sasquatch soils are very deep and well drained. Typically, the surface layer is loam. The subsoil is clay loam or gravelly clay loam. Slopes range from 15 to 75 percent.

The Samoa soils are very deep and somewhat excessively drained. Typically, the surface layer is sand. The subsoil is gravelly sand. The substratum is gravelly sand or sand. Slopes range from 0 to 50 percent.

Of minor extent in this unit are Clambeach, Flintrock, Highprairie, Houda, and Yeti soils. Also included are areas of Beaches, Dune lands, and rock outcrop.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

Udic Soils Derived from Sandstone and Mudstone on Mountains

2. Coppercreek-Slidecreek-Tectah, very deep, nearly level to very steep

Very deep, nearly level to very steep, well drained soils that have little seasonal fluctuation in soil temperature and that formed in residuum and colluvium derived from sandstone and mudstone; on mountain slopes and ridges

This map unit is on mountain slopes and ridges east of Redwood Creek and within the Lost Man, Mill, and Rock Creek watersheds. The vegetation is mainly redwood, Douglas-fir, western hemlock, red alder, and tanoak with an understory dominated by evergreen shrubs. Elevation ranges from 65 to 2,410 feet (20 to 735 meters). The average annual precipitation is 70 to 100 inches (1,780 to 2,540 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 240 to 290 days. A moderately strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 20 percent of the survey area. It is about 40 percent Coppercreek and similar soils, 30 percent Slidecreek and similar soils, 15 percent Tectah and similar soils, and 15 percent soils and miscellaneous areas of minor extent.

The Coppercreek soils are very deep and well drained. Typically, the surface layer is loam. The subsoil is gravelly clay loam. The substratum is very gravelly clay loam. Slopes range from 0 to 75 percent.

The Slidecreek soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is very gravelly clay loam. The substratum is extremely gravelly clay loam. Slopes range from 9 to 75 percent.

The Tectah soils are very deep and well drained. Typically, the surface layer is clay loam. The subsoil is clay loam or clay. Slopes range from 0 to 50 percent.

Of minor extent in this unit are Ahpah, Atwell, Lackscreek, and Trailhead soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

3. Sasquatch-Sisterrocks-Ladybird, very deep, strongly sloping to very steep (fig. 7)

Very deep, strongly sloping to very steep, well drained soils that have little seasonal fluctuation in soil temperature; that formed in residuum and colluvium derived from sandstone and mudstone on hillslopes, mountain slopes, and ridges; and that have a strong influence from coastal fog

This map unit is on hillslopes, mountain slopes, and ridges along the coast from Orick to Crescent City. The vegetation is mainly redwood, Sitka spruce, western hemlock, Douglas-fir, red alder, and tanoak with an understory dominated by deciduous shrubs or ferns. Elevation ranges from 6 to 1,725 feet (2 to 525 meters). The average annual precipitation is 65 to 90 inches (1,650 to 2,300 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 250 to 300 days. A strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature. Furthermore, a persistent fog layer reduces evapotranspiration and increases overall soil moisture and plant-available water.

This unit makes up about 11 percent of the survey area. It is about 45 percent Sasquatch and similar soils, 25 percent Sisterrocks and similar soils, 15 Ladybird and similar soils, and 15 percent soils of minor extent.

The Sasquatch soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is gravelly clay loam. The substratum is also gravelly clay loam. Slopes range from 9 to 50 percent.

The Sisterrocks soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is very gravelly clay loam. The texture of the substratum ranges from very gravelly loam to extremely gravelly clay loam. Slopes range from 30 to 75 percent.

The Ladybird soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is gravelly clay loam or gravelly silty clay loam. The substratum is very gravelly loam. Slopes range from 30 to 75 percent.

Of minor extent in this unit are Footstep and Yeti soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

4. Atwell-Coppercreek, very deep, moderately steep and steep

Very deep, moderately steep and steep, moderately well drained and well drained soils that have little seasonal fluctuation in soil temperature and that formed in earthflow colluvium from sheared mudstone and sandstone; on irregular mountain slopes shaped by mass wasting

This map unit is on wet, irregular mountain slopes east of Redwood Creek. The vegetation is mainly redwood, red alder, tanoak, and Douglas-fir. Elevation ranges from 145 to 2,460 feet (45 to 750 meters). The average annual precipitation is 70 to 90 inches (1,780 to 2,300 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 250 to 290 days. A moderately strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 2 percent of the survey area. It is about 50 percent Atwell and similar soils, 35 percent Coppercreek and similar soils, and 15 percent soils and miscellaneous areas of minor extent.

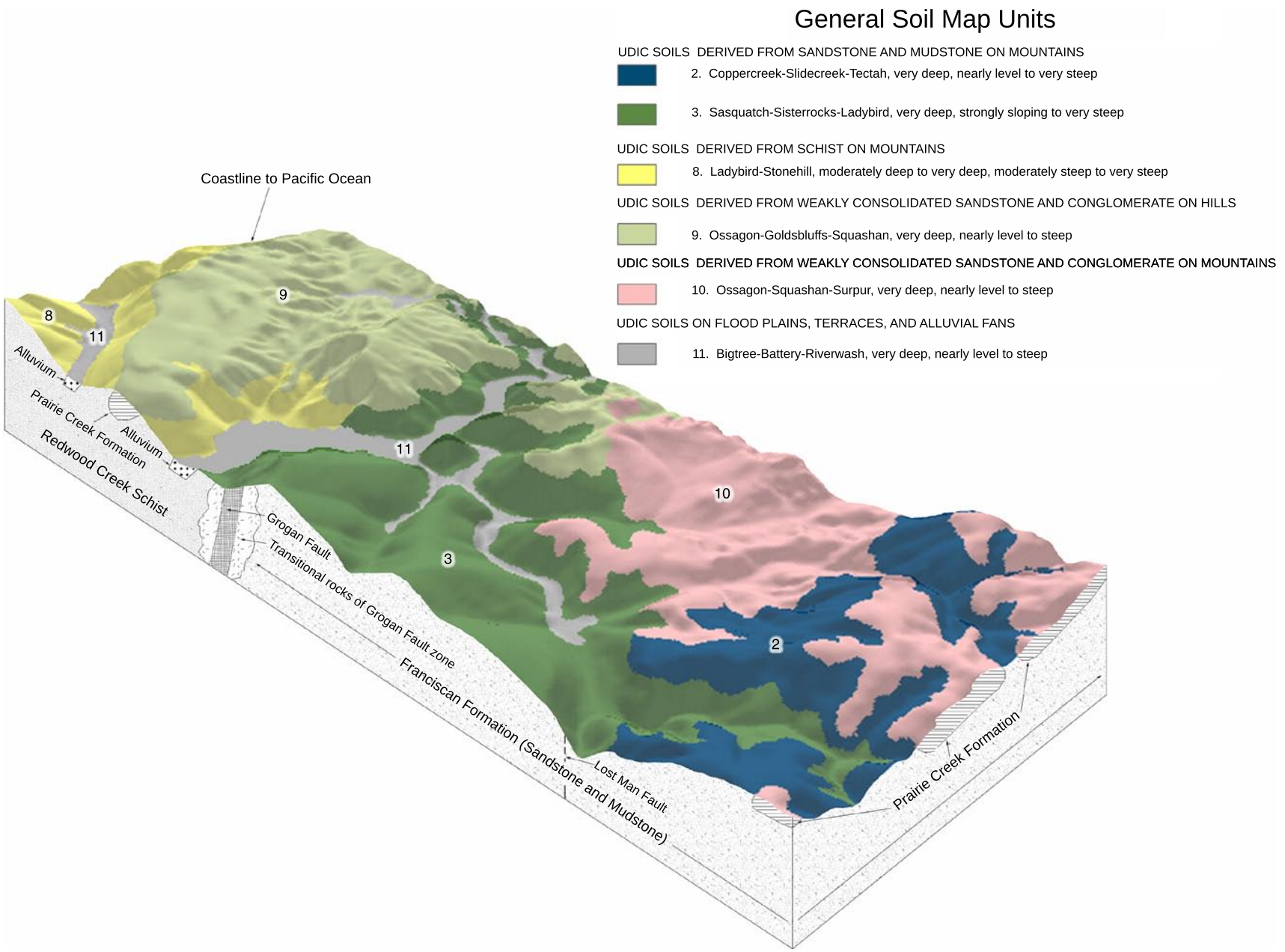

Figure 7.—Block diagram 2. Generalized pattern of soil distribution and conceptualized geology in the Lost Man, May, and Prairie Creek watersheds viewed from Holter Ridge area northwest towards Gold Bluffs beach and the Pacific Ocean.

The Atwell soils are very deep and moderately well drained. Typically, the surface layer is clay loam. The subsoil is gravelly clay loam or gravelly clay. The substratum is gravelly clay. Depth to the seasonal high water table ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 30 to 50 percent.

The Coppercreek soils are very deep and well drained. Typically, the surface layer is loam. The subsoil is clay loam or gravelly clay loam. The substratum is silty clay loam or clay. Slopes range from 30 to 50 percent.

Of minor extent in this unit are Lackscreek, Ladybird, Panthercreek, and Slidecreek soils.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

Udic Soils Derived from Schist on Mountains

5. Coppercreek-Ahpah-Lackscreek, moderately deep to very deep, nearly level to very steep

Moderately deep to very deep, nearly level to very steep, well drained soils that have little seasonal fluctuation in soil temperature and that formed in residuum and colluvium derived from schist; on mountain slopes and ridges

This map unit is on mountain slopes and ridges west of Redwood Creek and within the Mill Creek and Rock Creek watersheds. The vegetation is mainly redwood, Douglas-fir, western hemlock, red alder, and tanoak with an understory dominated by evergreen shrubs. Elevation ranges from 65 to 2,790 feet (20 to 850 meters). The average annual precipitation is 70 to 100 inches (1,780 to 2,540 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 220 to 290 days. A moderately strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 17 percent of the survey area. It is about 40 percent Coppercreek and similar soils, 15 percent Ahpah and similar soils, 15 percent Lackscreek and similar soils, and 30 percent soils and miscellaneous areas of minor extent.

The Coppercreek soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is gravelly clay loam. The substratum is gravelly or very gravelly clay loam. Slopes range from 15 to 75 percent.

The Ahpah soils are moderately deep and well drained. Typically, the surface layer is gravelly clay loam. The subsoil is gravelly loam or gravelly silty clay loam. The substratum is very gravelly loam. Depth to soft bedrock ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 15 to 50 percent.

The Lackscreek soils are moderately deep and well drained. Typically, the surface layer is very gravelly loam. The texture of the subsoil ranges from very gravelly loam to extremely gravelly clay loam. The substratum is very gravelly loam. Depth to hard bedrock ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 30 to 75 percent.

Of minor extent in this unit are Devilscreek, Fortyfour, Pittplace, Rockysaddle, Rodgerpeak, Scaath, Tectah, Trailhead, and Wiregrass soils and Ustic Palehumults. Also included are areas of rock outcrop. Soils on the eastern edge of the Mill Creek and Rock Creek watersheds are slightly warmer and have less maritime influence, which results in decreased soil moisture and plant-available water.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

6. Trailhead, very deep, nearly level to steep

Very deep, nearly level to steep, well drained soils that have little seasonal fluctuation in soil temperature and that formed in residuum and colluvium derived from schist; on broad ridges and upper mountain slopes

This map unit is on upper mountain slopes and broad ridgetops west of Redwood Creek. The vegetation is mainly redwood, Douglas-fir, western hemlock, red alder, and tanoak with an understory dominated by evergreen shrubs. Elevation ranges from 275 to 2,495 feet (85 to 760 meters). The average annual precipitation is 70 to 100 inches (1,780 to 2,540 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 240 to 290 days. A moderately strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 6 percent of the survey area. It is about 75 percent Trailhead and similar soils and 25 percent soils of minor extent.

The Trailhead soils are red, very deep, and well drained. Typically, the surface layer is silty clay loam. The subsoil is silty clay loam or silty clay. Slopes range from 0 to 50 percent.

Of minor extent in this unit are Coppercreek, Fortyfour, Lackscreek, Rockysaddle, Scaath, Tectah, and Wiregrass soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are seasonally saturated soil conditions and low soil strength.

7. Devilscreek-Panthercreek-Coppercreek, very deep, steep and very steep (fig. 8)

Very deep, steep and very steep, moderately well drained and well drained soils that have little seasonal fluctuation in soil temperature and that formed in residuum and earth- and debris-flow colluvium derived from schist; on mountain slopes and recent debris flows

This map unit is on mountain slopes and recent debris flows west of the Redwood Creek watershed. The vegetation is mainly redwood, Douglas-fir, western hemlock, red alder, bigleaf maple, and tanoak with an understory dominated by deciduous shrubs or ferns. Elevation ranges from 65 to 2,410 feet (20 to 735 meters). The average annual precipitation is 70 to 100 inches (1,780 to 2,540 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 240 to 300 days. A moderately strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 4 percent of the survey area. It is about 40 percent Devilscreek and similar soils, 25 percent Panthercreek and similar soils, 15 percent Coppercreek and similar soils, and 20 percent soils and miscellaneous areas of minor extent.

The Devilscreek soils are very deep and moderately well drained. Typically, the surface layer is gravelly loam. The subsoil is cobbly clay loam or gravelly clay loam. The substratum is very gravelly silt loam. Depth to the seasonal high water table ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 30 to 75 percent.

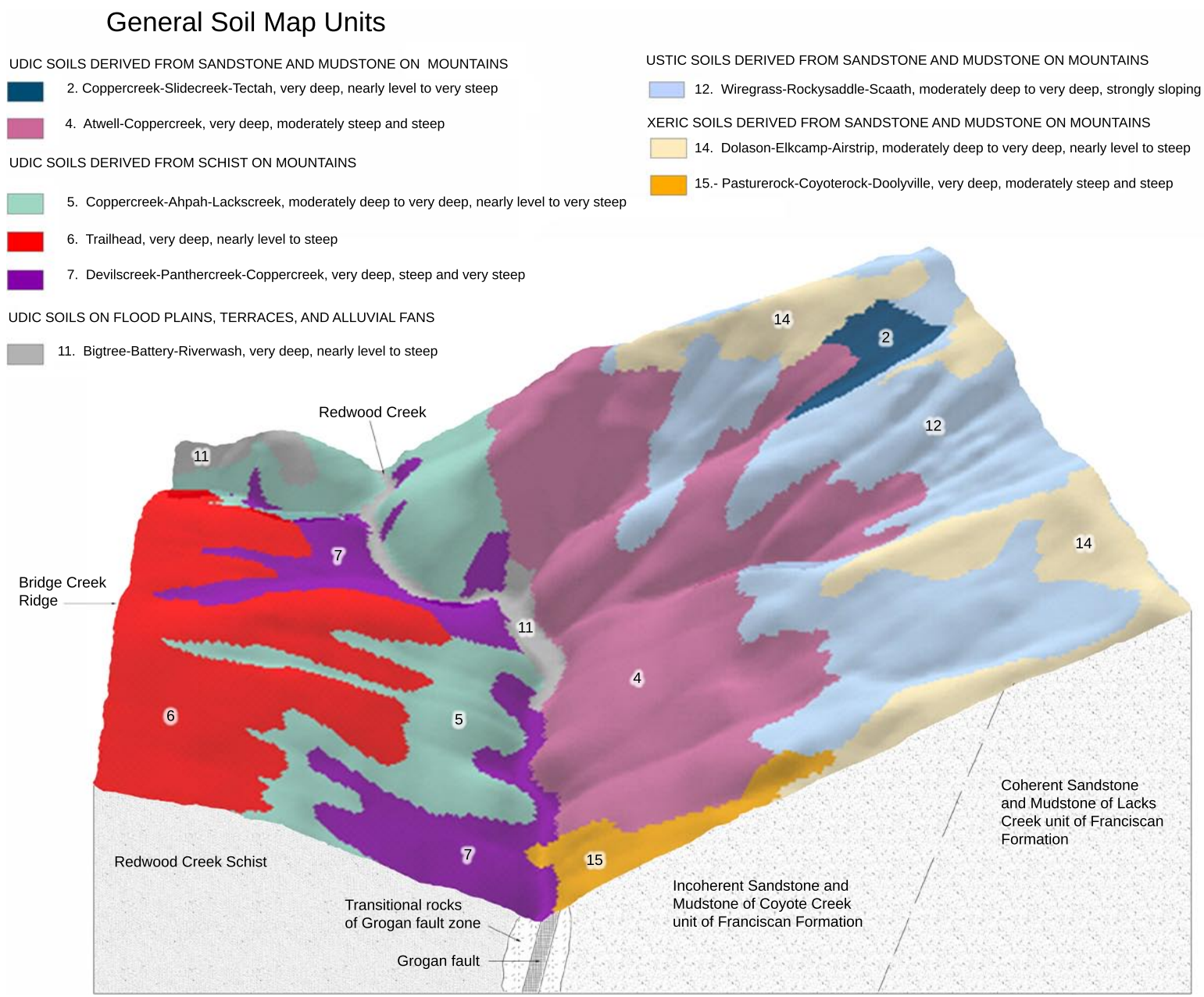

Figure 8.—Block diagram 3. Generalized pattern of soil distribution and conceptualized geology in the Redwood Creek watershed viewed from the Hog Prairie area north towards Harry Weir Creek.

The Panthercreek soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is very gravelly loam or extremely gravelly loam. The substratum is very gravelly loam or very gravelly sandy loam. Slopes range from 30 to 75 percent.

The Coppercreek soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is gravelly clay loam. The substratum is gravelly clay loam or very gravelly clay loam. Slopes range from 30 to 75 percent.

Of minor extent in this unit are Ahpah and Lackscreek soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

8. Ladybird-Stonehill, moderately deep to very deep, moderately steep to very steep

Moderately deep to very deep, moderately steep to very steep, well drained soils that have little seasonal fluctuation in soil temperature, that formed in residuum and colluvium derived from schist, and that have a strong influence from coastal fog; on lower mountain slopes

This map unit is on lower mountain slopes within the lower Redwood Creek basin. The vegetation is mainly redwood, Sitka spruce, western hemlock, Douglas-fir, red alder, and tanoak with an understory dominated by deciduous shrubs or ferns. Elevation ranges from sea level to 1,250 feet (0 to 380 meters). The average annual precipitation is 70 to 85 inches (1,780 to 2,160 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 250 to 300 days. A strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 3 percent of the survey area. It is about 55 percent Ladybird and similar soils, 15 percent Stonehill and similar soils, and 30 percent soils of minor extent.

The Ladybird soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is gravelly clay loam or gravelly silt clay loam. The substratum is very gravelly loam or very gravelly clay loam. Slopes range from 15 to 50 percent.

The Stonehill soils are moderately deep and well drained. Typically, the surface layer is cobbly silt loam. The subsoil is gravelly silty clay loam. Depth to hard bedrock ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 30 to 50 percent.

Of minor extent in this unit are Coppercreek, Devilscreek, Lackscreek, Panthercreek, Sasquatch, and Trailhead soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

Udic Soils Derived from Weakly Consolidated Sandstone and Conglomerate on Hills

9. Ossagon-Goldbluffs-Squashan, very deep, nearly level to steep

Very deep, nearly level to steep, well drained soils that have little seasonal fluctuation in soil temperature and that formed in colluvium and residuum from weakly consolidated sandstone and conglomerate; on hillslopes and ridges

This map unit is on mountains, hillslopes, and ridges north and northeast of Orick. The vegetation is mainly redwood, Douglas-fir, western hemlock, red alder, and tanoak with an understory dominated by evergreen shrubs. Elevation ranges from 0 to 1,020 feet (0 to 310 meters). The average annual precipitation is 60 to 80 inches (1,520 to 2,030 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 260 to 325 days. A strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 9 percent of the survey area. It is about 40 percent Ossagon and similar soils, 35 percent Goldbluffs and similar soils, 15 percent Squashan and similar soils, and 10 percent soils of minor extent.

The Ossagon soils are very deep and well drained. Typically, the surface layer is loam. The subsoil is clay loam or silty clay loam. The substratum is loam or sandy loam. Slopes range from 9 to 50 percent.

The Goldbluffs soils are very deep and well drained. Typically, the surface layer is very gravelly loam. The subsoil is also very gravelly loam or is very gravelly sandy loam. The substratum is very gravelly coarse sandy loam or extremely gravelly sandy loam. Slopes range from 9 to 50 percent.

The Squashan soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is very gravelly loam or very gravelly sandy loam. The substratum is very gravelly loamy sand or very gravelly sand. Slopes range from 9 to 50 percent.

Of minor extent in this unit are Coppercreek, Espa, Lackscreek, and Sasquatch soils.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

Udic Soils Derived from Weakly Consolidated Sandstone and Conglomerate on Mountains

10. Ossagon-Squashan-Surpur, very deep, nearly level to steep

Very deep, nearly level to steep, well drained soils that have little seasonal fluctuation in soil temperature and that formed in colluvium and residuum derived from weakly consolidated sandstone and conglomerate; dominantly on mountain slopes and ridges

This map unit is dominantly on mountain slopes and ridges east of Prairie Creek, south of Cedar Creek, and on Childs Hill. The vegetation is mainly redwood, Douglas-fir, western hemlock, red alder, and tanoak with an understory of deciduous shrubs. Elevation ranges from 180 to 2,365 feet (55 to 720 meters). The average annual precipitation is 70 to 100 inches (1,780 to 2,550 millimeters), the average annual air

temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 240 to 300 days. A strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 3 percent of the survey area. It is about 45 percent Ossagon and similar soils, 25 percent Squashan and similar soils, 15 percent Surpur and similar soils, and 15 percent soils of minor extent.

The Ossagon soils are very deep and well drained. Typically, the surface layer is loam. The subsoil is loam, silt loam, or clay loam. The substratum is sandy loam. Slopes range from 9 to 50 percent.

The Squashan soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is very gravelly loam or very gravelly sandy clay loam. The substratum is very gravelly sandy clay loam or very gravelly loamy sand. Slopes range from 9 to 50 percent.

The Surpur soils are very deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is gravelly clay loam. The substratum is fine sandy loam or loamy sand. Slopes range from 2 to 30 percent.

Of minor extent in this unit are Childshill, Coppercreek, Lackscreek, Mettah, Scaath, and Wiregrass soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

Udic Soils on Flood Plains, Terraces, and Alluvial Fans

11. Bigtree-Battery-Riverwash, very deep, nearly level to steep

Very deep, nearly level to steep, well drained to excessively drained soils that have little seasonal fluctuation in soil temperature and that formed in alluvium derived from mixed sources; on flood plains, low terraces, alluvial fans, and dissected terrace remnants

This map unit is on flood plains, low terraces, alluvial fans, and dissected terrace remnants along lower Redwood Creek, Prairie Creek, Mill Creek, the Klamath River, and the Smith River. The vegetation is mainly redwood, Sitka spruce, alder, bigleaf maple, western hemlock, Douglas-fir, and tanoak with an understory dominated by deciduous shrubs, swordfern, and Oregon sorrel. Some areas have little or no vegetation. Minor components have pasture vegetation or are reverting to pasture vegetation. Elevation ranges from sea level to 670 feet (0 to 205 meters). The average annual precipitation is 35 to 90 inches (890 to 2,300 millimeters), the average annual air temperature is 50 to 59 degrees F (10 to 15 degrees C), and the frost-free season is 240 to 330 days. A strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 4 percent of the survey area. It is about 25 percent Bigtree and similar soils, 15 percent Battery and similar soils, 15 percent Riverwash, and 45 percent soils of minor extent.

The Bigtree soils are very deep and well drained. Typically, the surface layer is loam. The subsoil is also loam. The substratum is sandy loam or silt loam. Slopes range from 2 to 9 percent.

The Battery soils are very deep and well drained. Typically, the surface layer is gravelly loam. The substratum is gravelly clay loam. Slopes range from 5 to 50 percent.

The Riverwash is very deep and excessively drained. It consists of sand, gravel, and cobbles. Slopes range from 0 to 4 percent.

Of minor extent in this unit are Arlynda, Aubell, Bigriver, Catchings, Ferndale, Loleta, Mystery, Russ, Swainslough, Talawa, Tarquin, Tsunami, Weott, and Worswick soils.

Areas of this map unit were formerly used for pasture and timber production and are currently used for wildlife, recreation, and watershed. Also included are areas of Beaches and Dune land.

The main management concerns are seasonally saturated soil conditions, ponding, and flooding.

Ustic Soils Derived from Sandstone and Mudstone on Mountains

12. Wiregrass-Rockysaddle-Scaath, moderately deep to very deep, strongly sloping to very steep (fig. 9)

Moderately deep to very deep, strongly sloping to very steep, well drained soils that have moderate seasonal fluctuations in soil temperature and that formed in residuum and colluvium derived from sandstone and mudstone; on mountain slopes and ridges

This map unit is on mountain slopes and ridges east of Redwood Creek and on the eastern edge of the Mill Creek and Rock Creek watersheds. The vegetation is mainly Douglas-fir, tanoak, madrone, California bay, and scattered pockets of redwood with a sparse understory dominated by evergreen shrubs. Elevation ranges from 340 to 3,200 feet (105 to 975 meters). The average annual precipitation is 75 to 100 inches (1,780 to 2,540 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 220 to 290 days. A moderately weak marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 8 percent of the survey area. It is about 50 percent Wiregrass and similar soils, 25 percent Rockysaddle and similar soils, 15 percent Scaath and similar soils, and 10 percent soils and miscellaneous areas of minor extent.

The Wiregrass soils are very deep and well drained. Typically, the surface layer is very gravelly loam. The subsoil is gravelly clay loam or gravelly silty clay loam. The substratum is very gravelly clay loam. Slopes range from 9 to 75 percent.

The Rockysaddle soils are very deep and well drained. Typically, the surface layer is extremely gravelly loam. The subsoil is very gravelly clay loam. The substratum is extremely gravelly clay loam. Slopes range from 30 to 75 percent.

The Scaath soils are moderately deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is very cobbly clay loam or very gravelly clay loam. The substratum is very gravelly clay loam or extremely gravelly clay loam. Depth to hard bedrock ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 9 to 75 percent.

Of minor extent in this unit are Ahpah, Airstrip, Atwell, Countshill, Dolason, and Pittplace soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

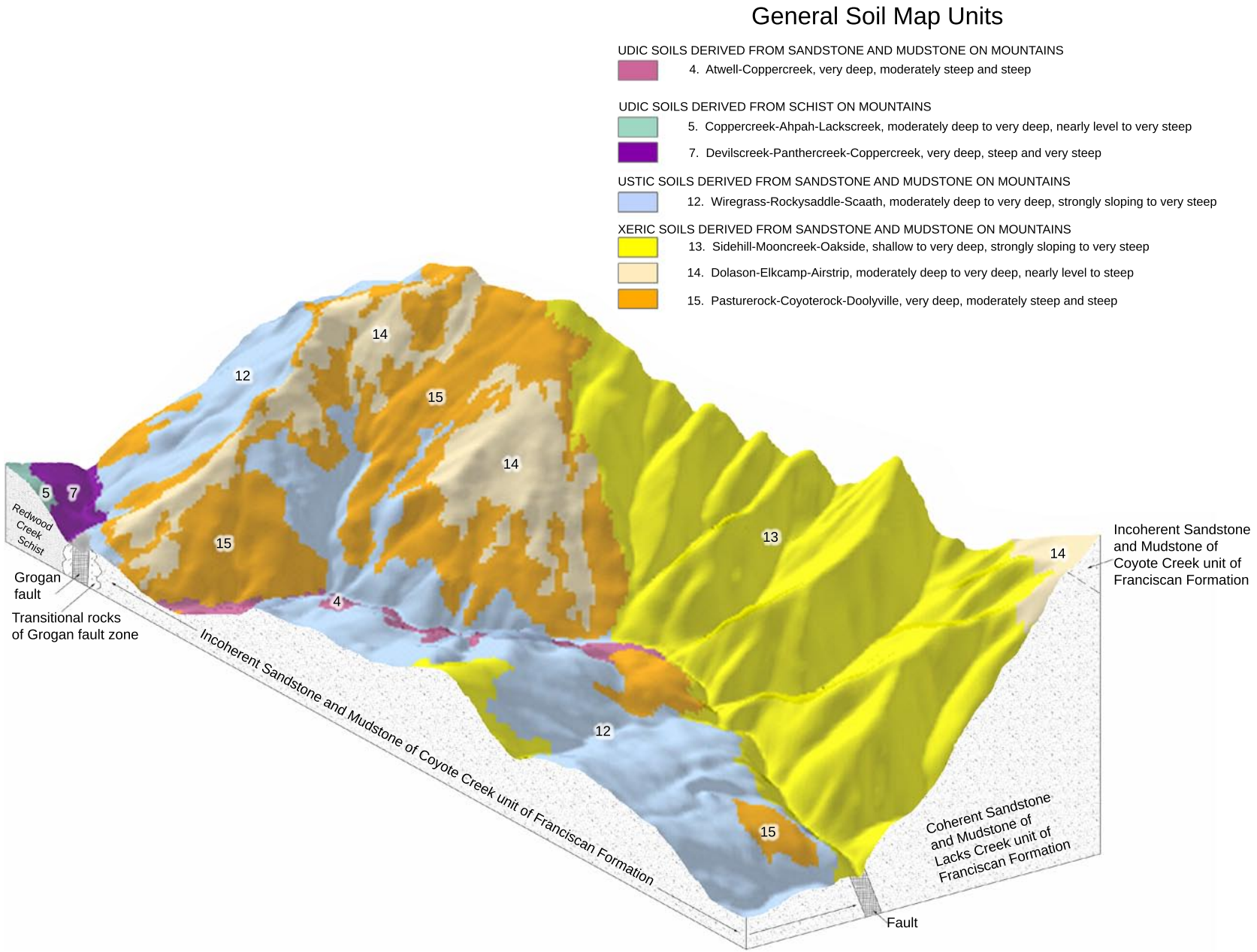

Figure 9.—Block diagram 4. Generalized pattern of soil distribution and conceptualized geology in the Lacks Creek watershed viewed from the Faulkner Prairie area northeast towards Arbor Camp Ridge.

Xeric Soils Derived from Sandstone and Mudstone on Mountains

13. Sidehill-Mooncreek-Oakside, shallow to very deep, strongly sloping to very steep (fig. 10)

Shallow to very deep, strongly sloping to very steep, somewhat excessively drained and well drained soils that have moderate seasonal fluctuation in soil temperature and that formed in residuum and colluvium derived from sandstone and mudstone; on mountain slopes and ridges

This map unit is on mountain slopes and ridges within the lower Redwood Creek and Lacks Creek watersheds. The vegetation is mainly Douglas-fir, tanoak, madrone, and California bay with a sparse understory dominated by evergreen shrubs. Elevation ranges from 950 to 4,085 feet (290 to 1,245 meters). The average annual precipitation is 80 to 100 inches (2,050 to 2,540 millimeters), the average annual air temperature is 48 to 55 degrees F (9 to 13 degrees C), and the frost-free season is 150 to 250 days. A moderately weak marine influence enables moderate seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 4 percent of the survey area. It is about 35 percent Sidehill and similar soils, 20 percent Mooncreek and similar soils, 20 percent Oakside and similar soils, and 25 percent soils and miscellaneous areas of minor extent.

The Sidehill soils are moderately deep and well drained. Typically, the surface layer is gravelly loam. The subsoil is very gravelly loam. The substratum is extremely cobbly loam. Depth to hard bedrock ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 30 to 100 percent.

The Mooncreek soils are very deep and well drained. Typically, the surface layer is very gravelly loam. The subsoil is gravelly clay loam. The substratum is gravelly clay loam or very gravelly clay loam. Slopes range from 9 to 75 percent.

Figure 10.—View of Rodger's Peak in the background. Pictured are areas of Wiregrass-Scaath complex, 30 to 50 percent slopes, on dry, upper mountain slopes covered by Douglas-fir and redwood. Also pictured are areas of Coppercreek-Ahpah-Lackscreek complex, 30 to 50 percent slopes, on moist, lower mountain slopes and areas of Trailhead-Fortyfour complex, 30 to 50 percent slopes, on narrow spur ridges.

The Oakside soils are shallow and somewhat excessively drained. Typically, the surface layer is extremely gravelly loam. The subsoil is extremely cobbly loam. Depth to hard bedrock ranges from 25 to 50 centimeters (10 to 20 inches). Slopes range from 50 to 100 percent.

Of minor extent in this unit are Darkwoods, Flyatt, Hawthorse, Highoaks, Mudhorse, Noisy, Rockus, and Tossup soils. Also included are areas of rock outcrop.

Most areas of this map unit are used for timber production, wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

14. Dolason-Elkcamp-Airstrip, moderately deep to very deep, nearly level to steep

Moderately deep to very deep, nearly level to steep, well drained soils that formed in residuum and colluvium derived from sandstone, mudstone and siltstone; mainly on upper mountain slopes and ridges with a minor extent on lower mountain slopes

This map unit is along the lower Redwood Creek basin on uniform to undulating mountain slopes shaped by earthflows and on ridges. The vegetation is mainly annual grasses and forbs. Invasion by Douglas-fir and other forest species occurs primarily in disturbed areas, along forest borders, and in zones where prescribed burning or cutting has stopped. Elevation ranges from 540 to 3,865 feet (165 to 1,178 meters). The average annual precipitation is 70 to 100 inches (1,780 to 2,540 millimeters), the average annual air temperature is 50 to 59 degrees F (10 to 15 degrees C), and the frost-free season is 200 to 280 days.

This unit makes up about 3 percent of the survey area. It is about 40 percent Dolason and similar soils, 25 percent Elkcamp and similar soils, 15 percent Airstrip and similar soils, and 20 percent soils and miscellaneous areas of minor extent.

The Dolason soils are very deep and well drained. Typically, the surface layer is thick, dark, and consists of gravelly loam. The subsoil is gravelly loam or very gravelly loam. The substratum is very gravelly loam. Slopes range from 9 to 50 percent.

The Elkcamp soils are very deep and well drained. Typically, the surface layer is thick, dark, and consists of gravelly loam. The subsoil is gravelly clay loam. The substratum is very gravelly clay loam. Slopes range from 15 to 50 percent.

The Airstrip soils are moderately deep and well drained. Typically, the surface layer is thick, dark, and consists of gravelly loam. The subsoil is very gravelly loam. Depth to hard bedrock ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 9 to 50 percent.

Of minor extent in this unit are Countshill, Pigpen, and Raingage soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for livestock grazing and are currently used for wildlife, recreation, and watershed. They are capable of supporting forest vegetation.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

15. Pasturerock-Coyoterock-Doolyville, very deep, moderately steep and steep

Very deep, moderately steep and steep, somewhat poorly drained to well drained soils that formed in residuum and colluvium derived from mudstone and sandstone; on mountain slopes and ridges

This map unit is on steep, uniform to undulating mountain slopes shaped by earthflows, poorly incised drainages, and ridges in the lower Redwood Creek basin.

The vegetation is mainly oak woodland with California bay and an understory of grasses and forbs. Some areas have been invaded by Douglas-fir and are in succession to coniferous forest. Elevation ranges from 165 to 3,265 feet (50 to 995 meters). The average annual precipitation is 70 to 100 inches (1,780 to 2,540 millimeters), the average annual air temperature is 50 to 59 degrees F (10 to 15 degrees C), and the frost-free season is 200 to 270 days.

This unit makes up about 2 percent of the survey area. It is about 35 percent Pasturerock and similar soils, 20 percent Coyoterock and similar soils, 15 percent Doolyville and similar soils, and 30 percent soils and miscellaneous areas of minor extent.

The Pasturerock soils are very deep and well drained. Typically, the surface layer is dark loam. The subsoil is clay loam or gravelly clay loam. The substratum is very gravelly sandy clay loam. Slopes range from 30 to 50 percent.

The Coyoterock soils are very deep and moderately well drained. Typically, the surface layer is dark cobbly clay loam. The subsoil is gravelly clay loam or gravelly clay. The substratum is gravelly silty clay. Depth to the seasonal high water table ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 30 to 50 percent.

The Doolyville soils are very deep and somewhat poorly drained. Typically, the surface layer is dark silt loam. The subsoil is silty clay loam or gravelly silty clay loam. The substratum is very gravelly silty clay loam. Depth to the seasonal high water table ranges from 25 to 50 centimeters (10 to 20 inches). Slopes range from 30 to 50 percent.

Of minor extent in this unit are Airstrip and Maneze soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for livestock grazing and are currently used for wildlife, recreation, and watershed. They are capable of supporting forest vegetation.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

Xeric Soils Derived from Serpentinite and Peridotite on Mountains

16. Jayel-Oragran-Walnett, shallow to very deep, nearly level to very steep

Shallow to very deep, nearly level to very steep, well drained soils that have moderately little seasonal fluctuation in soil temperature and that formed in residuum and colluvium derived from serpentinite, peridotite, and serpentinized peridotite of the Klamath Terrace; on upper mountain slopes and ridges

This map unit is on upper mountain slopes and ridges along the eastern margins of the Mill Creek and Rock Creek watersheds. The vegetation is mainly Jeffery pine, knobcone pine, Douglas-fir, and tanoak with an understory dominated by evergreen shrubs. Some areas are dominated by grass communities. Elevation ranges from 165 to 3,020 feet (50 to 920 meters). The average annual precipitation is 90 to 120 inches (2,300 to 3,050 millimeters), the average annual air temperature is 50 to 55 degrees F (10 to 13 degrees C), and the frost-free season is 100 to 180 days. A moderately strong marine influence minimizes seasonal fluctuations in air temperature and soil temperature.

This unit makes up about 2 percent of the survey area. It is about 30 percent Jayel and similar soils, 20 percent Oragran and similar soils, 20 percent Walnett and similar soils, and 30 percent soils and miscellaneous areas of minor extent.

The Jayel soils are moderately deep and well drained. Typically, the surface layer is stony clay loam. The subsoil is stony clay. Depth to hard bedrock ranges from 50 to 100 centimeters (20 to 40 inches). Slopes range from 9 to 75 percent.

The Oragran soils are shallow and well drained. Typically, the surface layer is very stony loam. The subsoil is stony silty loam. Depth to hard bedrock ranges from 25 to 50 centimeters (10 to 20 inches). Slopes range from 9 to 75 percent.

The Walnett soils are very deep and well drained. Typically, the surface layer is very stony loam. The subsoil is very gravelly clay loam, extremely gravelly loam, or gravelly clay loam. Slopes range from 9 to 75 percent.

Of minor extent in this unit are Rockysaddle, Scaath, Trailhead, and Wiregrass soils. Also included are areas of rock outcrop.

Most areas of this map unit were formerly used for selective timber production and are currently used for wildlife, recreation, and watershed.

The main management concerns are slope, seasonally saturated soil conditions, potential for mass wasting on unstable slopes, and low soil strength.

General Ecological Site Map Units

The general ecological site maps in this publication show broad areas that have a distinctive pattern of vegetation and soils. The map units on the general ecological site maps are unique natural communities. Typically, they consist of one to three dominant ecological site units that are generalized in geographic distribution. They are named for the dominate ecological site or combination of ecological sites. Refer to “Forestland Ecological Sites” and “Rangeland Ecological Sites” in the “Use and Management of the Soils” section for more detailed ecological site descriptions.

Generalized Ecological Site Descriptions

A. Redwood–Douglas-fir/Pacific rhododendron, mountain slopes, schist, clay loam.—This unit consists dominantly of forestland ecological sites F004BX101CA and F004BX115CA, which are on mountain slopes west of Redwood Creek.

B. Douglas-fir–redwood/tanoak, mountain slopes, sandstone, clay loam.—This unit consists dominantly of forestland ecological site F004BX102CA, which is on inland mountain slopes, dominantly in the lower Redwood Creek basin.

C. Redwood–Douglas-fir/Pacific rhododendron, mountain slopes, sandstone, clay loam.—This unit consists dominantly of forestland ecological site F004BX103CA, which is in the Mill Creek and Rock Creek watersheds, east of Redwood Creek near and southeast of Orick Valley.

D. Redwood–Douglas-fir/Pacific rhododendron, ridgetops, schist, red clay.—This unit consists dominantly of forestland ecological site F004BX104CA, which is on ridgetops and upper mountain slopes west of Redwood Creek and east of Prairie Creek.

E. Douglas-fir–tanoak/California huckleberry, ridgetops, schist, red clay.—This unit consists dominantly of forestland ecological site F004BX105CA, which is on dry upper mountain slopes and narrow ridgetops, dominantly west of Redwood Creek.

F. Redwood/western swordfern, hills, soft sandstone, clay loam.—This unit consists dominantly of forestland ecological sites F004BX106CA and F004BX107CA, which are on hills north and northeast of Orick, in the Prairie Creek watershed.

G. Redwood/western swordfern, mountain slopes, sandstone and schist, clay loam.—This unit consists dominantly of forestland ecological site F004BX108CA, which is on mountain slopes in close proximity to the coast throughout the survey area.

H. Douglas-fir–redwood/tanoak–California huckleberry, mountain slopes, sandstone and schist, clay loam.—This unit consists dominantly of forestland ecological site F004BX109CA, which is on dry, upper mountain slopes and broad ridges in the Mill Creek and Rock Creek watersheds.

I. Sitka spruce–red alder/salmonberry/western swordfern, hills, sandstone and mudstone, clay loam.—This unit consists dominantly of forestland ecological site F004BX110CA, which is on hills along the immediate coast throughout the survey area.

J. Redwood/western swordfern–redwood-sorrel, flood plains and terraces, loam.—This unit consists dominantly of forestland ecological site F004BX111CA, which is on low terraces, alluvial fans, fan remnants, and moist valley floors near creeks and rivers throughout the survey area.

K. Oregon white oak/orchardgrass, lower mountain slopes, sandstone and mudstone, silty clay loam.—This unit consists dominantly of forestland ecological site F004BX112CA, which is on lower mountain slopes east of Redwood Creek.

L. Douglas-fir–giant chinquapin/California huckleberry, ridgetops, soft sandstone, clay loam.—This unit consists dominantly of forestland ecological site F004BX113CA, which is on broad ridges and upper mountain slopes on and near Childs Hill in the Mill Creek watershed.

M. Oregon white oak/bristly dogstail grass, mountain slopes, sandstone and mudstone, clay loam.—This unit consists dominantly of forestland ecological site F004BX114CA, which is on mountain slopes east of Redwood Creek.

N. Upper prairie, mountain slopes, sandstone and mudstone, clay loam.—This unit consists dominantly of rangeland ecological site R004BX101CA, which is on upper mountain slopes and broad ridges east of Redwood Creek in the Bald Hills.

O. Coastal scrub and prairie, hills, sandstone and mudstone, gravelly clay loam.—This unit consists dominantly of rangeland ecological site R004BX102CA, which is on hills along the immediate coast throughout the survey area.

P. Lower prairie, earthflows, sandstone and mudstone, gravelly loam.—This unit consists dominantly of rangeland ecological site R004BX103CA, which is in slump positions on lower mountain slopes east of Redwood Creek.

Q. Middle prairie, mountain slopes, sandstone and mudstone, gravelly clay loam.—This unit consists dominantly of rangeland ecological site R004BX104CA, which is on mountain slopes east of Redwood Creek.

R. Douglas-fir–tanoak/tanoak, mountain slopes, sandstone and mudstone, clay loam.—This unit consists dominantly of forestland ecological sites F005BX101CA, F005BX102CA, and F005BX103CA, which are on mountain slopes near Beaver and Pine Ridge.

S. Jeffrey pine/huckleberry oak, mountain slopes, serpentinite and peridotite, clay loam.—This unit consists dominantly of forestland ecological sites F005BX104CA and F005XB105CA, which are on mountain slopes along the eastern margins of Mill Creek and Rock Creek.

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the heading “Use and Management of Soils.”

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

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

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

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Ferndale, moderately well drained, 0 to 5 percent slopes, is a phase of the Ferndale series.

Some map units are made up of one major soil or miscellaneous area. These map units are consociations. Consociations 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 soil or miscellaneous areas in association with other soils or miscellaneous areas. The relative proportion of the soil or miscellaneous area is greater than 75 percent. Trailhead, 0 to 9 percent slopes, is an example.

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

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Trailhead-Fortyfour complex, 30 to 50 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. The Beaches component of Beaches-Samoa-Dune land complex, 0 to 50 percent slopes, is an example.

Table 3 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

100—Riverwash

Map Unit Setting

General location: Active channels of major rivers and creeks
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Annual flood plains
Elevation: 25 to 350 feet (9 to 108 meters)
Mean annual precipitation: 60 to 90 inches (1,520 to 2,290 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 250 to 300 days

Map Unit Composition

Riverwash—90 percent
Minor components—10 percent

Characteristics of Riverwash

Slope: 0 to 4 percent
Aspect: Northwest clockwise to west
Landform: Active channels
Parent material: Stratified alluvium derived from mixed sources
Typical vegetation: Few annual herbs and re-sprouting willows
Surface area covered by coarse fragments: 10 to 20 percent subrounded cobbles and 35 to 60 percent coarse, subrounded pebbles
Restrictive feature: None noted
Slowest permeability class: Rapid
Available water capacity to a depth of 60 inches: About 0.8 inch (very low)

Hydrologic properties
Present annual flooding: Frequent
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Excessively drained
Hydrologic soil group: A/D

Interpretive groups
Land capability classification, nonirrigated: 8
Ecological site: None assigned

Minor Components

Fluvents and similar soils
Composition: About 10 percent
Slope: 0 to 4 percent
Landform: Flats adjacent to the stream channels
Ecological site: None assigned

102—Fluvents, 2 to 5 percent slopes

Map Unit Setting

General location: Low terraces and flood plains adjacent to active channels of major rivers and creeks
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Flood plains and low terraces
Elevation: 0 to 570 feet (0 to 175 meters)
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 300 to 330 days

Map Unit Composition

Fluvents—75 percent
Minor components—25 percent

Characteristics of Fluvents and Similar Soils

Slope: 2 to 5 percent
Aspect: Southeast clockwise to west
Landform: Terraces and flood plains near the margin of the active channel
Parent material: Overbank alluvium derived from mixed sources
Typical vegetation: Riparian woodland dominated by willows (*Salix* spp.). Major floods remove above-ground vegetation and start new cycles of plant succession.
Surface area covered by coarse fragments: 0 to 10 percent coarse, rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately rapid
Available water capacity to a depth of 60 inches: About 4.3 inches (low)

Hydrologic properties
Present annual flooding: Frequent
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Somewhat excessively drained
Hydrologic soil group: A/D

Interpretive groups
Land capability classification, nonirrigated: 4w-2
Ecological site: None assigned

Typical profile
A—0 to 2 inches (0 to 5 centimeters); fine sandy loam
C—2 to 9 inches (5 to 24 centimeters); loam
2C1—9 to 37 inches (24 to 94 centimeters); loamy sand
2C2—37 to 60 inches (94 to 152 centimeters); very gravelly loamy coarse sand

Minor Components

Bigriver and similar soils
Composition: About 10 percent
Slope: 2 to 5 percent
Landform: Farther than the Fluvents from the active channel
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Arlynda and similar soils
Composition: About 5 percent
Slope: 2 to 5 percent
Landform: Small, wet depressions on flood plains
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Riverwash
Composition: About 5 percent
Slope: 0 to 5 percent
Landform: Flats adjacent to the stream channel
Ecological site: None assigned

Russ and similar soils
Composition: About 5 percent
Slope: 2 to 5 percent
Landform: Farther than the Fluvents from the active channel
Ecological site: None assigned

110—Weott, 0 to 2 percent slopes

Map Unit Setting

General location: Alluvial plains of rivers and major creeks in coastal areas of northern California
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Alluvial plains
Landform: Alluvial plains
Elevation: 0 to 65 feet (0 to 20 meters)
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Weott—85 percent
Minor components—15 percent

Characteristics of Weott and Similar Soils

Slope: 0 to 2 percent
Aspect: West clockwise to south

Landform: Lower backswamps; depressions; low flood-plain steps
Parent material: Alluvium derived from mixed sources
Typical vegetation: Cultivated pasture grasses and forbs
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 10.0 inches (very high)

Hydrologic properties
Present annual flooding: Occasional
Present annual ponding: Frequent
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Very poorly drained
Hydrologic soil group: B/D

Interpretive groups
Land capability classification, nonirrigated: 5w
Ecological site: None assigned

Typical profile
Ap—0 to 12 inches (0 to 31 centimeters); silt loam
Bg1—12 to 26 inches (31 to 66 centimeters); silt loam
Bg2—26 to 60 inches (66 to 152 centimeters); silt loam

Minor Components

Worswick and similar soils
Composition: About 5 percent
Slope: 0 to 2 percent
Landform: Low flood-plain steps; backswamps adjacent to natural levees
Ecological site: None assigned

Swainslough and similar soils
Composition: About 4 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions; low flood-plain steps
Ecological site: None assigned

Arlynda and similar soils
Composition: About 3 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions; low flood-plain steps; meander scars
Ecological site: None assigned

Ferndale and similar soils
Composition: About 3 percent
Slope: 0 to 2 percent
Landform: High flood-plain steps
Ecological site: None assigned

116—Swainslough, 0 to 2 percent slopes

Map Unit Setting

General location: Alluvial plains of rivers and major creeks in coastal areas of northern California
Major land resource area: 4B—Coastal Redwood Belt

Landscape: Alluvial plains
Landform: Alluvial plains
Elevation: 0 to 160 feet (0 to 50 meters)
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Swainslough—90 percent
Minor components—10 percent

Characteristics of Swainslough and Similar Soils

Slope: 0 to 2 percent
Aspect: West clockwise to south
Landform: Backswamps; depressions; low flood-plain steps; reclaimed salt marshes
Parent material: Alluvium derived from mixed sources
Typical vegetation: Cultivated pasture grasses and forbs
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 10.9 inches (very high)

Hydrologic properties
Present annual flooding: Occasional
Present annual ponding: Frequent
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Very poorly drained
Hydrologic soil group: C/D

Interpretive groups
Land capability classification, nonirrigated: 5w
Ecological site: None assigned

Typical profile

Oi—0 to 3 inches (0 to 8 centimeters); peat
A—3 to 12 inches (8 to 30 centimeters); silty clay loam
Bg1—12 to 20 inches (30 to 51 centimeters); silty clay loam
Bg2—20 to 29 inches (51 to 74 centimeters); silty clay loam
Bg3—29 to 38 inches (74 to 97 centimeters); silty clay loam
Bg4—38 to 65 inches (97 to 165 centimeters); silty clay loam

Minor Components

Arlynda and similar soils
Composition: About 3 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions; low flood-plain steps; meander scars
Ecological site: None assigned

Occidental and similar soils
Composition: About 2 percent
Slope: 0 to 2 percent
Landform: Reclaimed tidal marshes
Ecological site: None assigned

Weott and similar soils
Composition: About 2 percent

Slope: 0 to 2 percent
Landform: Backswamps adjacent to natural levees; low flood-plain steps
Ecological site: None assigned

Wigi and similar soils
Composition: About 2 percent
Slope: 0 to 2 percent
Landform: Salt marshes; tidal marshes
Ecological site: None assigned

Loleta and similar soils
Composition: About 1 percent
Slope: 0 to 2 percent
Landform: Alluvial fans; fan remnants
Ecological site: None assigned

119—Arlynda, 0 to 2 percent slopes

Map Unit Setting

General location: Alluvial plains of rivers and major creeks in coastal areas of northern California
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Alluvial plains
Landform: Low alluvial plains
Elevation: 0 to 160 feet (0 to 50 meters)
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Arlynda—85 percent
Minor components—15 percent

Characteristics of Arlynda and Similar Soils

Slope: 0 to 2 percent
Aspect: West clockwise to south
Landform: Backswamps; depressions; low flood-plain steps; meander scars
Parent material: Alluvium derived from mixed sources
Typical vegetation: Cultivated pasture grasses and forbs, rushes, and sedges
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 10.9 inches (very high)

Hydrologic properties
Present annual flooding: Occasional
Present annual ponding: Frequent
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Very poorly drained
Hydrologic soil group: C/D

Interpretive groups
Land capability classification, nonirrigated: 5w
Ecological site: None assigned

Typical profile
Oi—0 to 3 inches (0 to 8 centimeters); peat
A—3 to 14 inches (8 to 36 centimeters); silty clay loam
Bg1—14 to 22 inches (36 to 56 centimeters); silty clay loam
Bg2—22 to 63 inches (56 to 160 centimeters); silty clay loam

Minor Components

Swainslough and similar soils
Composition: About 4 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions; low flood-plain steps
Ecological site: None assigned

Weott and similar soils
Composition: About 4 percent
Slope: 0 to 2 percent
Landform: Lower backswamp depressions; low flood-plain steps
Ecological site: None assigned

Occidental and similar soils
Composition: About 3 percent
Slope: 0 to 2 percent
Landform: Lower depressions; reclaimed tidal marshes
Ecological site: None assigned

Worswick and similar soils
Composition: About 2 percent
Slope: 0 to 2 percent
Landform: Low flood-plain steps; backswamps adjacent to natural levees
Ecological site: None assigned

Loleta and similar soils
Composition: About 2 percent
Slope: 2 to 9 percent
Landform: None assigned
Ecological site: None assigned

126—Loleta, 2 to 5 percent slopes

Map Unit Setting

General location: Alluvial plains of rivers and major creeks in coastal areas of northern California
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Alluvial plains
Landform: Alluvial plains
Elevation: 5 to 160 feet (3 to 50 meters)
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Loleta—85 percent
Minor components—15 percent

Characteristics of Loleta and Similar Soils

Slope: 2 to 5 percent
Aspect: West clockwise to south
Landform: Alluvial fans; fan remnants
Parent material: Alluvium derived from mixed sources
Typical vegetation: Cultivated pasture grasses and forbs
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.4 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Poorly drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6w
Ecological site: None assigned

Typical profile
Ap1—0 to 4 inches (0 to 10 centimeters); loam
Ap2—4 to 14 inches (10 to 36 centimeters); loam
Bg1—14 to 32 inches (36 to 81 centimeters); loam
Bg2—32 to 50 inches (81 to 127 centimeters); loam
Bg3—50 to 68 inches (127 to 173 centimeters); fine sandy loam

Minor Components

Cumulic Humaquepts and similar soils
Composition: About 3 percent
Slope: 2 to 5 percent
Landform: Alluvial fans
Ecological site: None assigned

Oxyaquic Eutrudepts and similar soils
Composition: About 3 percent
Slope: 2 to 5 percent
Landform: Alluvial fans
Ecological site: None assigned

Barbercreek and similar soils
Composition: About 3 percent
Slope: 0 to 5 percent
Landform: Alluvial fans
Ecological site: None assigned

Weott and similar soils
Composition: About 3 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions
Ecological site: None assigned

Arlynda and similar soils
Composition: About 3 percent

Slope: 0 to 2 percent
Landform: Backswamps; depressions
Ecological site: None assigned

155—Samoa-Clambeach-Dune land complex, 0 to 50 percent slopes

Map Unit Setting

General location: Northern Coast of California
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Coastal plains
Landform: Dune fields
Elevation: 0 to 65 feet (0 to 20 meters)
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Samoa—50 percent
Clambeach—30 percent
Dune land—15 percent
Minor components—5 percent

Characteristics of Samoa and Similar Soils

Slope: 2 to 50 percent
Aspect: North clockwise to southeast
Landform: Recently stabilized dunes
Parent material: Eolian and marine sand derived from mixed sources
Typical vegetation: The native vegetation is a shifting dune mat community of American beachgrass *(Ammophila breviligulata),* yarrow *(Achellea millefolium),* beach strawberry *(Fragaria chiloensis),* beach wormwood *(Artemisia pycnocephala),* beach tidytips *(Layia carnosa),* coastal sand verbena *(Abronia latifolia),* goldenrod *(solidago californica),* California polypody *(Polypodium californicum),* Brewer's rush *(Juncus brewri),* coyotebrush *(Baccharis pilularis),* and scattered shore pine. Non-native areas are composed of European beachgrass *(Ammophila arenaia)* planted to prevent sand movement and yellow bush lupine *(Lupinus arboreus),* iceplant *(Mesembryanthemum edule),* pampas grass *(Cortaderia Stapf),* and other herbaceous cover.
Surface area covered by coarse fragments: 0 to 5 percent medium, rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Rapid
Available water capacity to a depth of 60 inches: About 3.7 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Somewhat excessively drained
Hydrologic soil group: A

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: None assigned

Typical profile

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 6 inches (2 to 14 centimeters); sand
AC—6 to 18 inches (14 to 45 centimeters); sand
C—18 to 63 inches (45 to 160 centimeters); sand

Characteristics of Clambeach and Similar Soils

Slope: 0 to 2 percent
Aspect: West clockwise to south
Landform: Deflation basins; depressions
Parent material: Eolian and marine sand derived from mixed sources
Typical vegetation: Slough sedge *(Carex obnupta),* Brewer's rush *(juncus brewri),* Spanish lotus *(Lotus purshianus),* Pacific silverweed *(Argentina egedii),* hooded lady's tresses *(Spiranthes romanzoffiana),* common spikerush *(Eleocharis macrostachya),* California wax myrtle *(Morella californica),* hooker willow *(Salix* ssp.), and other native and non-native herbaceous cover.
Surface area covered by coarse fragments: 0 to 5 percent medium, rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Rapid
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties

Present annual flooding: None
Present annual ponding: Frequent
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Very poorly drained
Hydrologic soil group: A/D

Interpretive groups

Land capability classification, nonirrigated: 5w
Ecological site: None assigned

Typical profile

A—0 to 9 inches (0 to 22 centimeters); sand
Cg1—9 to 20 inches (22 to 50 centimeters); sand
Cg2—20 to 63 inches (50 to 160 centimeters); sand

Characteristics of Dune Land

Slope: 2 to 50 percent
Aspect: North clockwise to southeast
Landform: Unvegetated dunes; foredunes
Parent material: Eolian and marine sand derived from mixed sources
Typical vegetation: Unvegetated sand
Surface area covered by coarse fragments: 0 to 5 percent medium, rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Rapid
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Somewhat excessively drained
Hydrologic soil group: A

Interpretive groups
Land capability classification, nonirrigated: 8
Ecological site: None assigned

Minor Components

Beaches
Composition: About 5 percent
Slope: 0 to 20 percent
Landform: Coastal beaches
Ecological site: None assigned

157—Beaches-Samoa-Dune land complex, 0 to 50 percent slopes

Map Unit Setting

General location: Northern Coast of California
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Coastal plains and dune fields
Landform: Coastal beaches and adjacent dune fields and coastal plains
Elevation: 0 to 65 feet (0 to 20 meters)
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Beaches—35 percent
Samoa—35 percent
Dune land—25 percent
Minor components—5 percent

Characteristics of Beaches

Slope: 0 to 20 percent
Aspect: West clockwise to south
Landform: Coastal beaches
Parent material: Beach sand and gravel derived from mixed sources
Typical vegetation: Scattered European searocket *(cakile maritima* Scop.) or sand verbena *(Abronia* Juss.) on upper wave slopes
Surface area covered by coarse fragments: 0 to 50 percent medium, rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Rapid
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual flooding: Very frequent
Present annual ponding: None
Surface water runoff class: Low
Current water table: None noted
Natural drainage class: Somewhat excessively drained
Hydrologic soil group: A

Interpretive groups
Land capability classification, nonirrigated: 8
Ecological site: None assigned

Characteristics of Samoa and Similar Soils

Slope: 0 to 50 percent
Aspect: North clockwise to southeast
Landform: Recently stabilized dunes
Parent material: Eolian and marine sand derived from mixed sources
Typical vegetation: The native vegetation is a shifting dune mat community of American beachgrass *(Ammophila breviligulata),* yarrow *(Achellea millefolium),* beach strawberry *(Fragaria chiloensis),* beach wormwood *(Artemisia pycnocephala),* beach tidytips *(Layia carnosa),* coastal sand verbena *(Abronia latifolia),* goldenrod *(solidago californica),* California polypody *(Polypodium californicum),* Brewer's rush *(Juncus brewri),* coyotebrush *(Baccharis pilularis),* and scattered shore pine. Non-native areas are composed of European beachgrass *(Ammophila arenaia)* planted to prevent sand movement and yellow bush lupine *(Lupinus arboreus),* iceplant *(Mesembryanthemum edule),* pampas grass *(Cortaderia Stapf),* and other herbaceous cover.
Surface area covered by coarse fragments: 0 to 5 percent medium, rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Rapid
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Somewhat excessively drained
Hydrologic soil group: A

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: None assigned

Typical profile
C1—0 to 17 inches (0 to 44 centimeters); sand
C2—17 to 63 inches (44 to 160 centimeters); sand

Characteristics of Dune Land

Slope: 0 to 50 percent
Aspect: North clockwise to southeast
Landform: Unvegetated dunes; unvegetated foredunes
Parent material: Eolian and marine sand derived from mixed sources
Typical vegetation: Unvegetated sand
Surface area covered by coarse fragments: 0 to 5 percent medium, rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Rapid
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Somewhat excessively drained
Hydrologic soil group: A

Interpretive groups
Land capability classification, nonirrigated: 8
Ecological site: None assigned

Minor Components

Clambeach and similar soils
Composition: About 5 percent
Slope: 0 to 2 percent
Landform: Deflation basins; depressions
Ecological site: None assigned

171—Worswick-Arlynda complex, 0 to 2 percent slopes

Map Unit Setting

General location: Throughout Redwood National and State Parks
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Swampy, low-gradient portion of stream valleys
Elevation: 0 to 810 feet (0 to 247 meters)
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Worswick—40 percent
Arlynda—35 percent
Minor components—25 percent

Characteristics of Worswick and Similar Soils

Slope: 0 to 2 percent
Aspect: North clockwise to west
Landform: Backswamps and low flood-plain steps along valley floors
Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Small groups or individuals of Sitka spruce *(Picea sitchensis),* western hemlock *(Tsuga heterophylla),* or Douglas-fir *(Pseudotsuga menziesii)* grow in scattered areas throughout the unit. Some grand fir *(Abies grandis)* also grows. The understory is dominated by western swordfern *(Polystichum munitum)* and includes salal *(Gaultheria shallon),* deer fern *(Blechnum spicant),* and redwood-sorrel *(Oxalis oregana)*. Moist areas may include rushes *(Juncus* spp.), sedges *(Carex* spp.), and American skunkcabbage *(Lysichiton americanus)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.6 inches (high)

Hydrologic properties
Present annual flooding: Occasional
Present annual ponding: Occasional
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Very poorly drained
Hydrologic soil group: B/D

Interpretive groups
Land capability classification, nonirrigated: 3w-2
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 17 inches (3 to 43 centimeters); silt loam
Bg1—17 to 27 inches (43 to 68 centimeters); loam
Bg2—27 to 58 inches (68 to 148 centimeters); loam
Bg3—58 to 62 inches (148 to 158 centimeters); gravelly loamy sand

Characteristics of Arlynda and Similar Soils

Slope: 0 to 2 percent
Aspect: North clockwise to west
Landform: Depressions and low flood-plain steps on valley floors
Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Small groups or individuals of Sitka spruce *(Picea sitchensis),* western hemlock *(Tsuga heterophylla),* or Douglas-fir *(Pseudotsuga menziesii)* grow in scattered areas throughout the unit. Some grand fir *(Abies grandis)* also grows. The understory is dominated by western swordfern *(Polystichum munitum)* and includes salal *(Gaultheria shallon),* deer fern *(Blechnum spicant),* and redwood-sorrel *(Oxalis oregana)*. Moist areas may include rushes *(Juncus* spp.), sedges *(Carex* spp.), and American skunkcabbage *(Lysichiton americanus)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 10.8 inches (very high)

Hydrologic properties
Present annual flooding: Occasional
Present annual ponding: Frequent
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Poorly drained
Hydrologic soil group: B/D

Interpretive groups
Land capability classification, nonirrigated: 3w-2
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 2 inches (2 to 4 centimeters); silt loam
Bwg—2 to 15 inches (4 to 37 centimeters); loam
Cg—15 to 35 inches (37 to 88 centimeters); loam
2CAgb—35 to 60 inches (88 to 152 centimeters); loam

Minor Components

Fluvaquentic Endoaquepts and similar soils
Composition: About 10 percent
Slope: 0 to 2 percent
Landform: Near mouths of small tributary streams and the upper ends of valley floors

Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Riverwash
Composition: About 5 percent
Slope: 0 to 2 percent
Landform: Active channels
Ecological site: None assigned

Bigtree and similar soils
Composition: About 3 percent
Slope: 0 to 9 percent
Landform: Low terraces and alluvial fans
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluventic Dystrudepts and similar soils
Composition: About 3 percent
Slope: 0 to 9 percent
Landform: Low terraces and alluvial fans
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Oxyaquic Haplohumults and similar soils
Composition: About 2 percent
Slope: 5 to 30 percent
Landform: Ocean-side drainageways on lower mountain slopes
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Typic Palehumults and similar soils
Composition: About 2 percent
Slope: 5 to 30 percent
Landform: Upper, older terraces
Ecological site: None assigned

172—Bigriver, 2 to 5 percent slopes

Map Unit Setting

General location: Along the Smith River and Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Alluvial flats and flood plains
Elevation: 0 to 745 feet (1 to 228 meters)
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 300 to 330 days

Map Unit Composition

Bigriver fine sandy loam—80 percent
Minor components—20 percent

Characteristics of Bigriver and Similar Soils

Slope: 2 to 5 percent
Aspect: South clockwise to northeast
Landform: Lower alluvial flats; flood plains

Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Small groups or individuals of Sitka spruce *(Picea sitchensis),* western hemlock *(Tsuga heterophylla),* or Douglas-fir *(Pseudotsuga menziesii)* grow in scattered areas throughout the unit. Some grand fir *(Abies grandis)* also grows. The understory is dominated by western swordfern *(Polystichum munitum)* and includes salal *(Gaultheria shallon),* deer fern *(Blechnum spicant),* and redwood-sorrel *(Oxalis oregana)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 8.3 inches (high)

Hydrologic properties
Present annual flooding: Occasional
Present annual ponding: None
Surface water runoff class: Low
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 2e-2
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Typical profile
A—0 to 4 inches (0 to 9 centimeters); fine sandy loam
C—4 to 61 inches (9 to 156 centimeters); stratified loamy fine sand to silt loam

Minor Components

Battery and similar soils
Composition: About 10 percent
Slope: 2 to 5 percent
Landform: Higher, adjacent stream terraces
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Riverwash
Composition: About 10 percent
Slope: 2 to 5 percent
Landform: Active channels
Ecological site: None assigned

173—Bigriver-Ferndale-Russ complex, 2 to 5 percent slopes

Map Unit Setting

General location: Along Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Alluvial flats and flood terraces
Elevation: 35 to 145 feet (11 to 45 meters)
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 300 to 330 days

Map Unit Composition

Bigriver silt loam—55 percent
Ferndale—20 percent
Russ—15 percent
Minor components—10 percent

Characteristics of Bigriver and Similar Soils

Slope: 2 to 5 percent
Aspect: South clockwise to west
Landform: Lower alluvial flats; flood plains
Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Small groups or individuals of Sitka spruce *(Picea sitchensis),* western hemlock *(Tsuga heterophylla),* or Douglas-fir *(Pseudotsuga menziesii)* grow in scattered areas throughout the unit. Some grand fir *(Abies grandis)* also grows. The understory is dominated by western swordfern *(Polystichum munitum)* and includes salal *(Gaultheria shallon),* deer fern *(Blechnum spicant),* and redwood-sorrel *(Oxalis oregana)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 9.8 inches (high)

Hydrologic properties
Present annual flooding: Occasional
Present annual ponding: None
Surface water runoff class: Low
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 2e-2
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Typical profile
A—0 to 15 inches (0 to 39 centimeters); silt loam
C—15 to 63 inches (39 to 159 centimeters); stratified loamy fine sand to silt loam

Characteristics of Ferndale and Similar Soils

Slope: 2 to 5 percent
Aspect: South clockwise to west
Landform: High flood-plain steps
Parent material: Alluvium derived from mixed sources
Typical vegetation: The existing plant community is dominated by sweet vernalgrass *(Anthoxanthum odoratum),* velvetgrass *(Holcus* spp.), silver hairgrass *(Aira caryophyllea),* tall fescue *(Schedonorus phoenix),* western brackenfern *(Pteridium aquilinum),* and buttercup *(Ranunculus* spp.). A few scattered trees, typically redwood *(Sequoia sempervirens),* Douglas-fir *(Pseudotsuga menziesii),* or red alder *(Alnus rubra)* also grow.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 11.7 inches (very high)

Hydrologic properties
Present annual flooding: Rare
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 5e
Ecological site: None assigned

Typical profile
Ap—0 to 7 inches (0 to 19 centimeters); silt loam
C1—7 to 32 inches (19 to 82 centimeters); silt loam
C2—32 to 60 inches (82 to 153 centimeters); silt loam

Characteristics of Russ and Similar Soils

Slope: 2 to 5 percent
Aspect: South clockwise to west
Landform: Lower alluvial flats; flood plains
Parent material: Alluvium derived from mixed sources
Typical vegetation: The existing plant community is dominated by sweet vernalgrass *(Anthoxanthum odoratum),* velvetgrass *(Holcus* spp.), silver hairgrass *(Aira caryophyllea),* tall fescue *(Schedonorus phoenix),* western brackenfern *(Pteridium aquilinum),* and buttercup *(Ranunculus* spp.). A few scattered trees, typically redwood *(Sequoia sempervirens),* Douglas-fir *(Pseudotsuga menziesii),* or red alder *(Alnus rubra)* also grow.
Surface area covered by coarse fragments: 0 to 5 percent coarse, rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 8.5 inches (high)

Hydrologic properties
Present annual flooding: Occasional
Present annual ponding: None
Surface water runoff class: Low
Current water table: Present
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 2e-2
Ecological site: None assigned

Typical profile
A—0 to 10 inches (0 to 25 centimeters); loam
C1—10 to 28 inches (25 to 71 centimeters); loamy coarse sand
C2—28 to 43 inches (71 to 109 centimeters); loamy coarse sand
C3—43 to 60 inches (109 to 152 centimeters); loamy fine sand

Minor Components

Arlynda and similar soils
Composition: About 5 percent
Slope: 2 to 5 percent

Landform: Small, wet depressions on flood plains
Ecological site: None assigned

Riverwash
Composition: About 5 percent
Slope: 0 to 5 percent
Landform: Flats adjacent to the stream channels
Ecological site: None assigned

174—Bigtree-Mystery complex, 2 to 9 percent slopes

Map Unit Setting

General location: Throughout Redwood National and State Parks
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Gently sloping alluvial fans and low terraces
Elevation: 5 to 670 feet (2 to 205 meters)
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 300 to 320 days

Map Unit Composition

Bigtree—50 percent
Mystery—25 percent
Minor components—25 percent

Characteristics of Bigtree and Similar Soils

Slope: 2 to 9 percent
Aspect: Northwest clockwise to west
Landform: Alluvial fans; fan remnants; low terraces
Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Small groups or individuals of Sitka spruce *(Picea sitchensis),* western hemlock *(Tsuga heterophylla),* or Douglas-fir *(Pseudotsuga menziesii)* grow in scattered areas throughout the unit. Some grand fir *(Abies grandis)* also grows. The understory is dominated by western swordfern *(Polystichum munitum)* and includes salal *(Gaultheria shallon),* deer fern *(Blechnum spicant),* and redwood-sorrel *(Oxalis oregana)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 9.9 inches (high)

Hydrologic properties
Present annual flooding: Rare
Present annual ponding: None
Surface water runoff class: Low
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 2e-2
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Typical profile

A—0 to 10 inches (0 to 26 centimeters); loam
Bw—10 to 47 inches (26 to 120 centimeters); loam
2C1—47 to 57 inches (120 to 145 centimeters); sandy loam
2C2—57 to 63 inches (145 to 160 centimeters); silt loam

Characteristics of Mystery and Similar Soils

Slope: 2 to 9 percent
Aspect: Northwest clockwise to west
Landform: Alluvial fans; fan remnants; low terraces
Parent material: Overbank alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Small groups or individuals of Sitka spruce *(Picea sitchensis),* western hemlock *(Tsuga heterophylla),* or Douglas-fir *(Pseudotsuga menziesii)* grow in scattered areas throughout the unit. Some grand fir *(Abies grandis)* also grows. The understory is dominated by western swordfern *(Polystichum munitum)* and includes salal *(Gaultheria shallon),* deer fern *(Blechnum spicant),* and redwood-sorrel *(Oxalis oregana)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 10.6 inches (very high)

Hydrologic properties

Present annual flooding: Occasional
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: B

Interpretive groups

Land capability classification, nonirrigated: 2e-2
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Typical profile

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 24 inches (3 to 60 centimeters); very fine sandy loam
2C—24 to 30 inches (60 to 77 centimeters); fine sandy loam
3Bwb—30 to 41 inches (77 to 104 centimeters); fine sandy loam
4Ab—41 to 60 inches (104 to 152 centimeters); silt loam

Minor Components

Fluventic Dystrudepts, loamy-skeletal, and similar soils

Composition: About 10 percent
Slope: 2 to 9 percent
Landform: Alluvial fans; fan remnants; low terraces
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluvaquentic Endoaquepts and similar soils

Composition: About 5 percent
Slope: 2 to 9 percent
Landform: Backwater channels; depressions on low terraces; flood plains
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluvents and similar soils
Composition: About 3 percent
Slope: 0 to 4 percent
Landform: Flats adjacent to stream channels
Ecological site: None assigned

Riverwash
Composition: About 3 percent
Slope: 2 to 9 percent
Landform: Active channels
Ecological site: None assigned

Typic Palehumults and similar soils
Composition: About 3 percent
Slope: 5 to 40 percent
Landform: Older terraces
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Arents and similar soils
Composition: About 1 percent
Slope: 0 to 4 percent
Landform: Old mill sites on terraces
Ecological site: None assigned

177—Battery, dry, 15 to 50 percent slopes

Map Unit Setting

General location: Along Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Uplifted, dissected stream terraces
Elevation: 220 to 915 feet (68 to 280 meters)
Mean annual precipitation: 65 to 85 inches (1,650 to 2,160 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 300 days

Map Unit Composition

Battery, dry—75 percent
Minor components—25 percent

Characteristics of Battery, Dry, and Similar Soils

Slope: 15 to 50 percent
Aspect: East clockwise to southwest
Landform: Upper, gentler portions of uplifted stream terraces
Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and a few Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: 0 to 10 percent coarse, rounded pebbles
Restrictive feature: None noted

Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.3 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
A—0 to 13 inches (0 to 32 centimeters); gravelly clay loam
Bt—13 to 70 inches (32 to 179 centimeters); gravelly clay loam
2C—70 to 79 inches (179 to 200 centimeters); paragravelly clay loam

Minor Components

Typic Palehumults, loamy-skeletal, and similar soils
Composition: About 20 percent
Slope: 5 to 50 percent
Landform: Steeper, loamy portions of uplifted stream terraces
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Oxyaquic Palehumults and similar soils
Composition: About 5 percent
Slope: 0 to 10 percent
Landform: Depressions on terraces
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

178—Battery, 15 to 50 percent slopes

Map Unit Setting

General location: Along the Smith River and Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Uplifted, dissected stream terraces
Elevation: 55 to 305 feet (17 to 93 meters)
Mean annual precipitation: 65 to 85 inches (1,650 to 2,160 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 270 to 290 days

Map Unit Composition

Battery—85 percent
Minor components—15 percent

Characteristics of Battery and Similar Soils

Slope: 15 to 50 percent
Aspect: South clockwise to northwest
Landform: Uplifted, dissected stream terraces

Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.0 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 7 inches (0 to 19 centimeters); gravelly loam
Bt—7 to 47 inches (19 to 120 centimeters); gravelly clay loam
BC—47 to 60 inches (120 to 152 centimeters); very gravelly clay loam

Minor Components

Typic Palehumults, loamy-skeletal, and similar soils
Composition: About 10 percent
Slope: 15 to 50 percent
Landform: Steeper slopes of stream terraces
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Coppercreek and similar soils
Composition: About 3 percent
Slope: 30 to 50 percent
Landform: Areas of sandstone and/or mudstone on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Lackscreek and similar soils
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Areas of sandstone that have convex slopes and spur ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

191—Talawa, 0 to 2 percent slopes

Map Unit Setting

General location: Northwest of the North Operations Work Center, east of Elk Valley Road

Major land resource area: 4B—Coastal Redwood Belt
Landscape: Alluvial plains
Landform: Dissected terrace remnants
Elevation: 55 to 80 feet (18 to 25 meters)
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Talawa—85 percent
Minor components—15 percent

Characteristics of Talawa and Similar Soils

Slope: 0 to 2 percent
Aspect: Southwest clockwise to north
Landform: Dissected remnants of marine terraces
Parent material: Fluviomarine deposits derived from mixed sources
Typical vegetation: The existing plant community is dominated by sweet vernalgrass *(Anthoxanthum odoratum),* velvetgrass *(Holcus* spp.), silver hairgrass *(Aira caryophyllea),* tall fescue *(Schedonorus phoenix),* western brackenfern *(Pteridium aquilinum),* and buttercup *(Ranunculus* spp.). In places, pasture is reverting to a forest of Sitka spruce *(Picea sitchensis),* cascara *(Frangula purshiana),* Himalayan blackberry *(Rubus armeniacus),* and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 7.4 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Somewhat poorly drained
Hydrologic soil group: B/D

Interpretive groups
Land capability classification, nonirrigated: 5w
Ecological site: None assigned

Typical profile
Ap—0 to 12 inches (0 to 31 centimeters); fine sandy loam
AB—12 to 17 inches (31 to 43 centimeters); fine sandy loam
Bw—17 to 39 inches (43 to 100 centimeters); sandy loam
C—39 to 63 inches (100 to 160 centimeters); loamy sand

Minor Components

Fluvaquentic Endoaquepts and similar soils
Composition: About 5 percent
Slope: 2 to 9 percent
Landform: Backwater channels; depressions on low terraces; flood plains
Ecological site: None assigned

Worswick and similar soils
Composition: About 5 percent
Slope: 0 to 2 percent

Landform: Natural levees
Ecological site: None assigned

Fluvents and similar soils
Composition: About 3 percent
Slope: 0 to 4 percent
Landform: Flats adjacent to stream channels
Ecological site: None assigned

Weott and similar soils
Composition: About 2 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions; low flood-plain steps
Ecological site: None assigned

192—Aubell, 2 to 9 percent slopes

Map Unit Setting

General location: Northwest of the North Operations Work Center, east of Elk Valley Road
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Alluvial plains
Landform: Dissected fan remnants
Elevation: 65 to 140 feet (21 to 43 meters)
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Aubell—85 percent
Minor components—15 percent

Characteristics of Aubell and Similar Soils

Slope: 2 to 9 percent
Aspect: Southwest clockwise to west
Landform: Dissected fan remnants
Parent material: Alluvium derived from mixed sources
Typical vegetation: The existing plant community is dominated by sweet vernalgrass *(Anthoxanthum odoratum),* velvetgrass *(Holcus* spp.), silver hairgrass *(Aira caryophyllea),* tall fescue *(Schedonorus phoenix),* western brackenfern *(Pteridium aquilinum),* and buttercup *(Ranunculus* spp.). In places, pasture is reverting to a forest of Sitka spruce *(Picea sitchensis),* cascara *(Frangula purshiana),* Himalayan blackberry *(Rubus armeniacus),* and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.6 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Somewhat poorly drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 5e
Ecological site: None assigned

Typical profile
Ap—0 to 10 inches (0 to 26 centimeters); clay loam
Bw—10 to 27 inches (26 to 69 centimeters); clay loam
C1—27 to 39 inches (69 to 100 centimeters); silty clay loam
C2—39 to 60 inches (100 to 152 centimeters); very gravelly clay loam

Minor Components

Fluvaquentic Endoaquepts and similar soils
Composition: About 3 percent
Slope: 2 to 9 percent
Landform: Backwater channels; depressions on low terraces; flood plains
Ecological site: None assigned

Fluvents and similar soils
Composition: About 3 percent
Slope: 0 to 4 percent
Landform: Flats adjacent to the stream channel
Ecological site: None assigned

Oxyaquic Haplohumults and similar soils
Composition: About 3 percent
Slope: 5 to 40 percent
Landform: Lower hillsides or mountainsides
Ecological site: None assigned

Weott and similar soils
Composition: About 3 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions; low flood-plain steps
Ecological site: None assigned

Worswick and similar soils
Composition: About 3 percent
Slope: 0 to 2 percent
Landform: Natural levees
Ecological site: None assigned

194—Tsunami, 2 to 9 percent slopes

Map Unit Setting

General location: Along Enderts Beach Road south of Crescent City
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Alluvial plains
Landform: Fan terraces
Elevation: 10 to 120 feet (4 to 38 meters)
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 300 to 365 days

Map Unit Composition

Tsunami—85 percent
Minor components—15 percent

Characteristics of Tsunami and Similar Soils

Slope: 2 to 9 percent
Aspect: Southwest clockwise to west
Landform: Fan remnants and fan terraces
Parent material: Alluvium derived from mixed sources
Typical vegetation: The existing plant community is dominated by sweet vernalgrass *(Anthoxanthum odoratum),* velvetgrass *(Holcus* spp.), silver hairgrass *(Aira caryophyllea),* tall fescue *(Schedonorus phoenix),* western brackenfern *(Pteridium aquilinum),* and buttercup *(Ranunculus* spp.). In places, pasture is reverting to a forest of Sitka spruce *(Picea sitchensis),* cascara *(Frangula purshiana),* Himalayan blackberry *(Rubus armeniacus),* and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 7.9 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Low
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 2e-1
Ecological site: None assigned

Typical profile
A1—0 to 4 inches (0 to 11 centimeters); gravelly loam
A2—4 to 18 inches (11 to 46 centimeters); loam
Bw—18 to 38 inches (46 to 97 centimeters); gravelly loam
BC—38 to 60 inches (97 to 152 centimeters); very cobbly loam

Minor Components

Arlynda and similar soils
Composition: About 10 percent
Slope: 0 to 2 percent
Landform: Depressions on fan terraces
Ecological site: None assigned

Swainslough and similar soils
Composition: About 5 percent
Slope: 0 to 2 percent
Landform: Depressions along margins of fan terraces
Ecological site: None assigned

220—Ferndale, 0 to 2 percent slopes

Map Unit Setting

General location: Alluvial plains of rivers and major creeks in coastal areas of northern California
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Alluvial plains
Landform: High flood-plain steps

Elevation: 5 to 160 feet (3 to 50 meters)
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 330 days

Map Unit Composition

Ferndale—85 percent
Minor components—15 percent

Characteristics of Ferndale and Similar Soils

Slope: 0 to 2 percent
Aspect: West clockwise to south
Landform: High flood-plain steps
Parent material: Alluvium derived from mixed sources
Typical vegetation: Cultivated pasture grasses and forbs
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 10.4 inches (very high)

Hydrologic properties
Present annual flooding: Rare
Present annual ponding: None
Surface water runoff class: Low
Current water table: Present
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 2s
Ecological site: None assigned

Typical profile
Ap—0 to 11 inches (0 to 28 centimeters); silt loam
C1—11 to 16 inches (28 to 41 centimeters); silt loam
C2—16 to 21 inches (41 to 53 centimeters); silt loam
C3—21 to 50 inches (53 to 127 centimeters); silt loam
C4—50 to 60 inches (127 to 152 centimeters); fine sandy loam

Minor Components

Russ and similar soils
Composition: About 5 percent
Slope: 0 to 2 percent
Landform: Natural levees
Ecological site: None assigned

Worswick and similar soils
Composition: About 5 percent
Slope: 0 to 2 percent
Landform: Low flood-plain steps; backswamps adjacent to natural levees
Ecological site: None assigned

Swainslough and similar soils
Composition: About 3 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions; low flood-plain steps
Ecological site: None assigned

Madriver and similar soils
Composition: About 2 percent
Slope: 0 to 2 percent
Landform: Natural levees
Ecological site: None assigned

222—Ferndale, moderately well drained, 0 to 5 percent slopes

Map Unit Setting

General location: Elk Prairie south of the Prairie Creek Redwood State Park Visitor Center
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Alluvial plains
Landform: Slightly dissected terraces and alluvial fans
Elevation: 25 to 185 feet (9 to 57 meters)
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 300 to 330 days

Map Unit Composition

Ferndale, moderately well drained—75 percent
Minor components—25 percent

Characteristics of Ferndale and Similar Soils

Slope: 0 to 5 percent
Aspect: Southwest clockwise to northwest
Landform: High flood-plain steps
Parent material: Alluvium derived from mixed sources
Typical vegetation: The existing plant community is dominated by sweet vernalgrass *(Anthoxanthum odoratum),* velvetgrass *(Holcus* spp.), silver hairgrass *(Aira caryophyllea),* tall fescue *(Schedonorus phoenix),* western brackenfern *(Pteridium aquilinum),* and buttercup *(Ranunculus* spp.). A few trees, typically redwood *(Sequoia sempervirens),* Douglas-fir *(Pseudotsuga menziesii),* or red alder *(Alnus rubra),* grow in scattered areas.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 11.3 inches (very high)

Hydrologic properties
Present annual flooding: Rare
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: B/D

Interpretive groups
Land capability classification, nonirrigated: 5e
Ecological site: None assigned

Typical profile
A—0 to 13 inches (0 to 33 centimeters); loam
BA—13 to 17 inches (33 to 44 centimeters); loam

Bw—17 to 41 inches (44 to 105 centimeters); silt loam
BC—41 to 51 inches (105 to 130 centimeters); silt loam
2C—51 to 60 inches (130 to 152 centimeters); very gravelly sandy loam

Minor Components

Fluventic Dystrudepts and similar soils
Composition: About 10 percent
Slope: 2 to 9 percent
Landform: Alluvial fans; fan remnants
Ecological site: None assigned

Ferndale and similar soils
Composition: About 5 percent
Slope: 0 to 2 percent
Landform: High flood-plain steps
Ecological site: None assigned

Weott and similar soils
Composition: About 5 percent
Slope: 0 to 2 percent
Landform: Backswamps; depressions; low flood-plain steps
Ecological site: None assigned

Bigriver and similar soils
Composition: About 2 percent
Slope: 0 to 5 percent
Landform: Low flood-plain steps
Ecological site: None assigned

Fluventic Dystrudepts and similar soils
Composition: About 2 percent
Slope: 2 to 9 percent
Landform: Alluvial fans
Ecological site: None assigned

Worswick and similar soils
Composition: About 1 percent
Slope: 0 to 2 percent
Landform: Natural levees
Ecological site: None assigned

251—Surpur, 2 to 9 percent slopes

Map Unit Setting

General location: Flat topped ridge between Freshwater Lagoon and McArthur Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Uplifted, dissected marine terrace remnants
Elevation: 760 to 1,325 feet (233 to 405 meters)
Mean annual precipitation: 80 to 90 inches (2,030 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 270 to 280 days

Map Unit Composition

Surpur—75 percent
Minor components—25 percent

Characteristics of Surpur and Similar Soils

Slope: 2 to 9 percent
Aspect: Northeast clockwise to southeast
Landform: Moderately broad ridges
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with small amounts of western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Tanoak and salal *(Gaultheria shallon)* are present in places. The forb layer is sparse and may consist of western swordfern *(Polystichum munitum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 11.2 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 2e-1
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 14 inches (5 to 36 centimeters); loam
BA—14 to 22 inches (36 to 57 centimeters); silt loam
Bt—22 to 33 inches (57 to 85 centimeters); silty clay loam
2BC—33 to 79 inches (85 to 200 centimeters); silty clay loam

Minor Components

Tectah and similar soils
Composition: About 10 percent
Slope: 2 to 9 percent
Landform: Summits of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fortyfour and similar soils
Composition: About 5 percent
Slope: 2 to 9 percent
Landform: Sloping margins of ridges
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Trailhead and similar soils
Composition: About 5 percent
Slope: 2 to 9 percent

Landform: Sloping margins of ridges
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Ahpah and similar soils
Composition: About 3 percent
Slope: 2 to 9 percent
Landform: Sloping margins of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Squashan and similar soils
Composition: About 2 percent
Slope: 2 to 9 percent
Landform: Steeper mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

289—Espa, 2 to 9 percent slopes

Map Unit Setting

General location: North of Orick and Skunk Cabbage Creek and west of Highway 101
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills
Landform: Uplifted, dissected marine terrace remnants
Elevation: 160 to 740 feet (49 to 227 meters)
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 280 to 325 days

Map Unit Composition

Espa—80 percent
Minor components—20 percent

Characteristics of Espa and Similar Soils

Slope: 2 to 9 percent
Aspect: North clockwise to southwest
Landform: Broad ridgetops and upper hillslopes
Parent material: Colluvium and residuum derived from weakly consolidated fluvial, beach, and dune deposits
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 10.7 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None

Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 2e-1
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 3 inches (0 to 7 centimeters); slightly decomposed plant material
A—3 to 16 inches (7 to 41 centimeters); loam
Bt—16 to 47 inches (41 to 120 centimeters); loam
CBt—47 to 79 inches (120 to 200 centimeters); sandy loam

Minor Components

Goldbluffs and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Narrow ridges on hillslopes
Ecological site: F004BX106CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Vaccinium ovatum/Polystichum munitum*

Ossagon and similar soils
Composition: About 5 percent
Slope: 9 to 30 percent
Landform: Steeper hillsides
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Squashan and similar soils
Composition: About 5 percent
Slope: 2 to 9 percent
Landform: Steeper hillsides
Ecological site: F004BX106CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Vaccinium ovatum/Polystichum munitum*

Ahpah and similar soils
Composition: About 3 percent
Slope: 0 to 30 percent
Landform: Sloping margins of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Coppercreek and similar soils
Composition: About 2 percent
Slope: 0 to 30 percent
Landform: Areas of sandstone and/or mudstone on hillsides
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

290—Surpur-Mettah complex, 9 to 30 percent slopes

Map Unit Setting

General location: Holter and Ah Pah ridges east of Highway 101
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains

Landform: Nearly level to moderately steep ridges and upper mountain slopes
Elevation: 970 to 2,260 feet (296 to 690 meters)
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Surpur—50 percent
Mettah—35 percent
Minor components—15 percent

Characteristics of Surpur and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northeast
Landform: Moderately broad ridges
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with small amounts of western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Tanoak and salal *(Gaultheria shallon)* are present in a few places. The forb layer is sparse and may consist of western swordfern *(Polystichum munitum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.4 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 4 inches (0 to 10 centimeters); slightly decomposed plant material
A—4 to 12 inches (10 to 31 centimeters); gravelly loam
Bt1—12 to 41 inches (31 to 103 centimeters); clay loam
Bt2—41 to 63 inches (103 to 159 centimeters); fine sandy loam
C—63 to 79 inches (159 to 200 centimeters); loamy sand

Characteristics of Mettah and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northeast
Landform: Upper mountain slopes; moderately broad ridges
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with small amounts of western hemlock

(Tsuga heterophylla). Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Tanoak and salal *(Gaultheria shallon)* are present in a few places. The forb layer is sparse and may consist of western swordfern *(Polystichum munitum)*.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 7.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 9 inches (2 to 22 centimeters); clay loam
BAt—9 to 17 inches (22 to 42 centimeters); silty clay loam
Bt1—17 to 58 inches (42 to 148 centimeters); clay
Bt2—58 to 79 inches (148 to 200 centimeters); clay loam

Minor Components

Coppercreek and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Gently concave slopes; broad hollows on margins of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Ossagon and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Saddles and shoulders of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Lackscreek and similar soils
Composition: About 3 percent
Slope: 0 to 30 percent
Landform: Strongly convex slopes; ridge spurs; near margins of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typic Dystrudepts and similar soils
Composition: About 2 percent
Slope: 0 to 30 percent
Landform: Convex positions, formed in sandy marine deposits on ridges

Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

291—Ossagon-Squashan complex, 9 to 30 percent slopes

Map Unit Setting

General location: North of Orick, along the east side of Highway 101 as it passes through Prairie Creek Redwoods State Park east to Holter and Ah Pah ridges
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills and mountains
Landform: Nearly level to moderately steep mountain slopes, hillslopes, and ridges
Elevation: 285 to 1,515 feet (87 to 462 meters)
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 300 days

Map Unit Composition

Ossagon—65 percent
Squashan—20 percent
Minor components—15 percent

Characteristics of Ossagon and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northwest
Landform: Hillslopes; mountain slopes
Parent material: Colluvium and residuum derived from older, weakly consolidated fluvial, beach, and dune deposits from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.9 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 4 inches (0 to 10 centimeters); slightly decomposed plant material
A—4 to 12 inches (10 to 31 centimeters); loam
AB—12 to 16 inches (31 to 41 centimeters); clay loam

Bt—16 to 48 inches (41 to 121 centimeters); clay loam
BCt—48 to 56 inches (121 to 141 centimeters); sandy loam
C—56 to 79 inches (141 to 200 centimeters); sandy loam

Characteristics of Squashan and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northwest
Landform: Narrow ridges and hillslopes; mountain slopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: 0 to 30 percent coarse, well rounded pebbles and 0 to 30 percent well rounded cobbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 4e-4
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 5 inches (2 to 12 centimeters); gravelly loam
Bt—5 to 20 inches (12 to 52 centimeters); very gravelly loam
2BC—20 to 33 inches (52 to 84 centimeters); very gravelly loamy sand
2C—33 to 79 inches (84 to 200 centimeters); extremely gravelly sand

Minor Components

Ossagon and similar soils
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Steeper hillsides or mountainsides
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Coppercreek and similar soils
Composition: About 3 percent
Slope: 15 to 30 percent
Landform: Areas of sandstone and/or mudstone on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typic Dystrudepts and similar soils
Composition: About 3 percent
Slope: 15 to 30 percent
Landform: Convex positions
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Lackscreek and similar soils
Composition: About 2 percent
Slope: 15 to 30 percent
Landform: Areas of sandstone that have convex slopes and spur ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

292—Ossagon-Squashan complex, 30 to 50 percent slopes

Map Unit Setting

General location: North of Orick, along the east side of Highway 101 as it passes through Prairie Creek Redwoods State Park east to Holter and Ah Pah ridges
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills and mountains
Landform: Steep mountain slopes, hillslopes, and spur ridges
Elevation: 190 to 1,945 feet (58 to 593 meters)
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 300 days

Map Unit Composition

Ossagon—65 percent
Squashan—20 percent
Minor components—15 percent

Characteristics of Ossagon and Similar Soils

Slope: 30 to 50 percent
Aspect: East clockwise to northwest
Landform: Hillslopes and mountain slopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted

Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 10.5 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 13 inches (2 to 34 centimeters); loam
Bt—13 to 34 inches (34 to 87 centimeters); silt loam
BCt—34 to 54 inches (87 to 136 centimeters); sandy loam
C—54 to 75 inches (136 to 190 centimeters); sandy loam

Characteristics of Squashan and Similar Soils

Slope: 30 to 50 percent
Aspect: East clockwise to northwest
Landform: Narrow ridges and hillslopes; mountain slopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: 0 to 30 percent coarse, well rounded pebbles and 0 to 30 percent well rounded cobbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 5.9 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 12 inches (4 to 31 centimeters); gravelly loam
Bt—12 to 43 inches (31 to 109 centimeters); very gravelly sandy clay loam
CBt—43 to 74 inches (109 to 189 centimeters); very gravelly sandy clay loam

Minor Components

Ossagon and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Moderately steep hillsides; mountainsides
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Coppercreek and similar soils
Composition: About 3 percent
Slope: 30 to 50 percent
Landform: Areas of sandstone and/or mudstone on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typic Dystrudepts and similar soils
Composition: About 3 percent
Slope: 30 to 50 percent
Landform: Convex positions on ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Lackscreek and similar soils
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Areas of sandstone that have convex slopes and spur ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

293—Ossagon-Goldbluffs-Squashan complex, 9 to 30 percent slopes

Map Unit Setting

General location: North of Orick, along the west side of Highway 101 as it passes through Prairie Creek Redwoods State Park west to the ocean
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills
Landform: Nearly level to moderately steep hillslopes and ridges
Elevation: 15 to 1,010 feet (6 to 309 meters)
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 260 to 325 days

Map Unit Composition

Ossagon—50 percent
Goldbluffs—25 percent
Squashan—15 percent
Minor components—10 percent

Characteristics of Ossagon and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northeast
Landform: Broad ridgetops and upper hillslopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 10.7 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 15 inches (3 to 39 centimeters); loam
Bt—15 to 65 inches (39 to 165 centimeters); loam
CBt—65 to 79 inches (165 to 200 centimeters); sandy loam

Characteristics of Goldbluffs and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northeast
Landform: Narrow ridges on hillslopes
Parent material: Colluvium and residuum from weakly consolidated fluvial and beach deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Sitka spruce *(Picea sitchensis)* is present in limited amounts and replaces Douglas-fir on some sites close to the coast. The understory is dominated by California huckleberry *(Vaccinium ovatum).* Salal *(Gaultheria shallon)* is present in some places in small amounts. The ground cover is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*.
Surface area covered by coarse fragments: 0 to 20 percent coarse, well rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX106CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Vaccinium ovatum/Polystichum munitum*

Typical profile
A—0 to 8 inches (0 to 20 centimeters); very gravelly loam
BA—8 to 13 inches (20 to 32 centimeters); very gravelly loam
Bt—13 to 25 inches (32 to 64 centimeters); very gravelly sandy loam
C—25 to 60 inches (64 to 152 centimeters); extremely gravelly sandy loam

Characteristics of Squashan and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northeast
Landform: Upper hillslopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: 0 to 30 percent coarse, well rounded pebbles and 0 to 30 percent well rounded cobbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 6.4 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-4
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A1—2 to 9 inches (5 to 22 centimeters); loam
A2—9 to 17 inches (22 to 43 centimeters); gravelly loam
Bt1—17 to 47 inches (43 to 120 centimeters); very gravelly clay loam
Bt2—47 to 65 inches (120 to 165 centimeters); extremely gravelly sandy loam
BCt—65 to 79 inches (165 to 200 centimeters); extremely gravelly sandy loam

Minor Components

Coppercreek and similar soils
Composition: About 2 percent
Slope: 5 to 30 percent
Landform: Areas of sandstone and/or mudstone on hillsides
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Lackscreek and similar soils
Composition: About 2 percent
Slope: 5 to 30 percent
Landform: Areas of sandstone that have convex slopes and spur ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Ossagon and similar soils
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Steeper hillsides
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Squashan and similar soils
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Steeper hillsides
Ecological site: F004BX106CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Vaccinium ovatum/Polystichum munitum*

Typic Dystrudepts and similar soils
Composition: About 2 percent
Slope: 0 to 30 percent
Landform: Convex positions on ridges
Ecological site: F004BX106CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Vaccinium ovatum/Polystichum munitum*

294—Ossagon-Goldbluffs-Squashan complex, 30 to 50 percent slopes

Map Unit Setting

General location: North of Orick, along the west side of Highway 101 as it passes through Prairie Creek Redwoods State Park west to the ocean
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills (fig. 11)
Landform: Steep hillsides and narrow spur ridges
Elevation: 15 to 1,010 feet (6 to 309 meters)
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 260 to 325 days

Map Unit Composition

Ossagon—35 percent
Goldbluffs—20 percent
Squashan—15 percent
Minor components—30 percent

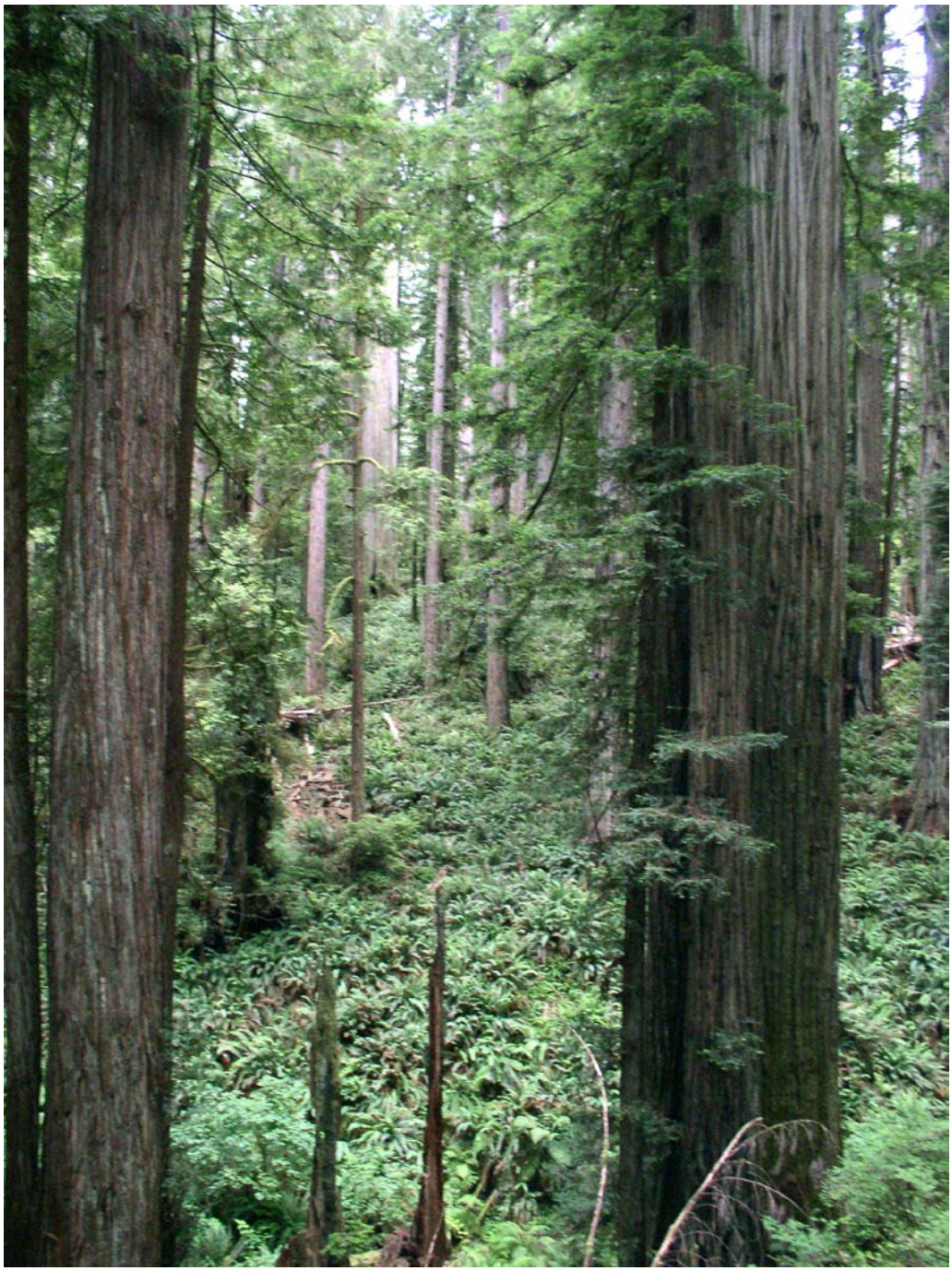

Figure 11.—An area of Ossagon-Goldbuffs-Squashan complex, 30 to 50 percent slopes. The dominant vegetation consists of redwood, Douglas-fir, western hemlock, California huckleberry, redwood-sorrel, and swordfern.

Characteristics of Ossagon and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to northwest
Landform: Hillslopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources

Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.9 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 4 inches (0 to 10 centimeters); slightly decomposed plant material
A—4 to 12 inches (10 to 31 centimeters); loam
ABt—12 to 16 inches (31 to 41 centimeters); clay loam
Bt—16 to 48 inches (41 to 121 centimeters); clay loam
CBt—48 to 79 inches (121 to 200 centimeters); sandy loam

Characteristics of Goldbluffs and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to northwest
Landform: Narrow ridges on hillslopes
Parent material: Colluvium and residuum from weakly consolidated fluvial and beach deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Sitka spruce *(Picea sitchensis)* is present in limited amounts and replaces Douglas-fir on some sites close to the coast. The understory is dominated by California huckleberry *(Vaccinium ovatum).* Salal *(Gaultheria shallon)* is present in some areas in small amounts. The ground cover is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*.
Surface area covered by coarse fragments: 0 to 5 percent well rounded cobbles and 0 to 20 percent coarse, well rounded pebbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 4.6 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX106CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Vaccinium ovatum/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 10 inches (3 to 25 centimeters); gravelly loam
Bt—10 to 37 inches (25 to 95 centimeters); very gravelly sandy loam
BC—37 to 47 inches (95 to 119 centimeters); very gravelly coarse sandy loam
C—47 to 69 inches (119 to 175 centimeters); extremely gravelly sandy loam

Characteristics of Squashan and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to northwest
Landform: Hillslopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)*. Disturbance has modified the composition of the species on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also present in very small amounts. The understory is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, consists of California huckleberry *(Vaccinium ovatum)* and a limited amount of salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: 0 to 30 percent coarse, well rounded pebbles and 0 to 30 percent well rounded cobbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 5.8 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 14 inches (2 to 35 centimeters); gravelly loam
Bt—14 to 37 inches (35 to 93 centimeters); very gravelly loam
BC—37 to 47 inches (93 to 119 centimeters); very gravelly sandy loam
C—47 to 60 inches (119 to 152 centimeters); extremely gravelly sand

Minor Components

Ossagon and similar soils
Composition: About 10 percent
Slope: 50 to 75 percent
Landform: Steeper hillsides
Ecological site: F004BX107CA, *Sequoia sempervirens/Polystichum munitum*

Squashan and similar soils
Composition: About 10 percent
Slope: 50 to 75 percent
Landform: Steeper hillsides
Ecological site: F004BX106CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Vaccinium ovatum/Polystichum munitum*

Coppercreek and similar soils
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Areas of sandstone and/or mudstone on hillsides
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fluvaquentic Endoaquepts and similar soils
Composition: About 2 percent
Slope: 2 to 9 percent
Landform: Flood plains
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluventic Dystrudepts and similar soils
Composition: About 2 percent
Slope: 5 to 30 percent
Landform: Alluvial fans and flood-plain steps
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Oxyaquic Haplohumults and similar soils
Composition: About 2 percent
Slope: 15 to 40 percent
Landform: Oceanside drainageways on lower hillsides
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

462—Mooncreek-Noisy-Tossup complex, 9 to 30 percent slopes

Map Unit Setting

General location: Beaver and Pine Ridge areas
Major land resource area: 5—Siskiyou-Trinity Area
Landscape: Mountains
Landform: Ridges and upper mountain slopes
Elevation: 245 to 4,985 feet (75 to 1,520 meters)
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 150 to 250 days

Map Unit Composition

Mooncreek—35 percent
Noisy—25 percent

Tossup—15 percent
Minor components—25 percent

Characteristics of Mooncreek and Similar Soils

Slope: 9 to 30 percent
Aspect: Northwest clockwise to east
Landform: Ridges and upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak with small amounts of Cascade barberry *(Mahonia nervosa)*. The dominant herbaceous species are modesty *(Whipplea modesta)* and western brackenfern *(Pteridium aquilinum)*.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles and 0 to 2 percent subangular cobbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.3 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB101CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 3 inches (0 to 7 centimeters); slightly decomposed plant material
A1—3 to 8 inches (7 to 21 centimeters); very gravelly loam
A2—8 to 16 inches (21 to 40 centimeters); very gravelly loam
Bt1—16 to 27 inches (40 to 68 centimeters); gravelly clay loam
Bt2—27 to 37 inches (68 to 95 centimeters); cobbly clay loam
Bt3—37 to 50 inches (95 to 128 centimeters); gravelly clay loam
Bt4—50 to 63 inches (128 to 160 centimeters); very paragravelly clay loam

Characteristics of Noisy and Similar Soils

Slope: 9 to 30 percent
Aspect: Northwest clockwise to east
Landform: Ridges and upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak in the shrub layer and modesty *(Whipplea modesta)* in the forb layer.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 3.2 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 6 inches (2 to 15 centimeters); very gravelly loam
BAt—6 to 12 inches (15 to 30 centimeters); gravelly clay loam
BCt1—12 to 24 inches (30 to 60 centimeters); extremely gravelly loam
BCt2—24 to 61 inches (60 to 155 centimeters); extremely gravelly loam

Characteristics of Tossup and Similar Soils

Slope: 9 to 30 percent
Aspect: Northwest clockwise to east
Landform: Upper mountain slopes and broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak with small amounts of Cascade barberry *(Mahonia nervosa)*. The dominant herbaceous species are modesty *(Whipplea modesta)* and western brackenfern *(Pteridium aquilinum)*.
Surface area covered by coarse fragments: 0 to 10 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 6.5 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB101CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 8 inches (2 to 20 centimeters); very gravelly loam
Bt1—8 to 21 inches (20 to 53 centimeters); gravelly clay
Bt2—21 to 37 inches (53 to 95 centimeters); gravelly clay
Bt3—37 to 48 inches (95 to 123 centimeters); silty clay
BCt—48 to 79 inches (123 to 200 centimeters); very gravelly clay

Minor Components

Redtop and similar soils
Composition: About 10 percent
Slope: 2 to 30 percent
Landform: Ridges
Ecological site: F005XB103CA, *Pseudotsuga menziesii–Quercus chrysolepis/ Lithocarpus densiflorus* var. *echinoides*

Xerorthents, frequently flooded, and similar soils
Composition: About 5 percent
Slope: 2 to 15 percent
Landform: Drainageways
Ecological site: None assigned

Darkwoods and similar soils
Composition: About 4 percent
Slope: 2 to 50 percent
Landform: Mountain slopes
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Oakside and similar soils
Composition: About 2 percent
Slope: 2 to 30 percent
Landform: Mountain slopes
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Sidehill and similar soils
Composition: About 2 percent
Slope: 2 to 30 percent
Landform: Mountain slopes
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Endoaquents and similar soils
Composition: About 1 percent
Slope: 15 to 70 percent
Landform: Debris slides
Ecological site: None assigned

Rock outcrop
Composition: About 1 percent
Slope: 2 to 50 percent
Landform: Ridges
Ecological site: None assigned

463—Mooncreek-Noisy-Sidehill complex, 30 to 75 percent slopes

Map Unit Setting

General location: Beaver and Pine Ridge areas
Major land resource area: 5—Siskiyou-Trinity Area
Landscape: Mountains
Landform: Mountain slopes
Elevation: 45 to 4,755 feet (15 to 1,450 meters)

Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 150 to 250 days

Map Unit Composition

Mooncreek—25 percent
Noisy—20 percent
Sidehill—20 percent
Minor components—35 percent

Characteristics of Mooncreek and Similar Soils

Slope: 30 to 75 percent
Aspect: South clockwise to west
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak with small amounts of Cascade barberry *(Mahonia nervosa)*. The dominant herbaceous species are modesty *(Whipplea modesta)* and western brackenfern *(Pteridium aquilinum)*.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles and 0 to 2 percent subangular cobbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.9 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB101CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A1—2 to 5 inches (4 to 12 centimeters); very gravelly loam
A2—5 to 8 inches (12 to 21 centimeters); very gravelly loam
Bt1—8 to 16 inches (21 to 40 centimeters); gravelly clay loam
Bt2—16 to 26 inches (40 to 67 centimeters); gravelly clay loam
Bt3—26 to 42 inches (67 to 106 centimeters); gravelly clay loam
Bt4—42 to 62 inches (106 to 158 centimeters); very paragravelly clay loam

Characteristics of Noisy and Similar Soils

Slope: 30 to 75 percent
Aspect: South clockwise to west
Landform: Upper mountain slopes and ridges
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific

madrone *(Arbutus menziesii)*. The understory is dominated by tanoak in the shrub layer and modesty *(Whipplea modesta)* in the forb layer.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 5.7 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A1—2 to 7 inches (4 to 18 centimeters); very gravelly loam
A2—7 to 12 inches (18 to 30 centimeters); gravelly loam
Bt1—12 to 23 inches (30 to 59 centimeters); extremely cobbly loam
Bt2—23 to 39 inches (59 to 100 centimeters); very gravelly clay loam
BCt1—39 to 47 inches (100 to 120 centimeters); extremely gravelly clay loam
BCt2—47 to 63 inches (120 to 160 centimeters); very gravelly loam

Characteristics of Sidehill and Similar Soils

Slope: 30 to 75 percent
Aspect: South clockwise to west
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak in the shrub layer and modesty *(Whipplea modesta)* in the forb layer.
Surface area covered by coarse fragments: 15 to 55 percent coarse, very angular pebbles and 5 to 25 percent very angular cobbles
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 3.7 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
Oe—2 to 6 inches (4 to 15 centimeters); moderately decomposed plant material
A1—6 to 10 inches (15 to 25 centimeters); extremely gravelly sandy loam
A2—10 to 18 inches (25 to 45 centimeters); extremely gravelly sandy loam
Bw—18 to 33 inches (45 to 85 centimeters); very gravelly loam
2R—33 to 59 inches (85 to 150 centimeters); bedrock

Minor Components

Darkwoods and similar soils
Composition: About 10 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Endoaquents and similar soils
Composition: About 5 percent
Slope: 15 to 70 percent
Landform: Rotational debris slides
Ecological site: None assigned

Oakside and similar soils
Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Rock outcrop
Composition: About 5 percent
Slope: 2 to 50 percent
Landform: Ridges
Ecological site: None assigned

Tossup and similar soils
Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Upper mountain slopes and ridges
Ecological site: F005XB103CA, *Pseudotsuga menziesii–Quercus chrysolepis/ Lithocarpus densiflorus* var. *echinoides*

Xerorthents, frequently flooded, and similar soils
Composition: About 5 percent
Slope: 2 to 15 percent
Landform: Drainageways
Ecological site: None assigned

464—Mooncreek-Tossup-Noisy complex, 15 to 50 percent slopes

Map Unit Setting

General location: Beaver and Pine Ridge areas
Major land resource area: 5—Siskiyou-Trinity Area
Landscape: Mountains
Landform: Mountain slopes

Elevation: 45 to 4,785 feet (15 to 1,460 meters)
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 150 to 250 days

Map Unit Composition

Mooncreek—40 percent
Tossup—20 percent
Noisy—15 percent
Minor components—25 percent

Characteristics of Mooncreek and Similar Soils

Slope: 15 to 50 percent
Aspect: Northwest clockwise to southeast
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak with small amounts of Cascade barberry *(Mahonia nervosa)*. The dominant herbaceous species are modesty *(Whipplea modesta)* and western brackenfern *(Pteridium aquilinum)*.
Surface area covered by coarse fragments: 0 to 2 percent subangular cobbles and 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.5 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB101CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 3 inches (4 to 8 centimeters); gravelly loam
ABt—3 to 6 inches (8 to 16 centimeters); gravelly loam
Bt1—6 to 21 inches (16 to 54 centimeters); gravelly clay loam
Bt2—21 to 38 inches (54 to 96 centimeters); gravelly silty clay loam
Bt3—38 to 55 inches (96 to 139 centimeters); gravelly silty clay loam
Bt4—55 to 79 inches (139 to 200 centimeters); gravelly silty clay loam

Characteristics of Tossup and Similar Soils

Slope: 15 to 50 percent
Aspect: Northwest clockwise to southeast
Landform: Upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone

Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak with small amounts of Cascade barberry *(Mahonia nervosa)*. The dominant herbaceous species are modesty *(Whipplea modesta)* and western brackenfern *(Pteridium aquilinum)*.
Surface area covered by coarse fragments: 0 to 10 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 10.3 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB101CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 4 inches (2 to 9 centimeters); loam
Bt1—4 to 6 inches (9 to 15 centimeters); clay loam
Bt2—6 to 12 inches (15 to 31 centimeters); clay loam
Bt3—12 to 20 inches (31 to 52 centimeters); clay loam
Bt4—20 to 41 inches (52 to 105 centimeters); clay loam
Bt5—41 to 61 inches (105 to 155 centimeters); clay loam

Characteristics of Noisy and Similar Soils

Slope: 15 to 50 percent
Aspect: Northwest clockwise to southeast
Landform: Ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak in the shrub layer and modesty *(Whipplea modesta)* in the forb layer.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 3.8 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 5 inches (4 to 13 centimeters); very gravelly loam
Bt1—5 to 10 inches (13 to 25 centimeters); extremely gravelly loam
Bt2—10 to 31 inches (25 to 80 centimeters); very gravelly clay loam
BCt1—31 to 51 inches (80 to 130 centimeters); extremely gravelly sandy clay loam
BCt2—51 to 61 inches (130 to 154 centimeters); very gravelly sandy clay loam

Minor Components

Redtop and similar soils
Composition: About 10 percent
Slope: 15 to 50 percent
Landform: Mountains
Ecological site: F005XB103CA, *Pseudotsuga menziesii–Quercus chrysolepis/ Lithocarpus densiflorus* var. *echinoides*

Xerorthents, frequently flooded, and similar soils
Composition: About 5 percent
Slope: 2 to 15 percent
Landform: Drainageways
Ecological site: None assigned

Darkwoods and similar soils
Composition: About 4 percent
Slope: 15 to 50 percent
Landform: Mountain slopes
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Oakside and similar soils
Composition: About 2 percent
Slope: 15 to 50 percent
Landform: Mountain slopes
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Sidehill and similar soils
Composition: About 2 percent
Slope: 15 to 50 percent
Landform: Mountain slopes
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Endoaquents and similar soils
Composition: About 1 percent
Slope: 15 to 70 percent
Landform: Debris slides
Ecological site: None assigned

Rock outcrop
Composition: About 1 percent
Slope: 2 to 50 percent
Landform: Ridges
Ecological site: None assigned

465—Sidehill-Oakside-Darkwoods complex, 50 to 100 percent slopes

Map Unit Setting

General location: Beaver and Pine Ridge areas
Major land resource area: 5—Siskiyou-Trinity Area
Landscape: Mountains
Landform: Dissected mountain slopes
Elevation: 65 to 4,755 feet (20 to 1,450 meters)
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 150 to 250 days

Map Unit Composition

Sidehill—35 percent
Oakside—25 percent
Darkwoods—20 percent
Minor components—20 percent

Characteristics of Sidehill and Similar Soils

Slope: 50 to 100 percent
Aspect: Southeast clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak in the shrub layer and modesty *(Whipplea modesta)* in the forb layer.
Surface area covered by coarse fragments: 5 to 25 percent very angular cobbles and 15 to 55 percent coarse, very angular pebbles
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 3.3 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 8
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 7 inches (2 to 19 centimeters); gravelly loam
Bw—7 to 30 inches (19 to 75 centimeters); very gravelly loam
R—30 to 59 inches (75 to 150 centimeters); bedrock

Characteristics of Oakside and Similar Soils

Slope: 50 to 100 percent
Aspect: Southeast clockwise to northwest

Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with canyon live oak *(Quercus chrysolepis)* as a subordinate species. The fire regime may lead to a patch or mosaic of both species. The understory is dominated by tanoak *(Lithocarpus densiflorus)* and canyon live oak.
Surface area covered by coarse fragments: 25 to 75 percent coarse, subangular pebbles
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 1.3 inches (very low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Somewhat excessively drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 8
Ecological site: F005XB103CA, *Pseudotsuga menziesii–Quercus chrysolepis/ Lithocarpus densiflorus* var. *echinoides*

Typical profile
Oi—0 to 2 inches (0 to 6 centimeters); slightly decomposed plant material
A1—2 to 6 inches (6 to 16 centimeters); extremely gravelly loam
A2—6 to 10 inches (16 to 26 centimeters); extremely cobbly loam
R—10 to 59 inches (26 to 150 centimeters); bedrock

Characteristics of Darkwoods and Similar Soils

Slope: 50 to 75 percent
Aspect: Southeast clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The subcanopy consists of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The understory is dominated by tanoak in the shrub layer and modesty *(Whipplea modesta)* in the forb layer.
Surface area covered by coarse fragments: 0 to 10 percent cobbles and 10 to 35 percent coarse gravel
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 5.7 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 8
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 7 inches (2 to 19 centimeters); extremely gravelly loam
ABt—7 to 15 inches (19 to 39 centimeters); very gravelly loam
Bt1—15 to 25 inches (39 to 63 centimeters); extremely gravelly clay loam
Bt2—25 to 31 inches (63 to 80 centimeters); gravelly clay loam
Bt3—31 to 44 inches (80 to 113 centimeters); gravelly loam
BCt—44 to 52 inches (113 to 131 centimeters); extremely gravelly sandy loam
C—52 to 79 inches (131 to 200 centimeters); very gravelly loamy sand

Minor Components

Noisy and similar soils

Composition: About 10 percent
Slope: 15 to 50 percent
Landform: Ridges
Ecological site: F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Lithocarpus densiflorus*

Rock outcrop

Composition: About 7 percent
Slope: 2 to 50 percent
Landform: Ridges
Ecological site: None assigned

Xerorthents, frequently flooded, and similar soils

Composition: About 3 percent
Slope: 2 to 15 percent
Landform: Drainageways
Ecological site: None assigned

473—Highoaks-Noisy-Mudhorse complex, 9 to 50 percent slopes

Map Unit Setting

General location: Lord Ellis Summit and Snow Camp Ridge areas
Major land resource area: 5—Siskiyou-Trinity Area
Landscape: Mountains
Landform: Summits and side slopes of hills and mountains
Elevation: 110 to 3,900 feet (35 to 1,190 meters)
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 150 to 250 days

Map Unit Composition

Highoaks—30 percent
Noisy—25 percent
Mudhorse—15 percent
Minor components—30 percent

Characteristics of Highoaks and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from mudstone and sandstone
Typical vegetation: The overstory of the existing plant community is dominated by Oregon white oak *(Quercus garryana)*. The understory is dominated by bristly

dogstail grass *(Cynosurus echinatus)* and woodland strawberry *(Fragaria vesca)*. The shrub cover is of limited extent and may include creeping snowberry *(Symphoricarpos mollis)* and Pacific poison oak *(Toxicodendron diversilobum)*.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX114CA, *Quercus garryana/Cynosurus echinatus*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 9 inches (2 to 22 centimeters); gravelly loam
Bt1—9 to 20 inches (22 to 51 centimeters); silty clay loam
Bt2—20 to 31 inches (51 to 80 centimeters); gravelly silty clay loam
Bt3—31 to 42 inches (80 to 107 centimeters); gravelly silty clay
Bt4—42 to 50 inches (107 to 127 centimeters); very paragravelly silty clay loam
BCt—50 to 63 inches (127 to 160 centimeters); extremely paragravelly silty clay loam

Characteristics of Noisy and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from mudstone
Typical vegetation: The overstory of the existing plant community is dominated by Oregon white oak *(Quercus garryana)*. The understory is dominated by bristly dogstail grass *(Cynosurus echinatus)* and woodland strawberry *(Fragaria vesca)*. The shrub cover is of limited extent and may include creeping snowberry *(Symphoricarpos mollis)* and Pacific poison oak *(Toxicodendron diversilobum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 5.1 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX114CA, *Quercus garryana/Cynosurus echinatus*

Typical profile

Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 5 inches (4 to 12 centimeters); very gravelly loam
Bt1—5 to 9 inches (12 to 24 centimeters); very gravelly clay loam
Bt2—9 to 24 inches (24 to 60 centimeters); very gravelly clay loam
BCt—24 to 39 inches (60 to 99 centimeters); very gravelly silty clay loam
C—39 to 63 inches (99 to 160 centimeters); extremely gravelly silty clay loam

Characteristics of Mudhorse and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory of the existing plant community is dominated by Oregon white oak *(Quercus garryana)*. The understory is dominated by bristly dogstail grass *(Cynosurus echinatus)* and woodland strawberry *(Fragaria vesca)*. The shrub cover is of limited extent and may include creeping snowberry *(Symphoricarpos mollis)* and Pacific poison oak *(Toxicodendron diversilobum)*.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.9 inches (high)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 6e
Ecological site: F004BX114CA, *Quercus garryana/Cynosurus echinatus*

Typical profile

Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 5 inches (4 to 12 centimeters); gravelly loam
Bt1—5 to 12 inches (12 to 30 centimeters); loam
Bt2—12 to 20 inches (30 to 51 centimeters); clay loam
Btg1—20 to 32 inches (51 to 82 centimeters); clay
Btg2—32 to 51 inches (82 to 130 centimeters); clay
Btg3—51 to 79 inches (130 to 200 centimeters); clay

Minor Components

Sidehill and similar soils

Composition: About 10 percent
Slope: 50 to 75 percent
Landform: Mountain slopes
Ecological site: None assigned

Oakside and similar soils

Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: None assigned

Rock outcrop
Composition: About 5 percent
Slope: 2 to 50 percent
Landform: Mountain slopes
Ecological site: None assigned

Hullygully and similar soils
Composition: About 3 percent
Slope: 30 to 50 percent
Landform: Mountains
Ecological site: None assigned

Xerorthents, frequently flooded, and similar soils
Composition: About 3 percent
Slope: 2 to 15 percent
Landform: Drainageways
Ecological site: None assigned

Darkwoods and similar soils
Composition: About 2 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: None assigned

Endoaquents and similar soils
Composition: About 2 percent
Slope: 15 to 70 percent
Landform: Debris slides
Ecological site: None assigned

480—Dolason-Countshill-Airstrip complex, 9 to 30 percent slopes

Map Unit Setting

General location: Bald Hills area
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Ridgetops and upper mountain slopes
Elevation: 500 to 3,385 feet (153 to 1,032 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 200 to 250 days

Map Unit Composition

Dolason—50 percent
Countshill—25 percent
Airstrip—20 percent
Minor components—5 percent

Characteristics of Dolason and Similar Soils

Slope: 9 to 30 percent
Aspect: Southeast clockwise to west
Landform: Ridges
Parent material: Colluvium and residuum weathered from sandstone
Typical vegetation: The existing plant community is dominated by herbaceous species, such as tall oatgrass *(Arrhenatherum elatius),* annual vernalgrass *(Anthoxanthum*

aristatum), bentgrass *(Agrostis),* and bristly dogstail grass *(Cynosurus echinatus)*. Forbs include common sheep sorrel *(Rumex acetosella)* and hairy cat's ear *(Hypochaeris radicata)*. Western brackenfern *(Pteridium aquilinium),* a native forb, grows on some sites.

Surface area covered by coarse fragments: 0 to 12 percent coarse, subangular pebbles and 0 to 3 percent subangular cobbles

Restrictive feature: None noted

Slowest permeability class: Moderate

Available water capacity to a depth of 60 inches: About 8.7 inches (high)

Hydrologic properties

Present annual flooding: None

Present annual ponding: None

Surface water runoff class: Medium

Current water table: None noted

Natural drainage class: Well drained

Hydrologic soil group: B

Interpretive groups

Land capability classification, nonirrigated: 4e-1

Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Typical profile

A1—0 to 17 inches (0 to 44 centimeters); loam

A2—17 to 35 inches (44 to 89 centimeters); gravelly loam

Bw—35 to 59 inches (89 to 150 centimeters); gravelly loam

C—59 to 77 inches (150 to 195 centimeters); very gravelly sandy loam

Characteristics of Countshill and Similar Soils

Slope: 9 to 30 percent

Aspect: Southeast clockwise to west

Landform: Gently convex ridgetops and spur ridges on mountain slopes; gently convex ridges

Parent material: Colluvium and residuum weathered from siltstone and sandstone

Typical vegetation: The existing plant community is dominated by herbaceous species, such as tall oatgrass *(Arrhenatherum elatius),* annual vernalgrass *(Anthoxanthum aristatum),* bentgrass *(Agrostis),* and bristly dogstail grass *(Cynosurus echinatus)*. Forbs include common sheep sorrel *(Rumex acetosella)* and hairy cat's ear *(Hypochaeris radicata)*. Western brackenfern *(Pteridium aquilinium),* a native forb, grows on some sites.

Surface area covered by coarse fragments: None

Depth to restrictive feature: 20 to 36 inches to paralithic bedrock

Slowest permeability class: Moderate above the bedrock

Available water capacity to a depth of 60 inches: About 5.0 inches (moderate)

Hydrologic properties

Present annual flooding: None

Present annual ponding: None

Surface water runoff class: Medium

Current water table: None noted

Natural drainage class: Well drained

Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 4e-8

Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Typical profile

A1—0 to 7 inches (0 to 19 centimeters); loam
A2—7 to 20 inches (19 to 51 centimeters); loam
AC—20 to 28 inches (51 to 72 centimeters); very gravelly loam
Cr—28 to 60 inches (72 to 152 centimeters); soft bedrock

Characteristics of Airstrip and Similar Soils

Slope: 9 to 30 percent
Aspect: Southeast clockwise to west
Landform: Convex areas on ridges
Parent material: Colluvium and residuum weathered from sandstone and siltstone
Typical vegetation: The existing plant community is dominated by herbaceous species, such as tall oatgrass *(Arrhenatherum elatius),* annual vernalgrass *(Anthoxanthum aristatum),* bentgrass *(Agrostis),* and bristly dogstail grass *(Cynosurus echinatus)*. Forbs include common sheep sorrel *(Rumex acetosella)* and hairy cat's ear *(Hypochaeris radicata)*. Western brackenfern *(Pteridium aquilinium),* a native forb, grows on some sites.
Surface area covered by coarse fragments: 15 to 35 percent coarse, subangular pebbles and 0 to 5 percent subangular cobbles
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 4.1 inches (low)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 4e-8
Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Typical profile

A—0 to 17 inches (0 to 42 centimeters); gravelly loam
AC—17 to 26 inches (42 to 67 centimeters); extremely gravelly loam
R—26 to 60 inches (67 to 152 centimeters); bedrock

Minor Components

Rock outcrop

Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

481—Dolason-Airstrip-Countshill complex, cool, 15 to 50 percent slopes

Map Unit Setting

General location: Bald Hills area; areas where forest vegetation has invaded adjacent to prairies
Major land resource area: 4B—Coastal Redwood Belt

Landscape: Mountains
Landform: Smooth mountain slopes and spur ridges
Elevation: 1,115 to 3,125 feet (340 to 953 meters)
Mean annual precipitation: 85 to 100 inches (2,160 to 2,550 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Dolason—45 percent
Airstrip—25 percent
Countshill—20 percent
Minor components—10 percent

Characteristics of Dolason and Similar Soils

Slope: 15 to 50 percent
Aspect: South clockwise to west
Landform: Mountain slopes
Parent material: Colluvium and residuum weathered from siltstone and sandstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: 0 to 3 percent subangular cobbles and 0 to 15 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 10.4 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 3 inches (0 to 7 centimeters); slightly decomposed plant material
A1—3 to 15 inches (7 to 37 centimeters); loam
A2—15 to 34 inches (37 to 87 centimeters); loam
Bw1—34 to 46 inches (87 to 117 centimeters); gravelly clay loam
Bw2—46 to 78 inches (117 to 197 centimeters); gravelly clay loam

Characteristics of Airstrip and Similar Soils

Slope: 15 to 50 percent
Aspect: South clockwise to west
Landform: Steeper slopes adjacent to drainageways; narrow spur ridges
Parent material: Colluvium and residuum weathered from sandstone and siltstone

Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 4.7 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 15 inches (4 to 38 centimeters); gravelly loam
C—15 to 41 inches (38 to 105 centimeters); extremely gravelly loam
R—41 to 60 inches (105 to 152 centimeters); bedrock

Characteristics of Countshill and Similar Soils

Slope: 15 to 50 percent
Aspect: South clockwise to west
Landform: Convex slopes; spur ridges
Parent material: Colluvium and residuum weathered from siltstone and sandstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 35 inches to paralithic bedrock; 35 to 40 inches to lithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 4.3 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e

Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile

A1—0 to 7 inches (0 to 19 centimeters); loam
A2—7 to 19 inches (19 to 47 centimeters); loam
AC—19 to 23 inches (47 to 59 centimeters); very gravelly loam
Cr—23 to 35 inches (59 to 90 centimeters); soft bedrock
R—35 to 60 inches (90 to 152 centimeters); bedrock

Minor Components

Humic Dystroxerepts and similar soils

Composition: About 10 percent
Slope: 15 to 50 percent
Landform: Mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

482—Dolason-Countshill complex, 30 to 50 percent slopes

Map Unit Setting

General location: Bald Hills area
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep and very steep mountain slopes
Elevation: 1,135 to 3,275 feet (347 to 999 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 200 to 250 days

Map Unit Composition

Dolason—55 percent
Countshill—30 percent
Minor components—15 percent

Characteristics of Dolason and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to west
Landform: Mountain slopes
Parent material: Colluvium and residuum weathered from siltstone and sandstone
Typical vegetation: The existing plant community is dominated by herbaceous species, such as tall oatgrass *(Arrhenatherum elatius),* annual vernalgrass *(Anthoxanthum aristatum),* bentgrass *(Agrostis),* and bristly dogstail grass *(Cynosurus echinatus)*. Forbs include common sheep sorrel *(Rumex acetosella)* and hairy cat's ear *(Hypochaeris radicata)*. Western brackenfern *(Pteridium aquilinium),* a native forb, grows on some sites.
Surface area covered by coarse fragments: 0 to 12 percent coarse, subangular pebbles and 0 to 3 percent subangular cobbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 7.6 inches (high)

Hydrologic properties

Present annual flooding: None

Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Typical profile
A1—0 to 13 inches (0 to 33 centimeters); loam
A2—13 to 21 inches (33 to 53 centimeters); gravelly loam
Bw—21 to 44 inches (53 to 113 centimeters); very gravelly loam
C—44 to 59 inches (113 to 150 centimeters); very gravelly loam

Characteristics of Countshill and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to west
Landform: Convex slopes and spur ridges
Parent material: Colluvium and residuum weathered from siltstone and sandstone
Typical vegetation: The existing plant community is dominated by herbaceous species, such as tall oatgrass *(Arrhenatherum elatius),* annual vernalgrass *(Anthoxanthum aristatum),* bentgrass *(Agrostis),* and bristly dogstail grass *(Cynosurus echinatus)*. Forbs include common sheep sorrel *(Rumex acetosella)* and hairy cat's ear *(Hypochaeris radicata)*. Western brackenfern *(Pteridium aquilinium),* a native forb, grows on some sites.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 24 to 35 inches to paralithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 5.3 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Typical profile
A1—0 to 3 inches (0 to 8 centimeters); gravelly loam
A2—3 to 24 inches (8 to 60 centimeters); loam
AC—24 to 30 inches (60 to 75 centimeters); very gravelly loam
Cr—30 to 60 inches (75 to 152 centimeters); soft bedrock

Minor Components

Oxyaquic Dystroxerepts and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent

Landform: Small slumps and hollows at the heads of drainages on mountain slopes
Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Rock outcrop
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

483—Doolyville-Pasturerock complex, 30 to 50 percent slopes

Map Unit Setting

General location: Steep, lower mountain slopes east of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, lower mountain slopes. Vertical drainage in the substratum is impaired. During the rainy season, ground water is perched and seeps downslope more or less parallel to the ground surface.
Elevation: 170 to 2,950 feet (53 to 900 meters)
Mean annual precipitation: 70 to 85 inches (1,780 to 2,160 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 240 to 270 days

Map Unit Composition

Doolyville—40 percent
Pasturerock—35 percent
Minor components—25 percent

Characteristics of Doolyville and Similar Soils

Slope: 30 to 50 percent
Aspect: Southeast clockwise to southwest
Landform: Smooth to rounded slopes; along poorly incised drainages; earthflows
Parent material: Earthflow deposits derived from mudstone and sandstone
Typical vegetation: The existing plant community is dominated by Oregon white oak *(Quercus garryana)* with an understory of orchardgrass *(Dactylis glomerata),* woodland strawberry *(Fragaria vesca),* sanicle *(Sanicula* spp.), and vetch *(Vicia* spp.).
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Very slow
Available water capacity to a depth of 60 inches: About 8.5 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Somewhat poorly drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX112CA, *Quercus garryana/Dactylis glomerata*

Typical profile

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 6 inches (3 to 15 centimeters); silt loam
ABt—6 to 11 inches (15 to 28 centimeters); silty clay loam
Bt—11 to 15 inches (28 to 37 centimeters); silty clay loam
Btg—15 to 18 inches (37 to 46 centimeters); gravelly silty clay loam
Cg—18 to 61 inches (46 to 155 centimeters); very gravelly loam

Characteristics of Pasturerock and Similar Soils

Slope: 30 to 50 percent
Aspect: Southeast clockwise to southwest
Landform: Raised areas; along well incised streams; mountain slopes
Parent material: Colluvium derived from sandstone and mudstone
Typical vegetation: The overstory of the existing plant community is dominated by Oregon white oak *(Quercus garryana)*. The understory is dominated by bristly dogstail grass *(Cynosurus echinatus)* and woodland strawberry *(Fragaria vesca)*. The shrub cover is of limited extent and may include creeping snowberry *(Symphoricarpos mollis)* and Pacific poison oak *(Toxicodendron diversilobum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.7 inches (high)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 6e
Ecological site: F004BX114CA, *Quercus garryana/Cynosurus echinatus*

Typical profile

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 8 inches (3 to 20 centimeters); loam
AB—8 to 17 inches (20 to 42 centimeters); gravelly clay loam
Bt—17 to 55 inches (42 to 140 centimeters); gravelly clay loam
BCt—55 to 68 inches (140 to 172 centimeters); gravelly clay loam

Minor Components

Aquic Hapludalfs and similar soils

Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Irregular slopes that have more rapid earthflow activity than the major soils; earthflows
Ecological site: F004BX112CA, *Quercus garryana/Dactylis glomerata*

Rock outcrop

Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Dystroxerepts and similar soils
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: F004BX114CA, *Quercus garryana/Cynosurus echinatus*

484—Elkcamp-Dolason-Airstrip complex, 15 to 50 percent slopes

Map Unit Setting

General location: Bald Hills area
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Interspersed smooth and hummocky or irregular mountain slopes (fig. 12). The hummocky and irregular areas are slow-moving earthflows. Vertical drainage is impaired in the substratum in some of the soils.
Elevation: 610 to 3,230 feet (187 to 985 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 200 to 250 days

Map Unit Composition

Elkcamp—50 percent
Dolason—30 percent
Airstrip—15 percent
Minor components—5 percent

Figure 12.—An area of Elkcamp-Dolason-Airstrip complex, 15 to 50 percent slopes. The dominant vegetation consists of grasses and forbs. Forest encroachment is occurring along prairie margins and in drainageways.

Characteristics of Elkcamp and Similar Soils

Slope: 15 to 50 percent
Aspect: Southeast clockwise to west
Landform: Irregular mountain slopes
Parent material: Earthflow deposits derived from sandstone, mudstone, and siltstone
Typical vegetation: The existing plant community is dominated by blue wildrye *(Elymus glaucus),* soft brome *(Bromus hordeaceus),* tall oatgrass *(Arrhenatherum elatius),* and bristly dogstail grass *(Cynosurus echinatus)*. Scotch broom *(Cytisus scoparius)* grows on some sites.
Surface area covered by coarse fragments: 0 to 15 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.9 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: R004BX104CA, Middle prairie, mountain slopes, sandstone and mudstone, gravelly clay loam

Typical profile
A—0 to 8 inches (0 to 20 centimeters); loam
ABt—8 to 21 inches (20 to 54 centimeters); gravelly loam
Bt1—21 to 37 inches (54 to 95 centimeters); gravelly clay loam
Bt2—37 to 49 inches (95 to 125 centimeters); gravelly clay loam
Bt3—49 to 65 inches (125 to 166 centimeters); very gravelly clay loam

Characteristics of Dolason and Similar Soils

Slope: 15 to 50 percent
Aspect: Southeast clockwise to west
Landform: Mountain slopes
Parent material: Colluvium and residuum weathered from siltstone and sandstone
Typical vegetation: The existing plant community is dominated by herbaceous species, such as tall oatgrass *(Arrhenatherum elatius),* annual vernalgrass *(Anthoxanthum aristatum),* bentgrass *(Agrostis),* and bristly dogstail grass *(Cynosurus echinatus)*. Forbs include common sheep sorrel *(Rumex acetosella)* and hairy cat's ear *(Hypochaeris radicata)*. Western brackenfern *(Pteridium aquilinium),* a native forb, grows on some sites.
Surface area covered by coarse fragments: 0 to 12 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 7.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High

Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Typical profile
A1—0 to 13 inches (0 to 33 centimeters); loam
A2—13 to 21 inches (33 to 53 centimeters); gravelly loam
Bw—21 to 44 inches (53 to 113 centimeters); very gravelly loam
C—44 to 59 inches (113 to 150 centimeters); very gravelly loam

Characteristics of Airstrip and Similar Soils

Slope: 15 to 50 percent
Aspect: Southeast clockwise to west
Landform: Narrow spur ridges
Parent material: Colluvium and residuum weathered from sandstone and siltstone
Typical vegetation: The existing plant community is dominated by herbaceous species, such as tall oatgrass *(Arrhenatherum elatius),* annual vernalgrass *(Anthoxanthum aristatum),* bentgrass *(Agrostis),* and bristly dogstail grass *(Cynosurus echinatus)*. Forbs include common sheep sorrel *(Rumex acetosella)* and hairy cat's ear *(Hypochaeris radicata)*. Western brackenfern *(Pteridium aquilinium),* a native forb, grows on some sites.
Surface area covered by coarse fragments: 15 to 35 percent coarse, subangular pebbles and 0 to 5 percent subangular cobbles
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 3.7 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Typical profile
A—0 to 14 inches (0 to 36 centimeters); gravelly loam
Bw—14 to 31 inches (36 to 80 centimeters); very gravelly loam
R—31 to 60 inches (80 to 152 centimeters); bedrock

Minor Components

Raingage, cool, and similar soils
Composition: About 3 percent
Slope: 15 to 50 percent
Landform: Slow moving portions of earthflow
Ecological site: R004BX103CA, Lower prairie, earthflows, sandstone and mudstone, gravelly loam

Rock outcrop
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

485—Pasturerock-Coyoterock-Maneze complex, 30 to 50 percent slopes

Map Unit Setting

General location: Steep, upper mountain slopes east of the lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep mountain slopes. Vertical drainage is impaired in the substratum in some of the soils.
Elevation: 515 to 3,160 feet (158 to 964 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 200 to 260 days

Map Unit Composition

Pasturerock—40 percent
Coyoterock—25 percent
Maneze—15 percent
Minor components—20 percent

Characteristics of Pasturerock and Similar Soils

Slope: 15 to 50 percent
Aspect: East clockwise to northwest
Landform: Shoulders of spur ridges; near deeply incised drainages; mountain slopes
Parent material: Colluvium derived from sandstone and mudstone
Typical vegetation: The overstory of the existing plant community is dominated by Oregon white oak *(Quercus garryana)*. The understory is dominated by bristly dogstail grass *(Cynosurus echinatus)* and woodland strawberry *(Fragaria vesca)*. The shrub cover is of limited extent and may include creeping snowberry *(Symphoricarpos mollis)* and Pacific poison oak *(Toxicodendron diversilobum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.2 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX114CA, *Quercus garryana/Cynosurus echinatus*

Typical profile

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 5 inches (2 to 12 centimeters); loam
AB—5 to 8 inches (12 to 20 centimeters); clay loam
Bt1—8 to 17 inches (20 to 42 centimeters); clay loam
Bt2—17 to 35 inches (42 to 90 centimeters); very cobbly clay loam
BCt—35 to 48 inches (90 to 122 centimeters); gravelly clay loam
C—48 to 69 inches (122 to 174 centimeters); extremely gravelly sandy clay loam

Characteristics of Coyoterock and Similar Soils

Slope: 15 to 50 percent
Aspect: East clockwise to northwest
Landform: Poorly incised drainages; hillslope hollows; lower mountain slopes
Parent material: Colluvium derived from sandstone, mudstone, and siltstone
Typical vegetation: The overstory of the existing plant community is dominated by Oregon white oak *(Quercus garryana)*. The understory is dominated by bristly dogstail grass *(Cynosurus echinatus)* and woodland strawberry *(Fragaria vesca)*. The shrub cover is of limited extent and may include creeping snowberry *(Symphoricarpos mollis)* and Pacific poison oak *(Toxicodendron diversilobum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Very slow
Available water capacity to a depth of 60 inches: About 9.2 inches (high)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: D

Interpretive groups

Land capability classification, nonirrigated: 6e
Ecological site: F004BX114CA, *Quercus garryana/Cynosurus echinatus*

Typical profile

Oi—0 to 0.5 inch (0 to 1 centimeter); slightly decomposed plant material
A1—0.5 to 8 inches (1 to 21 centimeters); cobbly clay loam
A2—8 to 16 inches (21 to 41 centimeters); gravelly clay loam
BAt—16 to 29 inches (41 to 73 centimeters); gravelly clay loam
Bt—29 to 39 inches (73 to 99 centimeters); gravelly clay
Cg—39 to 60 inches (99 to 152 centimeters); gravelly silty clay

Characteristics of Maneze and Similar Soils

Slope: 15 to 50 percent
Aspect: East clockwise to northwest
Landform: Spur ridges and convex slopes on mountain slopes
Parent material: Colluvium derived from sandstone, mudstone, and siltstone
Typical vegetation: The overstory of the existing plant community is dominated by Oregon white oak *(Quercus garryana)*. The understory is dominated by bristly dogstail grass *(Cynosurus echinatus)* and woodland strawberry *(Fragaria vesca)*. The shrub cover is of limited extent and may include creeping snowberry *(Symphoricarpos mollis)* and Pacific poison oak *(Toxicodendron diversilobum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted

Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 5.7 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX114CA, *Quercus garryana/Cynosurus echinatus*

Typical profile
Oi—0 to 0.5 inch (0 to 1 centimeter); slightly decomposed plant material
A1—0.5 to 11 inches (1 to 29 centimeters); loam
A2—11 to 18 inches (29 to 46 centimeters); extremely cobbly loam
Bw—18 to 44 inches (46 to 113 centimeters); extremely cobbly clay loam
Cg—44 to 63 inches (113 to 161 centimeters); very gravelly silty clay loam

Minor Components

Airstrip and similar soils
Composition: About 10 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Rock outcrop
Composition: About 10 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

531—Atwell-Coppercreek complex, 30 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, wet, irregular mountain slopes
Elevation: 170 to 2,865 feet (52 to 874 meters)
Mean annual precipitation: 70 to 85 inches (1,780 to 2,160 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 290 days

Map Unit Composition

Atwell—45 percent
Coppercreek—40 percent
Minor components—15 percent

Characteristics of Atwell and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to north

Landform: Around streams and draws on earthflow; steep, wet, irregular mountain slopes
Parent material: Earthflow deposits derived from sheared sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: 3 to 15 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Very slow
Available water capacity to a depth of 60 inches: About 9.4 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 10 inches (0 to 25 centimeters); silt loam
ABt—10 to 30 inches (25 to 75 centimeters); clay loam
Bt—30 to 71 inches (75 to 181 centimeters); gravelly clay loam
2BCtg—71 to 82 inches (181 to 208 centimeters); clay loam

Characteristics of Coppercreek and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to north
Landform: Raised areas on mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 5 inches (3 to 12 centimeters); loam
BAt—5 to 20 inches (12 to 51 centimeters); clay loam
Bt—20 to 61 inches (51 to 155 centimeters); clay loam
Cg—61 to 79 inches (155 to 200 centimeters); clay

Minor Components

Lithic Eutrudepts and similar soils
Composition: About 10 percent
Slope: 50 to 75 percent
Landform: Very steep areas near major streams on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Orthents and similar soils
Composition: About 3 percent
Slope: 50 to 90 percent
Landform: Hillslope hollows; steep mountain slopes
Ecological site: None assigned

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

532—Atwell-Ladybird complex, 30 to 50 percent slopes

Map Unit Setting

General location: Mountain slopes east of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, wet, irregular, broad, amphitheater-shaped mountain slopes
Elevation: 55 to 1,920 feet (18 to 586 meters)
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 290 days

Map Unit Composition

Atwell—75 percent
Ladybird—15 percent
Minor components—10 percent

Characteristics of Atwell and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Around streams and draws on earthflow; steep, wet, irregular mountain slopes

Parent material: Earthflow deposits derived from sheared sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Very slow
Available water capacity to a depth of 60 inches: About 9.5 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 7 inches (5 to 17 centimeters); silt loam
ABt—7 to 23 inches (17 to 59 centimeters); clay loam
Bt—23 to 32 inches (59 to 81 centimeters); gravelly clay loam
2Cg—32 to 81 inches (81 to 205 centimeters); clay

Characteristics of Ladybird and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Raised areas on mountain slopes
Parent material: Earthflow deposits derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.5 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 6 inches (5 to 16 centimeters); gravelly clay loam
AB—6 to 22 inches (16 to 55 centimeters); gravelly clay loam
Bt—22 to 47 inches (55 to 120 centimeters); gravelly clay loam
Cg—47 to 71 inches (120 to 180 centimeters); very gravelly clay loam

Minor Components

Lackscreek and similar soils
Composition: About 3 percent
Slope: 30 to 50 percent
Landform: Around small rock outcrops or “knockers” on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Slidecreek, wet substratum, and similar soils
Composition: About 3 percent
Slope: 30 to 50 percent
Landform: Along streams and in moist, downslope-running concavities on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Rock outcrop
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

533—Coppercreek-Ahpah complex, 15 to 30 percent slopes

Map Unit Setting

General location: Headwaters of drainage basins west of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Moderately steep, broad, north-trending spur ridges
Elevation: 380 to 2,765 feet (116 to 844 meters)
Mean annual precipitation: 80 to 95 inches (2,030 to 2,410 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 245 to 285 days

Map Unit Composition

Coppercreek—60 percent
Ahpah—15 percent
Minor components—25 percent

Characteristics of Coppercreek and Similar Soils

Slope: 15 to 30 percent
Aspect: North clockwise to southeast
Landform: Shoulders of broad ridges
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Western hemlock *(Tsuga heterophylla)* is present in some places. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and small amounts of salal *(Gaultheria shallon)*. The cover of grasses and forbs is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.3 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 0.5 inch (0 to 1 centimeter); slightly decomposed plant material
A—0.5 to 3 inches (1 to 7 centimeters); gravelly loam
BA—3 to 13 inches (7 to 32 centimeters); gravelly loam
Bt1—13 to 41 inches (32 to 103 centimeters); gravelly silty clay loam
Bt2—41 to 62 inches (103 to 157 centimeters); very gravelly silty clay loam

Characteristics of Ahpah and Similar Soils

Slope: 15 to 30 percent
Aspect: North clockwise to southeast
Landform: Tops of ridges
Parent material: Residuum and colluvium derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Western hemlock *(Tsuga heterophylla)* is present in some places. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and small amounts of salal *(Gaultheria shallon)*. The cover of grasses and forbs is limited.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock; 39 to 60 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 4.2 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None

Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-8
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 4 inches (3 to 10 centimeters); gravelly clay loam
Bw—4 to 19 inches (10 to 47 centimeters); gravelly silty clay loam
C—19 to 32 inches (47 to 81 centimeters); very gravelly loam
Cr—32 to 43 inches (81 to 110 centimeters); soft bedrock
R—43 to 60 inches (110 to 152 centimeters); bedrock

Minor Components

Lackscreek and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Locally steep areas on narrow portions of ridges
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Tectah and similar soils
Composition: About 10 percent
Slope: 15 to 30 percent
Landform: Broad areas on ridges
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Devilscreek and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Wet hollows near edges of ridges
Ecological site: None assigned

534—Coppercreek-Ahpah-Lackscreek complex, 15 to 30 percent slopes

Map Unit Setting

General location: Western part of the lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 415 to 2,495 feet (127 to 761 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 270 days

Map Unit Composition

Coppercreek—40 percent
Ahpah—20 percent

Lackscreek—20 percent
Minor components—20 percent

Characteristics of Coppercreek and Similar Soils

Slope: 15 to 30 percent
Aspect: South clockwise to northeast
Landform: Shoulders of broad ridges
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.7 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 6 inches (5 to 15 centimeters); loam
BAt—6 to 13 inches (15 to 32 centimeters); gravelly clay loam
Bt—13 to 41 inches (32 to 105 centimeters); gravelly clay loam
BCt—41 to 62 inches (105 to 157 centimeters); very gravelly clay loam

Characteristics of Ahpah and Similar Soils

Slope: 15 to 30 percent
Aspect: South clockwise to northeast
Landform: Tops of ridges
Parent material: Residuum and colluvium derived from sandstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 5.4 inches (moderate)

Hydrologic properties
Present annual flooding: None

Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 4e-8
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 2 inches (0 to 6 centimeters); slightly decomposed plant material
A—2 to 11 inches (6 to 27 centimeters); gravelly loam
Bw—11 to 25 inches (27 to 63 centimeters); gravelly loam
CB—25 to 38 inches (63 to 96 centimeters); very gravelly loam
Cr—38 to 60 inches (96 to 152 centimeters); soft bedrock

Characteristics of Lackscreek and Similar Soils

Slope: 15 to 30 percent
Aspect: South clockwise to northeast
Landform: Locally steep or strongly convex areas on ridges
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.8 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-8
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 3 inches (0 to 8 centimeters); slightly decomposed plant material
A—3 to 6 inches (8 to 15 centimeters); gravelly loam
Bt—6 to 27 inches (15 to 69 centimeters); very cobbly clay loam
C—27 to 35 inches (69 to 90 centimeters); extremely gravelly clay loam
R—35 to 60 inches (90 to 152 centimeters); bedrock

Minor Components

Sasquatch and similar soils
Composition: About 10 percent

Slope: 15 to 30 percent
Landform: Shoulders of broad ridges
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Ahpah, umbric epipedon, and similar soils
Composition: About 8 percent
Slope: 15 to 30 percent
Landform: Tops of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Rock outcrop
Composition: About 2 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

535—Wiregrass-Scaath complex, 15 to 30 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Moderately steep, broad, main mountain divides and spur ridges
Elevation: 1,200 to 2,590 feet (367 to 790 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 220 to 260 days

Map Unit Composition

Wiregrass—60 percent
Scaath—25 percent
Minor components—15 percent

Characteristics of Wiregrass and Similar Soils

Slope: 15 to 30 percent
Aspect: Southwest clockwise to northeast
Landform: Shoulders of broad ridges
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High

Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 5 inches (3 to 12 centimeters); very gravelly silt loam
ABt—5 to 11 inches (12 to 29 centimeters); gravelly silty clay loam
Bt—11 to 41 inches (29 to 103 centimeters); gravelly clay loam
BCt—41 to 67 inches (103 to 170 centimeters); very gravelly loam

Characteristics of Scaath and Similar Soils

Slope: 15 to 30 percent
Aspect: Southwest clockwise to northeast
Landform: Narrow ridges and strongly convex areas on mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 4.5 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-8
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 18 inches (5 to 45 centimeters); gravelly loam
BAt—18 to 24 inches (45 to 61 centimeters); very cobbly clay loam
Bt—24 to 37 inches (61 to 94 centimeters); extremely gravelly clay loam
R—37 to 60 inches (94 to 152 centimeters); bedrock

Minor Components

Ahpah and similar soils
Composition: About 10 percent
Slope: 15 to 30 percent

Landform: Tops of ridges
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Rock outcrop
Composition: About 5 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

536—Coppercreek-Ahpah-Lackscreek complex, 30 to 50 percent slopes

Map Unit Setting

General location: Mountain slopes west of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 60 to 3,035 feet (19 to 926 meters)
Mean annual precipitation: 75 to 100 inches (1,900 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 290 days

Map Unit Composition

Coppercreek—45 percent
Ahpah—20 percent
Lackscreek—15 percent
Minor components—20 percent

Characteristics of Coppercreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to northeast
Landform: Mountain slopes
Parent material: Colluvium and residuum weathered from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Western hemlock *(Tsuga heterophylla)* is present in some places. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and small amounts of salal *(Gaultheria shallon)*. The cover of grasses and forbs is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.4 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e

Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile

Oi—0 to 5 inches (0 to 12 centimeters); slightly decomposed plant material
A—5 to 10 inches (12 to 25 centimeters); gravelly loam
AB—10 to 16 inches (25 to 40 centimeters); gravelly clay loam
Bt—16 to 44 inches (40 to 113 centimeters); gravelly clay loam
BC—44 to 73 inches (113 to 185 centimeters); gravelly clay loam

Characteristics of Ahpah and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to northeast
Landform: Spur ridges; convex slope breaks on mountain slopes
Parent material: Residuum and colluvium derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Western hemlock *(Tsuga heterophylla)* is present in some places. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and small amounts of salal *(Gaultheria shallon)*. The cover of grasses and forbs is limited.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 5.0 inches (low)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 6e
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile

Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 9 inches (5 to 22 centimeters); gravelly clay loam
Bw—9 to 28 inches (22 to 70 centimeters); gravelly silty clay loam
C—28 to 34 inches (70 to 87 centimeters); very gravelly loam
Cr—34 to 60 inches (87 to 152 centimeters); soft bedrock

Characteristics of Lackscreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to northeast
Landform: Narrow ridges and steeper, more convex mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry

(Vaccinium ovatum). Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 1.9 inches (very low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX115CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Vaccinium ovatum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 6 inches (2 to 14 centimeters); gravelly loam
Bt—6 to 18 inches (14 to 45 centimeters); extremely gravelly clay loam
C—18 to 23 inches (45 to 58 centimeters); very gravelly loam
R—23 to 60 inches (58 to 152 centimeters); bedrock

Minor Components

Tectah and similar soils
Composition: About 8 percent
Slope: 0 to 30 percent
Landform: Gentle, upper mountain slopes
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Devilscreek and similar soils
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Seeps and low, wet places; near intermittent streams on mountain slopes
Ecological site: None assigned

Trailhead and similar soils
Composition: About 3 percent
Slope: 0 to 30 percent
Landform: Gentle, upper mountain slopes
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Rock outcrop
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

537—Wiregrass-Scaath complex, dry, 15 to 30 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Moderately steep, broad spur ridges on coherent sandstone
Elevation: 1,735 to 2,395 feet (529 to 731 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 270 days

Map Unit Composition

Wiregrass—50 percent
Scaath—20 percent
Minor components—30 percent

Characteristics of Wiregrass and Similar Soils

Slope: 15 to 30 percent
Aspect: Northwest clockwise to east
Landform: Shoulders of ridges
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.9 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 5 inches (2 to 12 centimeters); loam
BAt—5 to 12 inches (12 to 30 centimeters); gravelly clay loam
Bt—12 to 51 inches (30 to 130 centimeters); gravelly clay loam
BCt—51 to 85 inches (130 to 215 centimeters); very gravelly clay loam

Characteristics of Scaath and Similar Soils

Slope: 15 to 30 percent
Aspect: Northwest clockwise to east
Landform: Narrow ridges and strongly convex areas on mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 5.0 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-8
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 18 inches (5 to 45 centimeters); gravelly loam
BAt—18 to 24 inches (45 to 61 centimeters); very cobbly clay loam
Bt—24 to 37 inches (61 to 94 centimeters); extremely gravelly clay loam
R—37 to 60 inches (94 to 152 centimeters); bedrock

Minor Components

Ahpah and similar soils
Composition: About 10 percent
Slope: 15 to 30 percent
Landform: Tops of ridges
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Pittplace and similar soils
Composition: About 10 percent
Slope: 15 to 30 percent
Landform: Broad, gentler slopes away from ridges
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Rock outcrop
Composition: About 5 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Trailhead and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Broad, gentler slopes away from ridges
Ecological site: F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Vaccinium ovatum*

538—Wiregrass-Pittplace complex, 15 to 30 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Moderately steep, broad, east- to south-trending, main and spur ridges
Elevation: 1,370 to 2,780 feet (418 to 848 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 290 days

Map Unit Composition

Wiregrass—60 percent
Pittplace—15 percent
Minor components—25 percent

Characteristics of Wiregrass and Similar Soils

Slope: 15 to 30 percent
Aspect: North clockwise to southeast
Landform: Shoulders of broad ridges
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 2 inches (2 to 4 centimeters); gravelly loam
AB—2 to 11 inches (4 to 27 centimeters); gravelly clay loam
Bt—11 to 39 inches (27 to 100 centimeters); gravelly clay loam
BCt—39 to 60 inches (100 to 152 centimeters); gravelly clay loam

Characteristics of Pittplace and Similar Soils

Slope: 15 to 30 percent
Aspect: North clockwise to southeast
Landform: Upper mountain slopes; broad ridges
Parent material: Residuum and colluvium weathered from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 9.2 inches (high)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups

Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

A—0 to 7 inches (0 to 17 centimeters); clay loam
Bt1—7 to 43 inches (17 to 109 centimeters); paragravelly silty clay loam
Bt2—43 to 56 inches (109 to 143 centimeters); gravelly clay loam
Bt3—56 to 63 inches (143 to 160 centimeters); very gravelly clay loam

Minor Components

Ahpah and similar soils

Composition: About 10 percent
Slope: 15 to 30 percent
Landform: Tops of ridges
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Scaath and similar soils

Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Very steep areas; narrow ridges
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Devilscreek and similar soils
Composition: About 3 percent
Slope: 15 to 30 percent
Landform: Near seeps on ridges
Ecological site: None assigned

Rock outcrop
Composition: About 2 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

539—Wiregrass-Scaath complex, 30 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, south-facing mountain slopes
Elevation: 445 to 2,775 feet (137 to 847 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 290 days

Map Unit Composition

Wiregrass—50 percent
Scaath—30 percent
Minor components—20 percent

Characteristics of Wiregrass and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to southwest
Landform: Uniform to gently rounded mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 6.9 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e

Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 5 inches (3 to 12 centimeters); very gravelly loam
Bt1—5 to 33 inches (12 to 85 centimeters); gravelly clay loam
Bt2—33 to 73 inches (85 to 186 centimeters); very gravelly clay loam

Characteristics of Scaath and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to southwest
Landform: Narrow ridges and strongly convex areas on mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 2.6 inches (low)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 6e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 0.5 inch (0 to 1 centimeter); slightly decomposed plant material
A—0.5 to 10 inches (1 to 26 centimeters); gravelly loam
Bt—10 to 30 inches (26 to 77 centimeters); extremely gravelly clay loam
R—30 to 60 inches (77 to 152 centimeters); bedrock

Minor Components

Ahpah and similar soils

Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Spur ridges and strongly convex areas on mountain slopes
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Devilscreek and similar soils

Composition: About 5 percent
Slope: 30 to 50 percent

Landform: Near streams and in wet hollows on mountain slopes
Ecological site: None assigned

Rock outcrop
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

541—Wiregrass-Rockysaddle complex, 30 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 330 to 2,965 feet (101 to 904 meters)
Mean annual precipitation: 75 to 95 inches (1,900 to 2,410 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 290 days

Map Unit Composition

Wiregrass—60 percent
Rockysaddle—20 percent
Minor components—20 percent

Characteristics of Wiregrass and Similar Soils

Slope: 30 to 50 percent
Aspect: Southeast clockwise to north
Landform: Uniform to gently rounded mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.4 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e

Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 5 inches (3 to 12 centimeters); very gravelly silt loam
BAt—5 to 17 inches (12 to 44 centimeters); gravelly silty clay loam
Bt1—17 to 41 inches (44 to 103 centimeters); very gravelly clay loam
Bt2—41 to 67 inches (103 to 170 centimeters); very gravelly clay loam

Characteristics of Rockysaddle and Similar Soils

Slope: 30 to 50 percent
Aspect: Southeast clockwise to north
Landform: Uniform to gently rounded mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 2.8 inches (low)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 6e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 7 inches (2 to 18 centimeters); extremely gravelly loam
Bt1—7 to 21 inches (18 to 54 centimeters); very gravelly clay loam
Bt2—21 to 60 inches (54 to 152 centimeters); extremely gravelly clay loam

Minor Components

Scaath and similar soils

Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Spur ridges; upper mountain slopes
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Atwell and similar soils

Composition: About 5 percent
Slope: 30 to 50 percent

Landform: Near streams on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Rock outcrop
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

542—Coppercreek-Slidecreek-Lackscreek complex, 30 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood and Prairie Creek basins
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 150 to 2,515 feet (47 to 768 meters)
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 290 days

Map Unit Composition

Coppercreek—45 percent
Slidecreek gravelly loam—30 percent
Lackscreek—15 percent
Minor components—10 percent

Characteristics of Coppercreek and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.9 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e

Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 5 inches (2 to 12 centimeters); loam
BAt—5 to 12 inches (12 to 30 centimeters); gravelly clay loam
Bt—12 to 51 inches (30 to 130 centimeters); gravelly clay loam
BCt—51 to 85 inches (130 to 215 centimeters); very gravelly clay loam

Characteristics of Slidecreek and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 3.6 inches (low)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile

Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 9 inches (4 to 23 centimeters); extremely gravelly loam
Bt—9 to 31 inches (23 to 78 centimeters); very gravelly clay loam
C—31 to 62 inches (78 to 158 centimeters); extremely gravelly clay loam

Characteristics of Lackscreek and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Strongly rounded mountain slopes; spur ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.

Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.9 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 15 inches (5 to 37 centimeters); gravelly loam
BAt—15 to 23 inches (37 to 58 centimeters); very cobbly clay loam
Bt—23 to 32 inches (58 to 82 centimeters); extremely gravelly clay loam
R—32 to 60 inches (82 to 152 centimeters); bedrock

Minor Components

Atwell and similar soils
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Along streams and in moist, downslope-running concavities on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Coppercreek, wet substratum, and similar soils
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Along streams and in moist, downslope-running concavities on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Rock outcrop
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Slidecreek, wet substratum, and similar soils
Composition: About 2 percent
Slope: 30 to 50 percent

Landform: Along streams and in moist, downslope-running concavities on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

543—Wiregrass-Rockysaddle-Scaath complex, 30 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, upper mountain slopes
Elevation: 495 to 3,185 feet (151 to 972 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 290 days

Map Unit Composition

Wiregrass—40 percent
Rockysaddle—30 percent
Scaath—15 percent
Minor components—15 percent

Characteristics of Wiregrass and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to west
Landform: Uniform to gently rounded mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: 0 to 75 percent coarse gravel
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.1 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

A—0 to 7 inches (0 to 17 centimeters); gravelly loam
BAt—7 to 18 inches (17 to 45 centimeters); gravelly clay loam
Bt—18 to 39 inches (45 to 98 centimeters); gravelly clay loam
BCt—39 to 75 inches (98 to 191 centimeters); very gravelly clay loam

Characteristics of Rockysaddle and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to west
Landform: Uniform to gently rounded mountain slopes
Parent material: Colluvium derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 4.3 inches (low)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 6e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 2 inches (0 to 6 centimeters); slightly decomposed plant material
A—2 to 6 inches (6 to 14 centimeters); extremely gravelly loam
AB—6 to 14 inches (14 to 35 centimeters); very gravelly loam
Bt—14 to 44 inches (35 to 113 centimeters); very gravelly silty clay loam
BCt—44 to 61 inches (113 to 156 centimeters); extremely gravelly silty clay loam

Characteristics of Scaath and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to west
Landform: Narrow ridges and strongly convex areas on mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 8 inches (3 to 20 centimeters); gravelly loam
Bt1—8 to 22 inches (20 to 56 centimeters); very cobbly clay loam
Bt2—22 to 37 inches (56 to 95 centimeters); extremely gravelly clay loam
R—37 to 60 inches (95 to 152 centimeters); bedrock

Minor Components

Rockysaddle and similar soils
Composition: About 5 percent
Slope: 50 to 75 percent
Landform: Along streams and in moist, down-sloping concavities on mountain slopes
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Wiregrass and similar soils
Composition: About 5 percent
Slope: 50 to 75 percent
Landform: Along streams and in moist, down-sloping concavities on mountain slopes
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Atwell and similar soils
Composition: About 3 percent
Slope: 30 to 50 percent
Landform: Along streams and in moist, down-sloping concavities on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Rock outcrop
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

544—Coppercreek-Tectah-Lackscreek complex, 30 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt

Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 600 to 1,675 feet (184 to 512 meters)
Mean annual precipitation: 80 to 90 inches (2,030 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 280 days

Map Unit Composition

Coppercreek—40 percent
Tectah—20 percent
Lackscreek—15 percent
Minor components—25 percent

Characteristics of Coppercreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Southeast clockwise to southwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 5 inches (3 to 12 centimeters); very gravelly silt loam
ABt—5 to 11 inches (12 to 29 centimeters); gravelly silty clay loam
Bt—11 to 41 inches (29 to 103 centimeters); gravelly clay loam
BCt—41 to 67 inches (103 to 170 centimeters); very gravelly loam

Characteristics of Tectah and Similar Soils

Slope: 30 to 50 percent
Aspect: Southeast clockwise to southwest
Landform: Shoulders of ridges
Parent material: Residuum and colluvium derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock

(Tsuga heterophylla). Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 12 inches (5 to 30 centimeters); silty clay loam
Bt1—12 to 45 inches (30 to 115 centimeters); silty clay
Bt2—45 to 73 inches (115 to 185 centimeters); silty clay loam

Characteristics of Lackscreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Southeast clockwise to southwest
Landform: Spur ridges; strongly rounded mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.9 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile

Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 15 inches (5 to 37 centimeters); gravelly loam
BAt—15 to 23 inches (37 to 58 centimeters); very cobbly clay loam
Bt—23 to 32 inches (58 to 82 centimeters); extremely gravelly clay loam
R—32 to 60 inches (82 to 152 centimeters); bedrock

Minor Components

Slidecreek and similar soils
Composition: About 13 percent
Slope: 30 to 50 percent
Landform: Uniform mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Atwell and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Near streams and in broad hollows on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Rock outcrop
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

545—Devilscreek-Panthercreek-Coppercreek complex, 30 to 50 percent slopes

Map Unit Setting

General location: Mountain slopes west of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, wet mountain slopes, typically in mountain-slope hollows and along small streams
Elevation: 45 to 2,480 feet (15 to 757 meters)
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 290 days

Map Unit Composition

Devilscreek—45 percent
Panthercreek—20 percent
Coppercreek—15 percent
Minor components—20 percent

Characteristics of Devilscreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Northwest clockwise to south
Landform: Near drainage headwaters on mountain slopes
Parent material: Colluvium derived from schist

Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.6 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 6 inches (3 to 15 centimeters); gravelly loam
BA—6 to 14 inches (15 to 35 centimeters); clay loam
Bw—14 to 30 inches (35 to 75 centimeters); cobbly clay loam
Cg1—30 to 37 inches (75 to 95 centimeters); very gravelly silt loam
Cg2—37 to 67 inches (95 to 171 centimeters); very gravelly silt loam

Characteristics of Panthercreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Northwest clockwise to south
Landform: Recent debris flows; near lower axis of wet hollows; mountain slopes
Parent material: Debris flow deposits derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 5.8 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 7 inches (4 to 18 centimeters); gravelly loam
Bw—7 to 13 inches (18 to 34 centimeters); gravelly loam
C1—13 to 36 inches (34 to 91 centimeters); very gravelly sandy loam
C2—36 to 67 inches (91 to 171 centimeters); very gravelly sandy loam

Characteristics of Coppercreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Northwest clockwise to south
Landform: Better drained areas on mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.5 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 4 inches (3 to 10 centimeters); very gravelly loam
ABt—4 to 13 inches (10 to 34 centimeters); gravelly clay loam
Bt—13 to 52 inches (34 to 131 centimeters); gravelly clay loam
C—52 to 67 inches (131 to 169 centimeters); gravelly clay loam

Minor Components

Lackscreek and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Small areas underlain by resistant bedrock on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Ahpah and similar soils
Composition: About 3 percent

Slope: 30 to 50 percent
Landform: Small areas underlain by resistant bedrock on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Panthercreek, moderately deep, and similar soils
Composition: About 3 percent
Slope: 30 to 50 percent
Landform: Fresh landslide scars underlain by black schist saprolite on mountain slopes
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Rock outcrop
Composition: About 2 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

546—Lackscreek-Coppercreek complex, 50 to 75 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Very steep sidewalls in deeply incised headwaters of major tributary streams
Elevation: 265 to 2,525 feet (81 to 770 meters)
Mean annual precipitation: 75 to 100 inches (1,900 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 290 days

Map Unit Composition

Lackscreek—65 percent
Coppercreek—15 percent
Minor components—20 percent

Characteristics of Lackscreek and Similar Soils

Slope: 50 to 75 percent
Aspect: South clockwise to north
Landform: Convex to uniform mountain slopes
Parent material: Colluvium and/or residuum weathered from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None

Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 2.2 inches (very low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX115CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Vaccinium ovatum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 4 inches (2 to 11 centimeters); gravelly loam
BAt—4 to 9 inches (11 to 23 centimeters); very cobbly clay loam
Bt—9 to 21 inches (23 to 54 centimeters); extremely gravelly clay loam
C—21 to 29 inches (54 to 73 centimeters); extremely gravelly loam
R—29 to 60 inches (73 to 152 centimeters); bedrock

Characteristics of Coppercreek and Similar Soils

Slope: 50 to 75 percent
Aspect: South clockwise to north
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Western hemlock *(Tsuga heterophylla)* is present in some places. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and small amounts of salal *(Gaultheria shallon)*. The cover of grasses and forbs is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.3 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 5 inches (0 to 12 centimeters); slightly decomposed plant material
A—5 to 10 inches (12 to 25 centimeters); gravelly loam

AB—10 to 16 inches (25 to 40 centimeters); gravelly clay loam
Bt—16 to 44 inches (40 to 113 centimeters); gravelly clay loam
BCt—44 to 73 inches (113 to 185 centimeters); gravelly clay loam

Minor Components

Orthents and similar soils
Composition: About 10 percent
Slope: 50 to 90 percent
Landform: Hillslope hollows; steep mountain slopes
Ecological site: None assigned

Ahpah and similar soils
Composition: About 5 percent
Slope: 50 to 75 percent
Landform: Steeper areas; convex mountain slopes
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Rock outcrop
Composition: About 5 percent
Slope: 50 to 75 percent
Landform: Steeper mountain slopes
Ecological site: None assigned

549—Scaath-Rockysaddle-Wiregrass complex, 50 to 75 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Very steep, deeply incised mountain slopes
Elevation: 560 to 2,660 feet (171 to 812 meters)
Mean annual precipitation: 75 to 90 inches (1,900 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 290 days

Map Unit Composition

Scaath—40 percent
Rockysaddle—25 percent
Wiregrass—20 percent
Minor components—15 percent

Characteristics of Scaath and Similar Soils

Slope: 50 to 75 percent
Aspect: Southeast clockwise to northwest
Landform: Narrow ridges and convex to uniform upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.

Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 2.1 inches (very low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 4 inches (5 to 11 centimeters); gravelly loam
BAt—4 to 9 inches (11 to 22 centimeters); very cobbly clay loam
Bt—9 to 22 inches (22 to 55 centimeters); extremely gravelly clay loam
R—22 to 60 inches (55 to 152 centimeters); bedrock

Characteristics of Rockysaddle and Similar Soils

Slope: 50 to 75 percent
Aspect: Southeast clockwise to northwest
Landform: Concave to uniform scars from debris avalanche; around rock outcrop; toeslopes of mountain slopes
Parent material: Colluvium derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 4.7 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 2 inches (0 to 6 centimeters); slightly decomposed plant material
A—2 to 9 inches (6 to 24 centimeters); extremely gravelly loam
Bt—9 to 45 inches (24 to 115 centimeters); very gravelly clay loam
C—45 to 69 inches (115 to 176 centimeters); extremely gravelly clay loam

Characteristics of Wiregrass and Similar Soils

Slope: 50 to 75 percent
Aspect: Southeast clockwise to northwest
Landform: Shoulders of broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.6 inches (high)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 7e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 9 inches (2 to 22 centimeters); gravelly loam
BAt—9 to 26 inches (22 to 65 centimeters); gravelly clay loam
Bt—26 to 46 inches (65 to 118 centimeters); gravelly clay loam
BCt—46 to 71 inches (118 to 180 centimeters); very gravelly clay loam

Minor Components

Rock outcrop

Composition: About 10 percent
Slope: 30 to 120 percent
Landform: Ridges on mountain slopes
Ecological site: None assigned

Atwell and similar soils

Composition: About 5 percent
Slope: 50 to 75 percent
Landform: Along streams and in moist, downslope-running concavities on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

550—Scaath-Rockysaddle-Wiregrass complex, dry, 50 to 75 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Very steep, deeply incised mountain slopes
Elevation: 475 to 2,915 feet (146 to 890 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 270 days

Map Unit Composition

Scaath—40 percent
Rockysaddle—30 percent
Wiregrass—20 percent
Minor components—10 percent

Characteristics of Scaath and Similar Soils

Slope: 50 to 75 percent
Aspect: East clockwise to west
Landform: Narrow ridges and convex to uniform upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 4.4 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
Oe—2 to 2 inches (4 to 5 centimeters); moderately decomposed plant material
A—2 to 11 inches (5 to 29 centimeters); gravelly loam
ABt—11 to 18 inches (29 to 45 centimeters); gravelly clay loam
2BAt—18 to 24 inches (45 to 61 centimeters); very cobbly clay loam
2Bt—24 to 37 inches (61 to 94 centimeters); extremely gravelly clay loam
2R—37 to 60 inches (94 to 152 centimeters); bedrock

Characteristics of Rockysaddle and Similar Soils

Slope: 50 to 75 percent
Aspect: East clockwise to west
Landform: Concave to uniform scars from debris avalanche; around rock outcrop; toeslopes of mountain slopes
Parent material: Colluvium derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 4.6 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 2 inches (0 to 6 centimeters); slightly decomposed plant material
A—2 to 14 inches (6 to 35 centimeters); extremely gravelly loam
Bt—14 to 44 inches (35 to 113 centimeters); very gravelly clay loam
BCt—44 to 61 inches (113 to 156 centimeters); extremely gravelly clay loam

Characteristics of Wiregrass and Similar Soils

Slope: 50 to 75 percent
Aspect: East clockwise to west
Landform: Shoulders of broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.6 inches (high)

Hydrologic properties
Present annual flooding: None

Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 7 inches (2 to 17 centimeters); gravelly loam
BA—7 to 13 inches (17 to 33 centimeters); gravelly clay loam
Bt—13 to 63 inches (33 to 160 centimeters); gravelly clay loam
BCt—63 to 69 inches (160 to 175 centimeters); very gravelly clay loam

Minor Components

Atwell and similar soils
Composition: About 5 percent
Slope: 50 to 75 percent
Landform: Along streams and in moist, down-sloping concavities on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Rock outcrop
Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Ridges on mountain slopes
Ecological site: None assigned

553—Ladybird-Stonehill complex, 30 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin, in and around Orick Valley
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, moist, lower mountain slopes that have a strong influence from coastal fog
Elevation: 15 to 1,770 feet (5 to 541 meters)
Mean annual precipitation: 70 to 85 inches (1,780 to 2,160 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 300 days

Map Unit Composition

Ladybird—60 percent
Stonehill—20 percent
Minor components—20 percent

Characteristics of Ladybird and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to east
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from schist

Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.4 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A1—1 to 5 inches (3 to 13 centimeters); gravelly loam
A2—5 to 9 inches (13 to 24 centimeters); gravelly clay loam
BAt—9 to 24 inches (24 to 61 centimeters); very gravelly silty clay loam
Bt—24 to 51 inches (61 to 130 centimeters); gravelly clay loam
BCt1—51 to 61 inches (130 to 155 centimeters); gravelly loam
BCt2—61 to 76 inches (155 to 193 centimeters); very gravelly loam

Characteristics of Stonehill and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to east
Landform: Steeper, more strongly convex mountain slopes
Parent material: Residuum and colluvium derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 6.6 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
Oa—1 to 5 inches (3 to 13 centimeters); highly decomposed plant material
A—5 to 20 inches (13 to 52 centimeters); cobbly silt loam
BAt—20 to 25 inches (52 to 64 centimeters); cobbly silty clay loam
Bt—25 to 32 inches (64 to 82 centimeters); gravelly silty clay loam
R—32 to 60 inches (82 to 152 centimeters); bedrock

Minor Components

Devilscreek and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Near seeps and in low, wet places near intermittent streams; mountain slopes
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Panthercreek and similar soils
Composition: About 7 percent
Slope: 30 to 50 percent
Landform: Near seeps and in low, wet places near intermittent streams; mountain slopes
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Fluvents and similar soils
Composition: About 3 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

554—Ladybird-Trailhead complex, 15 to 30 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin, in and around Orick Valley
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Moderately steep, north- to northeast-trending ridges
Elevation: 45 to 1,085 feet (15 to 332 meters)
Mean annual precipitation: 70 to 80 inches (1,780 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 290 days

Map Unit Composition

Ladybird—50 percent
Trailhead—25 percent
Minor components—25 percent

Characteristics of Ladybird and Similar Soils

Slope: 15 to 30 percent
Aspect: Northwest clockwise to northeast
Landform: Shoulders of narrow ridges

Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.0 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 6 inches (0 to 15 centimeters); slightly decomposed plant material
A—6 to 28 inches (15 to 72 centimeters); gravelly loam
BAt—28 to 37 inches (72 to 95 centimeters); gravelly clay loam
Bt—37 to 62 inches (95 to 157 centimeters); gravelly clay loam
BCt—62 to 67 inches (157 to 169 centimeters); very gravelly loam

Characteristics of Trailhead and Similar Soils

Slope: 15 to 30 percent
Aspect: Northwest clockwise to northeast
Landform: Along tops of ridges
Parent material: Residuum and colluvium derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 11.4 inches (very high)
Note: The Trailhead soil in this map unit has an umbric epipedon. Trailhead soils generally have an ochric epipedon. This difference, however, does not effect use and management.

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium

Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 5 inches (0 to 12 centimeters); slightly decomposed plant material
A—5 to 24 inches (12 to 60 centimeters); silty clay loam
AB—24 to 30 inches (60 to 77 centimeters); silty clay loam
BAt—30 to 38 inches (77 to 97 centimeters); silty clay
Bt1—38 to 54 inches (97 to 137 centimeters); silty clay
Bt2—54 to 66 inches (137 to 167 centimeters); clay

Minor Components

Coppercreek and similar soils
Composition: About 13 percent
Slope: 15 to 30 percent
Landform: Shoulders and upper mountain slopes
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Tectah and similar soils
Composition: About 12 percent
Slope: 15 to 30 percent
Landform: Broader portions of ridges
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

555—Panthercreek-Devilscreek-Coppercreek complex, 50 to 75 percent slopes

Map Unit Setting

General location: Mountain slopes west of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Very steep, wet, inner-gorge mountain slopes. The slopes are scarred by landslides that occurred during recent floods and are strewn with large fallen logs and debris. Tree grow rapidly, and windfalls are frequent.
Elevation: 50 to 2,155 feet (16 to 657 meters)
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 300 days

Map Unit Composition

Panthercreek—35 percent
Devilscreek—20 percent
Coppercreek—20 percent
Minor components—25 percent

Characteristics of Panthercreek and Similar Soils

Slope: 50 to 75 percent
Aspect: Southwest clockwise to east

Landform: On scars and deposits from recent debris flow and debris slides
Parent material: Debris slide deposits derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderate
Available water capacity to a depth of 60 inches: About 6.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 6 centimeters); slightly decomposed plant material
A—2 to 7 inches (6 to 17 centimeters); gravelly loam
Bw—7 to 16 inches (17 to 41 centimeters); gravelly loam
C1—16 to 34 inches (41 to 86 centimeters); extremely gravelly loam
C2—34 to 89 inches (86 to 226 centimeters); very gravelly loam

Characteristics of Devilscreek and Similar Soils

Slope: 50 to 75 percent
Aspect: Southwest clockwise to east
Landform: Near drainage headwaters on mountain slopes
Parent material: Fault-gouged colluvium derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.2 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present

Natural drainage class: Moderately well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 11 inches (3 to 29 centimeters); gravelly loam
Bw—11 to 35 inches (29 to 90 centimeters); cobbly clay loam
2Cg1—35 to 67 inches (90 to 170 centimeters); very gravelly silt loam
2Cg2—67 to 71 inches (170 to 180 centimeters); very gravelly loam

Characteristics of Coppercreek and Similar Soils

Slope: 50 to 75 percent
Aspect: Southwest clockwise to east
Landform: Small ridges and better drained areas on mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 4 inches (3 to 10 centimeters); very gravelly loam
ABt—4 to 13 inches (10 to 34 centimeters); gravelly clay loam
Bt—13 to 52 inches (34 to 131 centimeters); gravelly clay loam
C—52 to 67 inches (131 to 169 centimeters); gravelly clay loam

Minor Components

Ahpah and similar soils
Composition: About 10 percent
Slope: 50 to 75 percent
Landform: Small areas underlain by resistant bedrock on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Lackscreek and similar soils
Composition: About 5 percent
Slope: 50 to 75 percent
Landform: Small areas underlain by resistant bedrock on mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Panthercreek, moderately deep, and similar soils
Composition: About 5 percent
Slope: 50 to 75 percent
Landform: Shallow debris-slide scars on mountain slopes
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Fluvents and similar soils
Composition: About 3 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Rock outcrop
Composition: About 2 percent
Slope: 50 to 75 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

556—Rodgerpeak-Wiregrass complex, 0 to 15 percent slopes

Map Unit Setting

General location: Summit of Rodger's Peak
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Broad, gently rounded ridgetops
Elevation: 2,675 to 2,780 feet (816 to 848 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 46 to 55 degrees F (8 to 13 degrees C)
Frost-free period: 220 to 250 days

Map Unit Composition

Rodgerpeak—50 percent
Wiregrass—30 percent
Minor components—20 percent

Characteristics of Rodgerpeak and Similar Soils

Slope: 0 to 15 percent
Aspect: North clockwise to northeast
Landform: Gently convex to planar areas on ridges
Parent material: Residuum derived from quartz-mica schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.

Surface area covered by coarse fragments: 10 to 70 percent coarse, subangular pebbles
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Slowest permeability class: Moderate above the bedrock
Available water capacity to a depth of 60 inches: About 2.6 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 3e-8
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 0.5 inch (0 to 1 centimeter); slightly decomposed plant material
A—0.5 to 7 inches (1 to 19 centimeters); gravelly loam
Bw—7 to 18 inches (19 to 45 centimeters); gravelly loam
R—18 to 60 inches (45 to 152 centimeters); bedrock

Characteristics of Wiregrass and Similar Soils

Slope: 0 to 15 percent
Aspect: North clockwise to northeast
Landform: Bedrock concavities; shoulders of broad ridges
Parent material: Colluvium derived from mica schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.0 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 3e-1
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 0.5 inch (0 to 1 centimeter); slightly decomposed plant material
A—0.5 to 10 inches (1 to 26 centimeters); loam

ABt—10 to 14 inches (26 to 36 centimeters); gravelly loam
Bt—14 to 59 inches (36 to 151 centimeters); gravelly clay loam

Minor Components

Ahpah and similar soils
Composition: About 10 percent
Slope: 0 to 15 percent
Landform: Near crests of ridges
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Scaath and similar soils
Composition: About 10 percent
Slope: 0 to 15 percent
Landform: Bedrock knobs on ridges
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

557—Ustic Palehumults, 15 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Rounded ridges and upper mountain slopes
Elevation: 1,530 to 2,025 feet (467 to 618 meters)
Mean annual precipitation: 75 to 95 inches (1,900 to 2,410 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 260 days

Map Unit Composition

Ustic Palehumults—90 percent
Minor components—10 percent

Characteristics of Ustic Palehumults and Similar Soils

Slope: 15 to 50 percent
Aspect: Northwest clockwise to east
Landform: Gently convex mountain slopes
Parent material: Colluvium and residuum derived from metadacite
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not present on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* and some Pacific madrone *(Arbutus menziesii)* are in the subcanopy. The understory is dominated by tanoak, salal *(Gaultheria shallon),* and California huckleberry *(Vaccinium ovatum)*. Grasses and forbs are either very limited in extent or not present.
Surface area covered by coarse fragments: 30 to 85 percent coarse, subangular pebbles; 10 to 40 percent subangular cobbles; and 0 to 10 percent subangular stones
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 5.6 inches (moderate)

Hydrologic properties
Present annual flooding: None

Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Typical profile
Oi—0 to 3 inches (0 to 7 centimeters); slightly decomposed plant material
A—3 to 7 inches (7 to 19 centimeters); very gravelly loam
AB—7 to 13 inches (19 to 33 centimeters); gravelly loam
BA—13 to 20 inches (33 to 51 centimeters); extremely gravelly silt loam
Bt—20 to 57 inches (51 to 145 centimeters); very cobbly silty clay loam
C—57 to 91 inches (145 to 232 centimeters); extremely stony loam

Minor Components

Trailhead and similar soils
Composition: About 3 percent
Slope: 15 to 50 percent
Landform: Downslope at the edge of mapped areas on mountain slopes
Ecological site: F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Vaccinium ovatum*

Wiregrass and similar soils
Composition: About 3 percent
Slope: 15 to 50 percent
Landform: Downslope at the edge of mapped areas on mountain slopes
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Rock outcrop
Composition: About 2 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Scaath and similar soils
Composition: About 2 percent
Slope: 15 to 50 percent
Landform: Narrow spur ridges on mountain slopes
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

558—Tectah-Coppercreek-Trailhead complex, 0 to 30 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Nearly level to moderately steep, broad ridges
Elevation: 615 to 2,185 feet (188 to 666 meters)

Mean annual precipitation: 80 to 90 inches (2,030 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Tectah—45 percent
Coppercreek—25 percent
Trailhead—15 percent
Minor components—15 percent

Characteristics of Tectah and Similar Soils

Slope: 0 to 30 percent
Aspect: South clockwise to northeast
Landform: Tops of broad ridges
Parent material: Residuum and colluvium derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 10.2 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 26 inches (5 to 65 centimeters); silty clay loam
Bt1—26 to 51 inches (65 to 130 centimeters); silty clay
Bt2—51 to 63 inches (130 to 159 centimeters); silty clay loam

Characteristics of Coppercreek and Similar Soils

Slope: 15 to 30 percent
Aspect: South clockwise to northeast
Landform: Moderately steep areas on broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 10.2 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 14 inches (3 to 36 centimeters); loam
ABt—14 to 23 inches (36 to 58 centimeters); clay loam
Bt—23 to 92 inches (58 to 233 centimeters); clay loam

Characteristics of Trailhead and Similar Soils

Slope: 0 to 9 percent
Aspect: South clockwise to northeast
Landform: Gently sloping areas on ridges
Parent material: Residuum and colluvium derived from sandstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with small amounts of western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Tanoak and salal *(Gaultheria shallon)* are present in a few places. The forb layer is sparse and may consist of western swordfern *(Polystichum munitum)*.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.5 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 4 inches (0 to 11 centimeters); silty clay loam
AB—4 to 15 inches (11 to 38 centimeters); silty clay loam

Bt1—15 to 30 inches (38 to 76 centimeters); silty clay
Bt2—30 to 79 inches (76 to 200 centimeters); clay

Minor Components

Slidecreek and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Steeper slopes on ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fortyfour and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Convex positions on crests of ridges
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

559—Trailhead, 0 to 9 percent slopes

Map Unit Setting

General location: Ridgetops west of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Broad, undulating ridgetops
Elevation: 1,285 to 2,380 feet (393 to 726 meters)
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 270 days

Map Unit Composition

Trailhead—85 percent
Minor components—15 percent

Characteristics of Trailhead and Similar Soils

Slope: 0 to 9 percent
Aspect: South clockwise to northeast
Landform: Broad, undulating ridges
Parent material: Residuum weathered from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with small amounts of western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Tanoak and salal *(Gaultheria shallon)* are present in a few places. The forb layer is sparse and may consist of western swordfern *(Polystichum munitum)*.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None

Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 2e-5
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 7 inches (2 to 19 centimeters); silty clay loam
AB—7 to 18 inches (19 to 45 centimeters); silty clay loam
Bt1—18 to 37 inches (45 to 95 centimeters); silty clay
Bt2—37 to 60 inches (95 to 152 centimeters); clay

Minor Components

Tectah and similar soils
Composition: About 10 percent
Slope: 0 to 9 percent
Landform: Gently concave slopes; broad hollows on ridges
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fortyfour and similar soils
Composition: About 5 percent
Slope: 0 to 9 percent
Landform: Knobs; convex slopes near tributary headwaters on ridges
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

560—Trailhead, 15 to 30 percent slopes

Map Unit Setting

General location: Ridges and upper mountain slopes west of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Broad, gently rolling ridges and upper mountain slopes
Elevation: 540 to 2,500 feet (165 to 763 meters)
Mean annual precipitation: 75 to 100 inches (1,900 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 290 days

Map Unit Composition

Trailhead—80 percent
Minor components—20 percent

Characteristics of Trailhead and Similar Soils

Slope: 15 to 30 percent
Aspect: Northwest clockwise to east
Landform: Broad, undulating ridges
Parent material: Residuum weathered from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with small amounts of western hemlock

(Tsuga heterophylla) (fig. 13). Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Tanoak and salal *(Gaultheria shallon)* are present in a few places. The forb layer is sparse and may consist of western swordfern *(Polystichum munitum)*.

Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 7 inches (2 to 19 centimeters); silty clay loam
AB—7 to 13 inches (19 to 33 centimeters); silty clay loam
BAt—13 to 23 inches (33 to 58 centimeters); silty clay
Bt1—23 to 54 inches (58 to 138 centimeters); silty clay
Bt2—54 to 73 inches (138 to 186 centimeters); clay

Figure 13.—An area of Trailhead, 15 to 30 percent slopes. The dominant vegetation consists of redwood, Douglas-fir, western hemlock, tanoak, California huckleberry, and Pacific rhododendron.

Minor Components

Coppercreek and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Gently concave slopes; broad hollows on ridges
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fortyfour and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Convex slopes; ridge spurs; near tributary headwaters on mountain slopes
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Lackscreek and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Convex slopes; ridge spurs; near tributary headwaters on ridges
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Tectah and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Gently concave slopes; broad hollows on ridges
Ecological site: None assigned

561—Trailhead, dry, 15 to 30 percent slopes

Map Unit Setting

General location: East side of Bridge Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Dry, upper mountain slopes. The slope is mostly smooth or gently rolling but is benchy and irregular in places.
Elevation: 1,345 to 2,640 feet (411 to 805 meters)
Mean annual precipitation: 85 to 100 inches (2,160 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 270 days

Map Unit Composition

Trailhead—75 percent
Minor components—25 percent

Characteristics of Trailhead and Similar Soils

Slope: 15 to 30 percent
Aspect: North clockwise to southeast
Landform: Broad, undulating ridges
Parent material: Residuum weathered from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Redwood *(Sequoia sempervirens)* is a minor associate of the overstory. The understory is dominated by California huckleberry *(Vaccinium ovatum)* with small amounts of Pacific

rhododendron *(Rhododendron macrophylum)* and salal *(Gaultheria shallon)*. Grasses and forbs are either limited in extent or not present.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.3 inches (high)
Note: The Trailhead soil in this map unit has an ustic moisture regime. Other Trailhead soils in the survey area have a udic moisture regime. This difference, however, does not effect use and management.

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Vaccinium ovatum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 3 inches (2 to 8 centimeters); loam
AB—3 to 8 inches (8 to 21 centimeters); silty clay loam
Bt1—8 to 48 inches (21 to 123 centimeters); silty clay
Bt2—48 to 93 inches (123 to 235 centimeters); clay

Minor Components

Fortyfour and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Steeper and more convex slopes, especially on ridge spurs on mountains
Ecological site: F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Vaccinium ovatum*

Scaath and similar soils
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Steeper and more convex slopes, especially on ridge spurs on mountains
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Trailhead, clayey-skeletal, and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Hollows; areas of irregular topography on ridges
Ecological site: F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Vaccinium ovatum*

Wiregrass and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Gently concave areas; broad hollows on ridges

Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

562—Trailhead-Fortyfour complex, 30 to 50 percent slopes

Map Unit Setting

General location: Steep mountain slopes west of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 295 to 2,555 feet (90 to 780 meters)
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Trailhead—65 percent
Fortyfour—15 percent
Minor components—20 percent

Characteristics of Trailhead and Similar Soils

Slope: 30 to 50 percent
Aspect: Northwest clockwise to southeast
Landform: Uniform mountain slopes
Parent material: Residuum weathered from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with small amounts of western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Tanoak and salal *(Gaultheria shallon)* are present in a few places. The forb layer is sparse and may consist of western swordfern *(Polystichum munitum)*.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.5 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 5 inches (2 to 13 centimeters); clay loam
AB—5 to 12 inches (13 to 30 centimeters); clay loam

BAt—12 to 27 inches (30 to 68 centimeters); clay loam
Bt1—27 to 36 inches (68 to 92 centimeters); clay
Bt2—36 to 80 inches (92 to 202 centimeters); clay

Characteristics of Fortyfour and Similar Soils

Slope: 30 to 50 percent
Aspect: Northwest clockwise to southeast
Landform: Spur ridges and convex mountain slopes
Parent material: Colluvium derived from schist and/or residuum weathered from schist
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with small amounts of western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Tanoak and salal *(Gaultheria shallon)* are present in a few places. The forb layer is sparse and may consist of western swordfern *(Polystichum munitum)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Slowest permeability class: Slow above the bedrock
Available water capacity to a depth of 60 inches: About 5.8 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 0.5 inch (0 to 1 centimeter); slightly decomposed plant material
A—0.5 to 12 inches (1 to 31 centimeters); silty clay loam
Bt1—12 to 30 inches (31 to 77 centimeters); gravelly clay
Bt2—30 to 39 inches (77 to 99 centimeters); clay
Cr—39 to 60 inches (99 to 152 centimeters); soft bedrock

Minor Components

Coppercreek and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Hollows at the headwaters of small drainages on mountain slopes
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Lackscreek and similar soils
Composition: About 10 percent
Slope: 50 to 75 percent
Landform: Steeper slopes adjacent to well incised drainages on mountain slopes
Ecological site: F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

563—Trailhead-Fortyfour complex, dry, 30 to 50 percent slopes

Map Unit Setting

General location: Steep mountain slopes west of Redwood Creek
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, upper mountain slopes
Elevation: 90 to 2,325 feet (28 to 709 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Trailhead—65 percent
Fortyfour—15 percent
Minor components—20 percent

Characteristics of Trailhead and Similar Soils

Slope: 30 to 50 percent
Aspect: West clockwise to southeast
Landform: Uniform mountain slopes
Parent material: Residuum weathered from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Redwood *(Sequoia sempervirens)* is a minor associate of the overstory. The understory is dominated by California huckleberry *(Vaccinium ovatum)* with small amounts of Pacific rhododendron *(Rhododendron macrophylum)* and salal *(Gaultheria shallon)*. Grasses and forbs are either limited in extent or not present.
Surface area covered by coarse fragments: 0 to 5 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.5 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Vaccinium ovatum*

Typical profile
A—0 to 5 inches (0 to 13 centimeters); silty clay loam
AB—5 to 13 inches (13 to 33 centimeters); silty clay loam
Bt1—13 to 43 inches (33 to 110 centimeters); silty clay
Bt2—43 to 60 inches (110 to 152 centimeters); clay

Characteristics of Fortyfour and Similar Soils

Slope: 30 to 50 percent
Aspect: West clockwise to southeast

Landform: Spur ridges; convex mountain slopes
Parent material: Colluvium derived from schist and/or residuum weathered from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Redwood *(Sequoia sempervirens)* is a minor associate of the overstory. The understory is dominated by California huckleberry *(Vaccinium ovatum)* with small amounts of Pacific rhododendron *(Rhododendron macrophylum)* and salal *(Gaultheria shallon)*. Grasses and forbs are either limited in extent or not present.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Slowest permeability class: Slow above the bedrock
Available water capacity to a depth of 60 inches: About 5.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Vaccinium ovatum*

Typical profile
A—0 to 8 inches (0 to 21 centimeters); silty clay loam
Bt1—8 to 25 inches (21 to 64 centimeters); gravelly clay
Bt2—25 to 31 inches (64 to 80 centimeters); clay
Cr—31 to 60 inches (80 to 152 centimeters); soft bedrock

Minor Components

Scaath and similar soils
Composition: About 10 percent
Slope: 50 to 75 percent
Landform: Steeper slopes adjacent to well incised drainages on mountain slopes
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

Wiregrass and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Hollows at the headwaters of small drainages on mountain slopes
Ecological site: F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus*

580—Coppercreek-Tectah-Slidecreek complex, 9 to 30 percent slopes

Map Unit Setting

General location: Mill, Rock, Wilson, and Hunter Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Nearly level to moderately steep, broad ridges

Elevation: 295 to 2,300 feet (90 to 702 meters)
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Coppercreek—40 percent
Tectah—30 percent
Slidecreek—20 percent
Minor components—10 percent

Characteristics of Coppercreek and Similar Soils

Slope: 9 to 30 percent
Aspect: Southwest clockwise to east
Landform: Moderately steep areas on broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.2 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 5 inches (0 to 12 centimeters); loam
AB—5 to 16 inches (12 to 40 centimeters); clay loam
Bt1—16 to 43 inches (40 to 108 centimeters); clay loam
Bt2—43 to 79 inches (108 to 200 centimeters); clay loam

Characteristics of Tectah and Similar Soils

Slope: 9 to 30 percent
Aspect: Southwest clockwise to east
Landform: Tops of broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 7.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 9 inches (0 to 22 centimeters); clay loam
BAt—9 to 15 inches (22 to 38 centimeters); clay loam
Bt1—15 to 28 inches (38 to 70 centimeters); clay loam
Bt2—28 to 60 inches (70 to 152 centimeters); clay

Characteristics of Slidecreek and Similar Soils

Slope: 9 to 30 percent
Aspect: Southwest clockwise to east
Landform: Ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 6.0 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-4
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
Oi—0 to 3 inches (0 to 7 centimeters); slightly decomposed plant material
A—3 to 11 inches (7 to 28 centimeters); very gravelly loam
BA—11 to 15 inches (28 to 38 centimeters); very gravelly clay loam

Bt—15 to 55 inches (38 to 140 centimeters); very gravelly clay loam
BCt—55 to 60 inches (140 to 152 centimeters); extremely cobbly clay loam

Minor Components

Trailhead and similar soils
Composition: About 5 percent
Slope: 0 to 15 percent
Landform: Gently sloping areas on ridges
Ecological site: F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Lackscreek and similar soils
Composition: About 3 percent
Slope: 15 to 50 percent
Landform: Spur ridges and upper mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Rock outcrop
Composition: About 2 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

581—Coppercreek-Slidecreek-Tectah complex, 30 to 50 percent slopes

Map Unit Setting

General location: Mill, Rock, Wilson, and Hunter Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 75 to 2,170 feet (24 to 662 meters)
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Coppercreek—40 percent
Slidecreek—30 percent
Tectah—15 percent
Minor components—15 percent

Characteristics of Coppercreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to south
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.4 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 8 inches (0 to 20 centimeters); loam
BAt—8 to 15 inches (20 to 37 centimeters); clay loam
Bt—15 to 55 inches (37 to 140 centimeters); clay loam
BCt—55 to 79 inches (140 to 200 centimeters); paragravelly clay loam

Characteristics of Slidecreek and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to south
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 5.8 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 7 inches (0 to 18 centimeters); gravelly loam
BAt—7 to 14 inches (18 to 36 centimeters); very gravelly loam

Bt—14 to 61 inches (36 to 155 centimeters); very gravelly clay loam
BCt—61 to 79 inches (155 to 200 centimeters); extremely gravelly clay loam

Characteristics of Tectah and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to south
Landform: Linear to concave positions on mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.4 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 4 inches (0 to 9 centimeters); loam
Bt1—4 to 19 inches (9 to 48 centimeters); clay loam
Bt2—19 to 63 inches (48 to 160 centimeters); gravelly clay

Minor Components

Orthents and similar soils
Composition: About 10 percent
Slope: 50 to 90 percent
Landform: Hillslope hollows; steep mountain slopes
Ecological site: None assigned

Rock outcrop
Composition: About 3 percent
Slope: 30 to 75 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Lackscreek and similar soils
Composition: About 2 percent
Slope: 30 to 75 percent
Landform: Spur ridges; upper mountain slopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

582—Slidecreek-Lackscreek-Coppercreek complex, 50 to 75 percent slopes

Map Unit Setting

General location: Mill, Rock, Wilson, and Hunter Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Very steep mountain slopes
Elevation: 180 to 2,270 feet (55 to 693 meters)
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Slidecreek—40 percent
Lackscreek—25 percent
Coppercreek—15 percent
Minor components—20 percent

Characteristics of Slidecreek and Similar Soils

Slope: 50 to 75 percent
Aspect: Southeast clockwise to north
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 5.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 8 inches (0 to 20 centimeters); gravelly loam
BAt—8 to 15 inches (20 to 39 centimeters); very gravelly clay loam
Bt—15 to 50 inches (39 to 127 centimeters); very gravelly clay loam
CBt—50 to 71 inches (127 to 180 centimeters); extremely gravelly clay loam

Characteristics of Lackscreek and Similar Soils

Slope: 50 to 75 percent
Aspect: Southeast clockwise to north

Landform: Narrow ridges; convex to uniform upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: 0 to 10 percent subangular cobbles and 0 to 20 percent coarse, subangular pebbles
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 2.6 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 5 inches (0 to 13 centimeters); very gravelly loam
BAt—5 to 17 inches (13 to 42 centimeters); very gravelly loam
Bt—17 to 39 inches (42 to 100 centimeters); extremely gravelly loam
R—39 to 79 inches (100 to 200 centimeters); bedrock

Characteristics of Coppercreek and Similar Soils

Slope: 50 to 75 percent
Aspect: Southeast clockwise to north
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 10.2 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 7 inches (0 to 19 centimeters); gravelly loam
Bt1—7 to 24 inches (19 to 62 centimeters); gravelly clay loam
Bt2—24 to 75 inches (62 to 190 centimeters); very gravelly clay loam

Minor Components

Orthents and similar soils
Composition: About 10 percent
Slope: 50 to 90 percent
Landform: Hillslope hollows; steep mountain slopes
Ecological site: None assigned

Rock outcrop
Composition: About 5 percent
Slope: 30 to 90 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Tectah and similar soils
Composition: About 5 percent
Slope: 15 to 35 percent
Landform: Broad, gentler slopes away from ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

583—Trailhead-Wiregrass complex, 9 to 30 percent slopes

Map Unit Setting

General location: Mill and Rock Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Nearly level to moderately steep, broad ridges
Elevation: 155 to 2,045 feet (48 to 624 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Trailhead—65 percent
Wiregrass—25 percent
Minor components—10 percent

Characteristics of Trailhead and Similar Soils

Slope: 9 to 30 percent
Aspect: East clockwise to north
Landform: Gently sloping areas on ridges
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Redwood *(Sequoia*

sempervirens) is a minor associate of the overstory. The understory is dominated by California huckleberry *(Vaccinium ovatum)* with small amounts of Pacific rhododendron *(Rhododendron macrophylum)* and salal *(Gaultheria shallon)*. Grasses and forbs are either limited in extent or not present.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 5.4 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Vaccinium ovatum*

Typical profile
A—0 to 7 inches (0 to 19 centimeters); gravelly loam
AB—7 to 15 inches (19 to 38 centimeters); gravelly clay loam
Bt—15 to 56 inches (38 to 142 centimeters); gravelly clay
BCt—56 to 79 inches (142 to 200 centimeters); clay

Characteristics of Wiregrass and Similar Soils

Slope: 9 to 30 percent
Aspect: East clockwise to north
Landform: Moderately steep areas on broad ridges
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile

A—0 to 5 inches (0 to 12 centimeters); loam
BAt—5 to 12 inches (12 to 31 centimeters); clay loam
Bt1—12 to 35 inches (31 to 90 centimeters); clay loam
Bt2—35 to 67 inches (90 to 170 centimeters); gravelly clay loam

Minor Components

Rockysaddle and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Steeper slopes adjacent to well incised drainages on mountain slopes
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Fortyfour and similar soils
Composition: About 3 percent
Slope: 0 to 30 percent
Landform: Convex slopes; ridge spurs; near tributary headwaters on mountain slopes
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Scaath and similar soils
Composition: About 2 percent
Slope: 0 to 30 percent
Landform: Convex slopes; ridge spurs; near tributary headwaters on ridges
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

584—Wiregrass-Pittplace-Scaath complex, 9 to 30 percent slopes

Map Unit Setting

General location: Mill and Rock Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Moderately steep main and spur ridges
Elevation: 990 to 2,030 feet (303 to 620 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Wiregrass—40 percent
Pittplace—25 percent
Scaath—20 percent
Minor components—15 percent

Characteristics of Wiregrass and Similar Soils

Slope: 9 to 30 percent
Aspect: West clockwise to east
Landform: Broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts.

The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 10.3 inches (very high)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile

A—0 to 12 inches (0 to 30 centimeters); loam
BA—12 to 20 inches (30 to 51 centimeters); loam
Bt—20 to 50 inches (51 to 128 centimeters); clay loam
BC—50 to 79 inches (128 to 200 centimeters); clay loam

Characteristics of Pittplace and Similar Soils

Slope: 9 to 30 percent
Aspect: West clockwise to east
Landform: Upper mountain slopes; broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.9 inches (high)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups

Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile

A—0 to 7 inches (0 to 17 centimeters); clay loam
Bt1—7 to 43 inches (17 to 109 centimeters); paragravelly silty clay loam

Bt2—43 to 56 inches (109 to 143 centimeters); gravelly clay loam
Bt3—56 to 63 inches (143 to 160 centimeters); very gravelly clay loam

Characteristics of Scaath and Similar Soils

Slope: 15 to 30 percent
Aspect: West clockwise to east
Landform: Narrow ridges; strongly convex areas on mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 4.1 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-8
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile
A—0 to 4 inches (0 to 11 centimeters); gravelly loam
BAt—4 to 10 inches (11 to 25 centimeters); gravelly clay loam
Bt—10 to 39 inches (25 to 98 centimeters); very cobbly clay loam
R—39 to 60 inches (98 to 152 centimeters); bedrock

Minor Components

Rock outcrop
Composition: About 5 percent
Slope: 15 to 50 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Rockysaddle and similar soils
Composition: About 5 percent
Slope: 15 to 50 percent
Landform: Mountain slopes
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Trailhead and similar soils
Composition: About 5 percent
Slope: 0 to 20 percent
Landform: Gently sloping areas on ridges
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

585—Wiregrass-Rockysaddle complex, 30 to 50 percent slopes

Map Unit Setting

General location: Mill and Rock Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 665 to 2,210 feet (204 to 675 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Wiregrass—45 percent
Rockysaddle—40 percent
Minor components—15 percent

Characteristics of Wiregrass and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to southeast
Landform: Uniform to gently rounded mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.7 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile
A—0 to 8 inches (0 to 21 centimeters); loam
BA—8 to 15 inches (21 to 38 centimeters); loam
Bt1—15 to 35 inches (38 to 90 centimeters); clay loam
Bt2—35 to 60 inches (90 to 152 centimeters); clay loam

Characteristics of Rockysaddle and Similar Soils

Slope: 30 to 50 percent
Aspect: North clockwise to southeast
Landform: Uniform to gently rounded mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone

Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 5.1 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile
A—0 to 4 inches (0 to 9 centimeters); gravelly loam
AB—4 to 11 inches (9 to 29 centimeters); gravelly loam
Bt—11 to 37 inches (29 to 95 centimeters); very gravelly clay loam
CBt—37 to 60 inches (95 to 152 centimeters); extremely cobbly clay loam

Minor Components

Orthents and similar soils
Composition: About 5 percent
Slope: 50 to 90 percent
Landform: Hillslope hollows; steep mountain slopes
Ecological site: None assigned

Rock outcrop
Composition: About 5 percent
Slope: 30 to 90 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Scaath and similar soils
Composition: About 5 percent
Slope: 30 to 90 percent
Landform: Spur ridges; upper mountain slopes
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

586—Wiregrass-Rockysaddle-Trailhead complex, 30 to 50 percent slopes

Map Unit Setting

General location: Mill and Rock Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt

Landscape: Mountains
Landform: Nearly level to moderately steep, broad ridges and upper mountain slopes
Elevation: 275 to 2,185 feet (85 to 667 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Wiregrass—40 percent
Rockysaddle—30 percent
Trailhead—15 percent
Minor components—15 percent

Characteristics of Wiregrass and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 9.6 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile
A—0 to 8 inches (0 to 20 centimeters); loam
Bt1—8 to 39 inches (20 to 98 centimeters); clay loam
Bt2—39 to 69 inches (98 to 175 centimeters); clay loam

Characteristics of Rockysaddle and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Uniform to gently rounded mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 5.7 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile
A—0 to 4 inches (0 to 11 centimeters); gravelly loam
Bt1—4 to 12 inches (11 to 31 centimeters); very gravelly clay loam
Bt2—12 to 54 inches (31 to 138 centimeters); very gravelly clay loam
CBt—54 to 61 inches (138 to 155 centimeters); extremely gravelly silty clay loam

Characteristics of Trailhead and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northwest
Landform: Upper mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 5.5 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Typical profile
A—0 to 9 inches (0 to 22 centimeters); loam
Bt1—9 to 25 inches (22 to 63 centimeters); clay
Bt2—25 to 62 inches (63 to 158 centimeters); gravelly clay
BCt—62 to 79 inches (158 to 200 centimeters); extremely cobbly clay

Minor Components

Orthents and similar soils
Composition: About 5 percent
Slope: 50 to 90 percent
Landform: Hillslope hollows; steep mountain slopes
Ecological site: None assigned

Scaath and similar soils
Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Convex slopes; ridge spurs; near tributary headwaters on ridges
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Rock outcrop
Composition: About 3 percent
Slope: 30 to 90 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

Rodgerpeak and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Gently convex to planar areas on crest of ridges
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

587—Childshill, 5 to 30 percent slopes

Map Unit Setting

General location: Mill and Rock Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Nearly level to moderately steep, broad ridges
Elevation: 1,785 to 2,350 feet (545 to 717 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Childshill—65 percent
Minor components—35 percent

Characteristics of Childshill and Similar Soils

Slope: 5 to 30 percent
Aspect: West clockwise to east
Landform: Moderately broad ridges
Parent material: Colluvium and residuum from weakly consolidated fluvial deposits
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with giant chinquapin *(Chrysolepis chrysophylla)* and tanoak *(Lithocarpus densiflorus)* in the subcanopy. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Understory cover includes common beargrass *(Xerophyllum tenax)* and western brackenfern *(Pteridium aquilinum)*.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.3 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/ Vaccinium ovatum*

Typical profile
A1—0 to 3 inches (0 to 8 centimeters); loam
A2—3 to 9 inches (8 to 22 centimeters); sandy clay loam
Bt1—9 to 35 inches (22 to 90 centimeters); gravelly clay loam
Bt2—35 to 65 inches (90 to 165 centimeters); very cobbly clay loam

Minor Components

Surpur and similar soils
Composition: About 10 percent
Slope: 5 to 30 percent
Landform: Saddles and shoulders of ridges
Ecological site: F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/ Vaccinium ovatum*

Ustic Palehumults and similar soils
Composition: About 10 percent
Slope: 0 to 30 percent
Landform: Convex areas on broad, undulating ridges
Ecological site: F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/ Vaccinium ovatum*

Scaath and similar soils
Composition: About 5 percent
Slope: 0 to 50 percent
Landform: Strongly convex slopes; ridge spurs; near margins of ridges
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Ustic Palehumults and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Moderately broad, undulating ridges
Ecological site: F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/ Vaccinium ovatum*

Wiregrass and similar soils
Composition: About 5 percent
Slope: 0 to 50 percent
Landform: Gently concave slopes; broad hollows on margins of ridges

Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

588—Surpur, dry, 2 to 15 percent slopes

Map Unit Setting

General location: Mill and Rock Creek watersheds
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Nearly level to moderately steep mountain slopes and ridges
Elevation: 1,220 to 2,245 feet (372 to 685 meters)
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Surpur—75 percent
Minor components—25 percent

Characteristics of Surpur and Similar Soils

Slope: 2 to 15 percent
Aspect: Southeast clockwise to north
Landform: Broad ridges; upper mountain slopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with giant chinquapin *(Chrysolepis chrysophylla)* and tanoak *(Lithocarpus densiflorus)* in the subcanopy. The understory is dominated by California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. Understory cover includes common beargrass *(Xerophyllum tenax)* and western brackenfern *(Pteridium aquilinum)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/ Vaccinium ovatum*

Typical profile
A—0 to 7 inches (0 to 17 centimeters); loam
BAt—7 to 11 inches (17 to 29 centimeters); gravelly loam
Bt—11 to 39 inches (29 to 100 centimeters); clay loam
CBt—39 to 67 inches (100 to 170 centimeters); very paragravelly loam

Minor Components

Surpur and similar soils
Composition: About 10 percent
Slope: 0 to 30 percent
Landform: Broad ridgetops; upper mountain slopes
Ecological site: F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/ Vaccinium ovatum*

Squashan and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Broad ridgetops; upper mountain slopes
Ecological site: F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/ Vaccinium ovatum*

Childshill and similar soils
Composition: About 3 percent
Slope: 0 to 30 percent
Landform: Mountainsides
Ecological site: F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/ Vaccinium ovatum*

Wiregrass and similar soils
Composition: About 3 percent
Slope: 0 to 30 percent
Landform: Areas of sandstone and/or mudstone on mountain slopes
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Pittplace and similar soils
Composition: About 2 percent
Slope: 0 to 30 percent
Landform: Areas of sandstone and/or mudstone ridges
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

Scaath and similar soils
Composition: About 2 percent
Slope: 10 to 30 percent
Landform: Areas of sandstone that have convex slopes and spur mountain slopes
Ecological site: F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/ Lithocarpus densiflorus–Vaccinium ovatum*

590—Sasquatch-Yeti-Footstep complex, 5 to 30 percent slopes

Map Unit Setting

General location: Near the coast and along Highway 101
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Nearly level to moderately steep, broad ridges
Elevation: 180 to 1,295 feet (56 to 395 meters)
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 300 days

Map Unit Composition

Sasquatch—45 percent
Yeti—20 percent
Footstep—15 percent
Minor components—20 percent

Characteristics of Sasquatch and Similar Soils

Slope: 5 to 30 percent
Aspect: South clockwise to northeast
Landform: Broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 10.9 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 4 centimeters); slightly decomposed plant material
A—2 to 19 inches (4 to 49 centimeters); loam
Bt1—19 to 65 inches (49 to 165 centimeters); clay loam
Bt2—65 to 79 inches (165 to 200 centimeters); paragravelly clay loam

Characteristics of Yeti and Similar Soils

Slope: 5 to 30 percent
Aspect: South clockwise to northeast
Landform: Broad ridges; upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted

Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.4 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
A—0 to 16 inches (0 to 41 centimeters); loam
Bt1—16 to 37 inches (41 to 93 centimeters); clay loam
Bt2—37 to 51 inches (93 to 130 centimeters); gravelly clay
C—51 to 60 inches (130 to 152 centimeters); gravelly clay

Characteristics of Footstep and Similar Soils

Slope: 5 to 30 percent
Aspect: South clockwise to northeast
Landform: Narrow ridges; convex to uniform upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: 0 to 25 percent coarse, subangular pebbles and 0 to 5 percent subangular cobbles
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.8 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Medium
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
A—0 to 15 inches (0 to 38 centimeters); gravelly loam
Bt—15 to 26 inches (38 to 66 centimeters); very gravelly clay loam
CBt—26 to 31 inches (66 to 80 centimeters); extremely gravelly clay loam
R—31 to 79 inches (80 to 200 centimeters); bedrock

Minor Components

Ladybird and similar soils
Composition: About 10 percent
Slope: 15 to 30 percent
Landform: Moderately steep spur ridges
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Sisterrocks and similar soils
Composition: About 8 percent
Slope: 0 to 30 percent
Landform: Uniform to gently rounded areas on ridges
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Footstep and similar soils
Composition: About 2 percent
Slope: 15 to 50 percent
Landform: Spur ridges; upper mountain slopes
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

591—Sasquatch-Sisterrocks-Ladybird complex, 30 to 50 percent slopes

Map Unit Setting

General location: Near the coast and along Highway 101
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, moist mountain slopes that have a strong influence from coastal fog
Elevation: 15 to 1,850 feet (5 to 565 meters)
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 300 days

Map Unit Composition

Sasquatch—45 percent
Sisterrocks—25 percent
Ladybird—15 percent
Minor components—15 percent

Characteristics of Sasquatch and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northeast
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.0 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 17 inches (3 to 43 centimeters); loam
Bt1—17 to 46 inches (43 to 117 centimeters); cobbly clay loam
Bt2—46 to 56 inches (117 to 141 centimeters); clay loam
Bt3—56 to 79 inches (141 to 200 centimeters); gravelly clay loam

Characteristics of Sisterrocks and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northeast
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 6.5 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
A1—0 to 9 inches (0 to 22 centimeters); loam
A2—9 to 16 inches (22 to 40 centimeters); gravelly clay loam
Bt1—16 to 41 inches (40 to 105 centimeters); very gravelly clay loam
Bt2—41 to 67 inches (105 to 170 centimeters); very gravelly silty clay loam

Characteristics of Ladybird and Similar Soils

Slope: 30 to 50 percent
Aspect: South clockwise to northeast

Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.7 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
A—0 to 7 inches (0 to 18 centimeters); gravelly loam
AB—7 to 15 inches (18 to 37 centimeters); gravelly silty clay loam
Bt—15 to 55 inches (37 to 140 centimeters); gravelly clay loam
CBt—55 to 60 inches (140 to 152 centimeters); very gravelly loam

Minor Components

Footstep and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Spur ridges; upper mountain slopes
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Yeti and similar soils
Composition: About 3 percent
Slope: 15 to 30 percent
Landform: Summits of ridges
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Rock outcrop
Composition: About 2 percent
Slope: 30 to 90 percent
Landform: Very steep, strongly convex mountain slopes
Ecological site: None assigned

592—Sisterrocks-Ladybird-Footstep complex, 50 to 75 percent slopes

Map Unit Setting

General location: Near the coast and along Highway 101
Major land resource area: 4B—Coastal Redwood Belt

Landscape: Mountains
Landform: Very steep, moist mountain slopes that have a strong influence from coastal fog
Elevation: 15 to 1,695 feet (5 to 518 meters)
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 300 days

Map Unit Composition

Sisterrocks—35 percent
Ladybird—30 percent
Footstep—20 percent
Minor components—15 percent

Characteristics of Sisterrocks and Similar Soils

Slope: 50 to 75 percent
Aspect: Southwest clockwise to east
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 3.4 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
A—0 to 7 inches (0 to 18 centimeters); gravelly loam
BA—7 to 13 inches (18 to 32 centimeters); very gravelly clay loam
Bt1—13 to 32 inches (32 to 82 centimeters); extremely gravelly sandy clay loam
Bt2—32 to 60 inches (82 to 152 centimeters); extremely gravelly clay loam

Characteristics of Ladybird and Similar Soils

Slope: 50 to 75 percent
Aspect: Southwest clockwise to east
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock

(Tsuga heterophylla), and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.0 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 16 inches (5 to 41 centimeters); gravelly loam
BAt—16 to 23 inches (41 to 59 centimeters); gravelly clay loam
Bt—23 to 53 inches (59 to 135 centimeters); gravelly clay loam
2C—53 to 60 inches (135 to 152 centimeters); very gravelly loam

Characteristics of Footstep and Similar Soils

Slope: 50 to 75 percent
Aspect: Southwest clockwise to east
Landform: Narrow ridges; convex to uniform upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 2.6 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile

A—0 to 7 inches (0 to 18 centimeters); gravelly loam
Bt1—7 to 14 inches (18 to 35 centimeters); very gravelly loam
Bt2—14 to 28 inches (35 to 70 centimeters); extremely gravelly clay loam
R—28 to 79 inches (70 to 200 centimeters); bedrock

Minor Components

Orthents and similar soils
Composition: About 5 percent
Slope: 50 to 90 percent
Landform: Hillslope hollows; steep mountain slopes
Ecological site: None assigned

Rock outcrop
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Ridges
Ecological site: None assigned

Sasquatch and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Gently concave slopes; broad hollows on margins of ridges
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

593—Sasquatch-Yeti-Sisterrocks complex, 15 to 30 percent slopes

Map Unit Setting

General location: Hillslopes that have direct exposure to the ocean
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills
Landform: Steep, moist hillslopes that are strongly influenced by coastal fog
Elevation: 5 to 835 feet (3 to 256 meters)
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 300 days

Map Unit Composition

Sasquatch—50 percent
Yeti—20 percent
Sisterrocks—15 percent
Minor components—15 percent

Characteristics of Sasquatch and Similar Soils

Slope: 15 to 30 percent
Aspect: South clockwise to east
Landform: Hillslopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry.

Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 10.7 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 20 inches (3 to 52 centimeters); loam
Bt1—20 to 40 inches (52 to 102 centimeters); clay loam
Bt2—40 to 61 inches (102 to 155 centimeters); paragravelly clay loam

Characteristics of Yeti and Similar Soils

Slope: 15 to 30 percent
Aspect: South clockwise to east
Landform: Broad ridges; upper hillslopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 10.2 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 4e-5
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 16 inches (3 to 40 centimeters); clay loam

Bt1—16 to 43 inches (40 to 109 centimeters); clay loam
Bt2—43 to 67 inches (109 to 170 centimeters); paragravelly clay loam

Characteristics of Sisterrocks and Similar Soils

Slope: 15 to 30 percent
Aspect: South clockwise to east
Landform: Hillslopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 6.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-4
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Typical profile
Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 16 inches (5 to 40 centimeters); gravelly loam
BA—16 to 22 inches (40 to 55 centimeters); very gravelly clay loam
Bt—22 to 47 inches (55 to 120 centimeters); very gravelly clay loam
CBt—47 to 60 inches (120 to 152 centimeters); extremely gravelly clay loam

Minor Components

Footstep and similar soils
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Spur ridges; upper hillslopes
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Houda and similar soils
Composition: About 5 percent
Slope: 15 to 50 percent
Landform: Around streams; draws on earthflows
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Ladybird and similar soils
Composition: About 5 percent

Slope: 0 to 30 percent
Landform: Spur ridges; upper hillslopes
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

594—Sisterrocks-Sasquatch-Houda complex, 30 to 75 percent slopes

Map Unit Setting

General location: Hillslopes that have direct exposure to the ocean
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills
Landform: Very steep, moist hillslopes that are strongly influenced by coastal fog
Elevation: 5 to 960 feet (2 to 294 meters)
Mean annual precipitation: 70 to 80 inches (1,780 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 325 days

Map Unit Composition

Sisterrocks—45 percent
Sasquatch—20 percent
Houda—20 percent
Minor components—15 percent

Characteristics of Sisterrocks and Similar Soils

Slope: 30 to 75 percent
Aspect: South clockwise to west
Landform: Hillslopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 5.3 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Typical profile

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 8 inches (3 to 20 centimeters); gravelly loam
AB—8 to 16 inches (20 to 41 centimeters); very gravelly loam
Bt—16 to 47 inches (41 to 120 centimeters); very gravelly clay loam
C—47 to 60 inches (120 to 152 centimeters); very gravelly clay loam

Characteristics of Sasquatch and Similar Soils

Slope: 30 to 75 percent
Aspect: South clockwise to west
Landform: Hillslopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.9 inches (high)

Hydrologic properties

Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups

Land capability classification, nonirrigated: 7e
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Typical profile

Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material
A—2 to 20 inches (5 to 52 centimeters); loam
Bt1—20 to 41 inches (52 to 105 centimeters); clay loam
Bt2—41 to 79 inches (105 to 200 centimeters); gravelly clay loam

Characteristics of Houda and Similar Soils

Slope: 30 to 75 percent
Aspect: South clockwise to west
Landform: Stabilized debris slides on hillslopes
Parent material: Debris slide deposits derived from sandstone and mudstone
Typical vegetation: The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry.
Surface area covered by coarse fragments: None
Restrictive feature: None noted

Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 6.5 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 8 inches (3 to 21 centimeters); gravelly loam
BA—8 to 15 inches (21 to 38 centimeters); gravelly clay loam
Bw—15 to 33 inches (38 to 85 centimeters); very gravelly clay loam
C1—33 to 53 inches (85 to 135 centimeters); very gravelly clay loam
C2—53 to 60 inches (135 to 152 centimeters); extremely gravelly clay loam

Minor Components

Footstep and similar soils
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Spur ridges; upper hillslopes
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Ladybird and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Spur ridges; upper ridges
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Rock outcrop
Composition: About 5 percent
Slope: 30 to 90 percent
Landform: Very steep and strongly convex hillslopes
Ecological site: None assigned

595—Battery-Catchings complex, 5 to 30 percent slopes

Map Unit Setting

General location: Near Mill and Clarks Creek tributaries to the Smith River and along the Smith River near Stout Grove
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Uplifted stream terrace remnants
Elevation: 75 to 845 feet (24 to 258 meters)
Mean annual precipitation: 75 to 90 inches (1,900 to 2,290 millimeters)

Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 240 to 280 days

Map Unit Composition

Battery—50 percent
Catchings—30 percent
Minor components—20 percent

Characteristics of Battery and Similar Soils

Slope: 5 to 30 percent
Aspect: West clockwise to southeast
Landform: Uplifted, dissected remnants of stream terraces
Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 7.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 13 inches (0 to 32 centimeters); gravelly clay loam
Bt—13 to 70 inches (32 to 179 centimeters); gravelly clay loam
2C—70 to 79 inches (179 to 200 centimeters); paragravelly clay loam

Characteristics of Catchings and Similar Soils

Slope: 5 to 30 percent
Aspect: West clockwise to southeast
Landform: Uplifted, dissected remnants of stream terraces
Parent material: Alluvium derived from mixed sources
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 5.2 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 4e-4
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typical profile
A—0 to 16 inches (0 to 40 centimeters); very gravelly loam
Bt1—16 to 39 inches (40 to 100 centimeters); very gravelly clay loam
Bt2—39 to 52 inches (100 to 132 centimeters); gravelly sandy loam
Bt3—52 to 63 inches (132 to 160 centimeters); extremely gravelly coarse sandy loam
Bt4—63 to 69 inches (160 to 175 centimeters); silt loam

Minor Components

Coppercreek and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Areas of sandstone and/or mudstone on hillsides
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Palehumults, fine, and similar soils
Composition: About 5 percent
Slope: 5 to 30 percent
Landform: Uplifted, dissected stream terraces
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fluvaquentic Endoaquepts and similar soils
Composition: About 3 percent
Slope: 2 to 9 percent
Landform: Flood plains
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluventic Dystrudepts and similar soils
Composition: About 3 percent
Slope: 5 to 30 percent
Landform: Alluvial fans; flood-plain steps
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Lackscreek and similar soils
Composition: About 2 percent
Slope: 0 to 30 percent
Landform: Strongly convex slopes; ridge spurs; near margins of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

596—Flintrock-Highprairie complex, 15 to 75 percent slopes

Map Unit Setting

General location: Hillslopes that have direct exposure to the ocean
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills
Landform: Steep and very steep hillslopes adjacent to the ocean
Elevation: 0 to 695 feet (0 to 213 meters)
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 300 to 365 days

Map Unit Composition

Flintrock—40 percent
Highprairie—30 percent
Minor components—30 percent

Characteristics of Flintrock and Similar Soils

Slope: 15 to 75 percent
Aspect: South clockwise to west
Landform: Unstable, lower hillslopes
Parent material: Debris flow colluvium derived from sandstone and mudstone
Typical vegetation: The existing plant community is a complex mosaic of coastal scrub and prairie. It is comprised of perennial grasses and forbs. The dominant perennials grasses include various fescues *(Festuca* spp.), tall oatgrass *(Arrhenatherum elatius),* and annual vernalgrass *(Anthroxanthum aristatum)*. Shrubs and woody vines, such as coyotebrush *(Baccharis pilularus),* California buckthorn *(Rhammus californica),* thimbleberry *(Rubus parviflorus),* California blackberry *(Rubus ursinus),* and Himalayan blackberry *(Rubus discolor)* are also present. Cow parsnip *(Heracleum* spp.) and western brackenfern *(Pteridium aquilinum)* and a few, scattered and stunted Sitka spruce *(Picea sitchensis)* or Douglas-fir *(Pseudotsuga menziesii)* are present on some sites.
Surface area covered by coarse fragments: 0 to 30 percent coarse, subangular pebbles and 0 to 10 percent subangular cobbles
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 4.6 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: R004BX102CA, Coastal scrub and prairie, hills, sandstone and mudstone, gravelly clay loam

Typical profile
A—0 to 10 inches (0 to 25 centimeters); very gravelly clay loam
Bw1—10 to 19 inches (25 to 47 centimeters); very gravelly clay loam
Bw2—19 to 31 inches (47 to 78 centimeters); extremely gravelly clay loam
BC—31 to 38 inches (78 to 97 centimeters); very gravelly clay loam
C—38 to 63 inches (97 to 160 centimeters); extremely gravelly clay loam

Characteristics of Highprairie and Similar Soils

Slope: 15 to 75 percent
Aspect: South clockwise to west
Landform: Upper hillslopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Typical vegetation: The existing plant community is a complex mosaic of coastal scrub and prairie. It is comprised of perennial grasses and forbs. Dominant perennials grasses include various fescues *(Festuca* spp.), tall oatgrass *(Arrhenatherum elatius),* and annual vernalgrass *(Anthroxanthum aristatum)*. Shrubs and woody vines, such as coyotebrush *(Baccharis pilularus),* California buckthorn *(Rhammus californica),* thimbleberry *(Rubus parviflorus),* California blackberry *(Rubus ursinus),* and Himalayan blackberry *(Rubus discolor),* are also present. Cow parsnip *(Heracleum* spp.) and western brackenfern (*(Pteridium aquilinum)* and a few, scattered and stunted Sitka spruce *(Picea sitchensis)* or Douglas-fir *(Pseudotsuga menziesii)* are present on some sites.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 8.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: R004BX102CA, Coastal scrub and prairie, hills, sandstone and mudstone, gravelly clay loam

Typical profile
A—0 to 15 inches (0 to 39 centimeters); clay loam
Bw1—15 to 26 inches (39 to 65 centimeters); clay loam
Bw2—26 to 55 inches (65 to 140 centimeters); gravelly clay loam
BC—55 to 67 inches (140 to 170 centimeters); gravelly clay loam

Minor Components

Sisterrocks and similar soils
Composition: About 10 percent
Slope: 0 to 30 percent
Landform: Hillslopes

Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Ladybird and similar soils
Composition: About 8 percent
Slope: 30 to 90 percent
Landform: Spur ridges; upper hillslopes
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Footstep and similar soils
Composition: About 5 percent
Slope: 30 to 90 percent
Landform: Spur ridges; upper hillslopes
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Rock outcrop
Composition: About 5 percent
Slope: 30 to 90 percent
Landform: Very steep, strongly convex hillslopes
Ecological site: None assigned

Fluvents and similar soils
Composition: About 2 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

597—Tarquin, 9 to 30 percent slopes

Map Unit Setting

General location: North of Howland Hill Road in the Boy Scout Trail area
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Hills
Landform: Dissected fan remnants
Elevation: 160 to 645 feet (50 to 198 meters)
Mean annual precipitation: 75 to 90 inches (1,900 to 2,290 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 275 to 325 days

Map Unit Composition

Tarquin—70 percent
Minor components—30 percent

Characteristics of Tarquin and Similar Soils

Slope: 9 to 30 percent
Aspect: North clockwise to southwest
Landform: Dissected fan remnants
Parent material: Colluvium and residuum derived from weakly consolidated siltstone and conglomerate
Typical vegetation: The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in

many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Slow
Available water capacity to a depth of 60 inches: About 11.0 inches (very high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 4e-1
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

Typical profile
Oi—0 to 3 inches (0 to 8 centimeters); slightly decomposed plant material
A—3 to 20 inches (8 to 51 centimeters); loam
Bt1—20 to 30 inches (51 to 77 centimeters); clay loam
Bt2—30 to 50 inches (77 to 128 centimeters); silty clay loam
CBt—50 to 60 inches (128 to 152 centimeters); very paragravelly silty clay loam

Minor Components

Coppercreek and similar soils
Composition: About 5 percent
Slope: 0 to 30 percent
Landform: Hillslopes
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Fluvaquentic Endoaquepts and similar soils
Composition: About 5 percent
Slope: 2 to 9 percent
Landform: Flood plains
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluventic Dystrudepts and similar soils
Composition: About 5 percent
Slope: 5 to 30 percent
Landform: Alluvial fans; flood-plain steps
Ecological site: F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana*

Fluvents and similar soils
Composition: About 5 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

Lackscreek and similar soils
Composition: About 5 percent

Slope: 0 to 30 percent
Landform: Strongly convex slopes; ridge spurs; near margins of ridges
Ecological site: F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/ Rhododendron macrophyllum*

Typic Palehumults and similar soils
Composition: About 5 percent
Slope: 5 to 40 percent
Landform: Terraces
Ecological site: F004BX108CA, *Sequoia sempervirens/Polystichum munitum*

598—Ladybird-Stonehill complex, moist, 30 to 50 percent slopes

Map Unit Setting

General location: Lower Redwood Creek basin in and around Orick Valley
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Steep, moist, lower mountain slopes that have a strong influence from coastal fog (fig. 14)
Elevation: 15 to 1,770 feet (5 to 541 meters)
Mean annual precipitation: 70 to 85 inches (1,780 to 2,160 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 250 to 300 days

Figure 14.—An area of Ladybird-Stonehill complex, moist, 30 to 50 percent slopes. The dominant vegetation consists of Sitka spruce, red alder, swordfern, and redwood-sorrel.

Map Unit Composition

Ladybird—60 percent
Stonehill—20 percent
Minor components—20 percent

Characteristics of Ladybird and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to northwest
Landform: Mountain slopes
Parent material: Colluvium and residuum derived from schist
Typical vegetation: The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry.
Surface area covered by coarse fragments: None
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 8.8 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed plant material
A—1 to 9 inches (3 to 24 centimeters); gravelly loam
BAt—9 to 24 inches (24 to 61 centimeters); gravelly clay loam
Bt—24 to 51 inches (61 to 130 centimeters); gravelly clay loam
BCt—51 to 76 inches (130 to 193 centimeters); very gravelly loam

Characteristics of Stonehill and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to northwest
Landform: Steeper, more strongly convex mountain slopes
Parent material: Residuum and colluvium derived from schist
Typical vegetation: The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 5.5 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 11 inches (2 to 27 centimeters); cobbly silt loam
Bt—11 to 32 inches (27 to 82 centimeters); gravelly silty clay loam
R—32 to 60 inches (82 to 152 centimeters); bedrock

Minor Components

Devilscreek and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Near seeps and in low, wet places near intermittent streams on mountain slopes
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Panthercreek and similar soils
Composition: About 7 percent
Slope: 30 to 50 percent
Landform: Near seeps and in low, wet places near intermittent streams on mountain slopes
Ecological site: F004BX110CA, *Picea sitchensis-Alnus rubra/Rubus spectabilis–Polystichum munitum*

Fluvents and similar soils
Composition: About 3 percent
Slope: 0 to 15 percent
Landform: Active channels
Ecological site: None assigned

659—Raingage-Pigpen complex, 15 to 50 percent slopes

Map Unit Setting

General location: Bald Hills area
Major land resource area: 4B—Coastal Redwood Belt
Landscape: Mountains
Landform: Interspersed smooth and hummocky or irregular, middle and lower mountain slopes. The hummocky and irregular areas are earthflows.
Elevation: 215 to 3,185 feet (67 to 971 meters)
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)

Mean annual air temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free period: 250 to 280 days

Map Unit Composition

Raingage—65 percent
Pigpen—20 percent
Minor components—15 percent

Characteristics of Raingage and Similar Soils

Slope: 15 to 50 percent
Aspect: Southeast clockwise to west
Landform: Earthflows; lower mountain slopes
Parent material: Earthflow deposits derived from mudstone and sandstone
Typical vegetation: The existing plant community is dominated by herbaceous species, such as bristly dogstail grass *(Cynosurus echinatus),* orchardgrass *(Dactylis glomerata),* annual vernalgrass *(Anthroxanthum aristatum),* and hairy cat's ear *(Hypochaeris radicata)*. Shrubs species, such as Scotch broom *(Cytisus scoparius)* and coyotebrush *(Baccharis pilularis),* are also present on some sites.
Surface area covered by coarse fragments: 3 to 10 percent coarse, subangular pebbles
Restrictive feature: None noted
Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 9.3 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: Present
Natural drainage class: Moderately well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: R004BX103CA, Lower prairie, earthflows, sandstone and mudstone, gravelly loam

Typical profile
A—0 to 17 inches (0 to 44 centimeters); loam
BA—17 to 26 inches (44 to 65 centimeters); very gravelly clay loam
Btg—26 to 51 inches (65 to 130 centimeters); gravelly silty clay loam
Cg—51 to 59 inches (130 to 150 centimeters); gravelly silty clay loam

Characteristics of Pigpen and Similar Soils

Slope: 15 to 50 percent
Aspect: Southeast clockwise to west
Landform: On the steeper, more hummocky or irregular portions of earthflow
Parent material: Earthflow deposits derived from mudstone and sandstone
Typical vegetation: The existing plant community is dominated by herbaceous species, such as bristly dogstail grass *(Cynosurus echinatus),* orchardgrass *(Dactylis glomerata),* annual vernalgrass *(Anthroxanthum aristatum),* and hairy cat's ear *(Hypochaeris radicata)*. Shrubs species, such as Scotch broom *(Cytisus scoparius)* and coyotebrush *(Baccharis pilularis),* are also present on some sites.
Surface area covered by coarse fragments: 15 to 30 percent coarse, subangular pebbles
Restrictive feature: None noted

Slowest permeability class: Moderately slow
Available water capacity to a depth of 60 inches: About 6.5 inches (moderate)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: Present
Natural drainage class: Somewhat poorly drained
Hydrologic soil group: C/D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: R004BX103CA, Lower prairie, earthflows, sandstone and mudstone, gravelly loam

Typical profile
A—0 to 6 inches (0 to 15 centimeters); gravelly loam
AB—6 to 14 inches (15 to 36 centimeters); gravelly silty clay loam
Bt—14 to 32 inches (36 to 81 centimeters); very cobbly silty clay loam
Cg—32 to 59 inches (81 to 150 centimeters); very gravelly clay loam

Minor Components

Airstrip and similar soils
Composition: About 5 percent
Slope: 15 to 50 percent
Landform: Spur ridges on mountain slopes
Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Humic Dystroxerepts and similar soils
Composition: About 5 percent
Slope: 15 to 50 percent
Landform: Irregular slopes that have more rapid earthflow activity; on mountain slopes
Ecological site: R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam

Rock outcrop
Composition: About 5 percent
Slope: 30 to 50 percent
Landform: Very steep, strongly convex earthflows
Ecological site: None assigned

756—Oragran-Weitchpec complex, 30 to 50 percent slopes

Map Unit Setting

General location: Little Bald Hills southeast of the town of Hiouchi
Major land resource area: 5—Siskiyou-Trinity Area
Landscape: Mountains
Landform: Steep mountain slopes
Elevation: 845 to 2,135 feet (259 to 652 meters)
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 100 to 150 days

Map Unit Composition

Oragran—40 percent
Weitchpec—25 percent
Minor components—35 percent

Characteristics of Oragran and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to northwest
Landform: Mountain slopes
Parent material: Residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Jeffrey pine *(Pinus jeffreyi)*. The understory is dominated by shrubs, including huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The forb layer is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 2.3 inches (very low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 3 inches (2 to 8 centimeters); very stony loam
Bw—3 to 13 inches (8 to 33 centimeters); stony silt loam
R—13 to 17 inches (33 to 43 centimeters); bedrock

Characteristics of Weitchpec and Similar Soils

Slope: 30 to 50 percent
Aspect: Southwest clockwise to northwest
Landform: Mountain slopes
Parent material: Residuum weathered from serpentinite
Typical vegetation: The overstory is dominated by Jeffrey pine *(Pinus jeffreyi)*. The understory is dominated by shrubs, including huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The forb layer is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.2 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None

Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: B

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Typical profile
A—0 to 8 inches (0 to 20 centimeters); gravelly silt loam
Bw1—8 to 30 inches (20 to 76 centimeters); extremely gravelly sandy loam
Bw2—30 to 35 inches (76 to 89 centimeters); very gravelly sandy loam
R—35 to 39 inches (89 to 99 centimeters); bedrock

Minor Components

Lithic Haploxeralfs, ultramafic, and similar soils
Composition: About 10 percent
Slope: 50 to 70 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Oragran, moderately deep, and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Walnett and similar soils
Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Rock outcrop
Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: None assigned

759—Jayel-Walnett-Oragran complex, 30 to 75 percent slopes, extremely stony

Map Unit Setting

General location: Little Bald Hills southeast of the town of Hiouchi
Major land resource area: 5—Siskiyou-Trinity Area
Landscape: Mountains
Landform: Very steep mountain slopes and broad ridges
Elevation: 180 to 3,010 feet (55 to 918 meters)
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 100 to 180 days

Map Unit Composition

Jayel, extremely stony—35 percent
Walnett, extremely stony—20 percent
Oragran—20 percent
Minor components—25 percent

Characteristics of Jayel and Similar Soils

Slope: 30 to 50 percent
Aspect: Southeast clockwise to north
Landform: Mountain slopes; broad ridges
Parent material: Colluvium and residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Jeffrey pine *(Pinus jeffreyi)*. The understory is dominated by shrubs, including huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The forb layer is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.
Surface area covered by coarse fragments: 3 to 15 percent subangular stones
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Slowest permeability class: Slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 11 inches (2 to 28 centimeters); stony clay loam
Bw—11 to 32 inches (28 to 81 centimeters); stony clay
R—32 to 39 inches (81 to 100 centimeters); bedrock

Characteristics of Walnett and Similar Soils

Slope: 30 to 75 percent
Aspect: Southeast clockwise to north
Landform: Mountain slopes
Parent material: Colluvium and residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Jeffrey pine *(Pinus jeffreyi)*. The understory is dominated by shrubs, including huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The forb layer is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.
Surface area covered by coarse fragments: 3 to 15 percent subangular stones
Depth to restrictive feature: 60 to 79 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 4.8 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None

Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 5 inches (2 to 13 centimeters); very stony loam
Bt—5 to 43 inches (13 to 109 centimeters); very gravelly clay loam
C—43 to 61 inches (109 to 155 centimeters); very gravelly loam
R—61 to 65 inches (155 to 165 centimeters); bedrock

Characteristics of Oragran and Similar Soils

Slope: 30 to 75 percent
Aspect: Southeast clockwise to north
Landform: Mountain slopes
Parent material: Residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Jeffrey pine *(Pinus jeffreyi)*. The understory is dominated by shrubs, including huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The forb layer is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 2.9 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 7e
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 3 inches (2 to 8 centimeters); very stony loam
Bw—3 to 19 inches (8 to 48 centimeters); stony silt loam
R—19 to 23 inches (48 to 58 centimeters); bedrock

Minor Components

Lithic Haploxeralfs, ultramafic, and similar soils
Composition: About 10 percent
Slope: 50 to 70 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/Quercus vacciniifolia*

Gasquet, extremely stony, and similar soils
Composition: About 5 percent
Slope: 15 to 30 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Rock outcrop
Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: None assigned

Ultic Haploxeralfs and similar soils
Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

760—Jayel-Walnett-Oragran complex, 9 to 30 percent slopes, extremely stony

Map Unit Setting

General location: Little Bald Hills southeast of the town of Hiouchi
Major land resource area: 5—Siskiyou-Trinity Area
Landscape: Mountains
Landform: Broad ridges and moderately steep mountain slopes
Elevation: 1,535 to 2,410 feet (469 to 735 meters)
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 100 to 180 days

Map Unit Composition

Jayel, extremely stony—30 percent
Walnett, extremely stony—25 percent
Oragran—25 percent
Minor components—20 percent

Characteristics of Jayel and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northeast
Landform: Mountain slopes; broad ridges
Parent material: Colluvium and residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Jeffrey pine *(Pinus jeffreyi)*. The understory is dominated by shrubs, including huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The forb layer is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.
Surface area covered by coarse fragments: 3 to 15 percent subangular stones
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Slowest permeability class: Slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 11 inches (2 to 28 centimeters); stony clay loam
Bw—11 to 32 inches (28 to 81 centimeters); stony clay
R—32 to 39 inches (81 to 100 centimeters); bedrock

Characteristics of Walnett and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northeast
Landform: Mountain slopes; broad ridges
Parent material: Colluvium and residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Jeffrey pine *(Pinus jeffreyi)*. The understory is dominated by shrubs, including huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The forb layer is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.
Surface area covered by coarse fragments: 3 to 15 percent subangular stones
Depth to restrictive feature: 60 to 79 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 4.8 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 5 inches (2 to 13 centimeters); very stony loam
Bt—5 to 43 inches (13 to 109 centimeters); very gravelly clay loam
C—43 to 61 inches (109 to 155 centimeters); very gravelly loam
R—61 to 65 inches (155 to 165 centimeters); bedrock

Characteristics of Oragran and Similar Soils

Slope: 9 to 30 percent
Aspect: South clockwise to northeast
Landform: Mountain slopes; broad ridges
Parent material: Residuum weathered from serpentinized peridotite

Typical vegetation: The overstory is dominated by Jeffrey pine *(Pinus jeffreyi)*. The understory is dominated by shrubs, including huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The forb layer is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 2.0 inches (very low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 3 inches (2 to 8 centimeters); very stony loam
Bw—3 to 13 inches (8 to 33 centimeters); stony silt loam
R—13 to 17 inches (33 to 43 centimeters); bedrock

Minor Components

Weitchpec and similar soils
Composition: About 10 percent
Slope: 15 to 50 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/Quercus vacciniifolia*

Gasquet, extremely stony, and similar soils
Composition: About 5 percent
Slope: 9 to 30 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/Quercus vacciniifolia*

Rock outcrop
Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: None assigned

761—Gasquet-Walnett-Jayel complex, 9 to 50 percent slopes, extremely stony

Map Unit Setting

General location: Little Bald Hills southeast of the town of Hiouchi
Major land resource area: 5—Siskiyou-Trinity Area

Landscape: Mountains
Landform: Moderately steep and steep mountain slopes
Elevation: 510 to 2,515 feet (156 to 768 meters)
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual air temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free period: 140 to 180 days

Map Unit Composition

Gasquet, extremely stony—30 percent
Walnett, extremely stony—25 percent
Jayel—20 percent
Minor components—25 percent

Characteristics of Gasquet and Similar Soils

Slope: 9 to 50 percent
Aspect: South clockwise to north
Landform: Mountain slopes
Parent material: Colluvium and residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The understory is dominated by huckleberry oak *(Quercus vacciniifolia),* Pacific rhododendron *(Rhododendron macrophyllum),* and various manzanita species, including sticky whiteleaf manzanita *(Arctostaphylos viscida)* and pinemat manzanita *(Arctostaphylos nevadensis)*. Other common shrubs include red huckleberry *(Vaccinium parvifolium)* and California buckthorn *(Rhamnus californica)*.
Surface area covered by coarse fragments: 3 to 15 percent subangular stones
Depth to restrictive feature: 60 to 79 inches to lithic bedrock
Slowest permeability class: Slow above the bedrock
Available water capacity to a depth of 60 inches: About 9.3 inches (high)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 10 inches (2 to 25 centimeters); stony loam
Bt—10 to 61 inches (25 to 155 centimeters); stony clay loam
R—61 to 65 inches (155 to 165 centimeters); bedrock

Characteristics of Walnett and Similar Soils

Slope: 9 to 50 percent
Aspect: South clockwise to north
Landform: Mountain slopes
Parent material: Colluvium and residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The understory is dominated by huckleberry oak *(Quercus vacciniifolia),* Pacific rhododendron *(Rhododendron macrophyllum),* and various

manzanita species, including sticky whiteleaf manzanita *(Arctostaphylos viscida)* and pinemat manzanita *(Arctostaphylos nevadensis)*. Other common shrubs include red huckleberry *(Vaccinium parvifolium)* and California buckthorn *(Rhamnus californica)*.

Surface area covered by coarse fragments: 3 to 15 percent subangular stones
Depth to restrictive feature: 60 to 79 inches to lithic bedrock
Slowest permeability class: Moderately slow above the bedrock
Available water capacity to a depth of 60 inches: About 4.8 inches (low)

Hydrologic properties
Present annual flooding: None
Present annual ponding: None
Surface water runoff class: High
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: C

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Typical profile
Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material
A—1 to 5 inches (2 to 13 centimeters); very stony loam
Bt—5 to 43 inches (13 to 109 centimeters); very gravelly clay loam
C—43 to 61 inches (109 to 155 centimeters); extremely gravelly loam
R—61 to 65 inches (155 to 165 centimeters); bedrock

Characteristics of Jayel and Similar Soils

Slope: 9 to 50 percent
Aspect: South clockwise to north
Landform: Mountain slopes
Parent material: Colluvium and residuum weathered from serpentinized peridotite
Typical vegetation: The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)*. The understory is dominated by huckleberry oak *(Quercus vacciniifolia),* Pacific rhododendron *(Rhododendron macrophyllum),* and various manzanita species, including sticky whiteleaf manzanita *(Arctostaphylos viscida)* and pinemat manzanita *(Arctostaphylos nevadensis)*. Other common shrubs include red huckleberry *(Vaccinium parvifolium)* and California buckthorn *(Rhamnus californica)*.
Surface area covered by coarse fragments: None
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Slowest permeability class: Slow above the bedrock
Available water capacity to a depth of 60 inches: About 3.5 inches (low)

Hydrologic properties
Present annual ponding: None
Surface water runoff class: Very high
Current water table: None noted
Natural drainage class: Well drained
Hydrologic soil group: D

Interpretive groups
Land capability classification, nonirrigated: 6e
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Typical profile

A—0 to 12 inches (0 to 30 centimeters); clay loam
Bw—12 to 39 inches (30 to 100 centimeters); clay
R—39 to 60 inches (100 to 152 centimeters); bedrock

Minor Components

Lithic Haploxeralfs and similar soils

Composition: About 10 percent
Slope: 50 to 70 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Oragran, moderately deep, and similar soils

Composition: About 10 percent
Slope: 30 to 50 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

Ultic Haploxeralfs and similar soils

Composition: About 5 percent
Slope: 30 to 75 percent
Landform: Mountain slopes
Ecological site: F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/ Quercus vacciniifolia*

W—Water

This unit consists of perennial water bodies, including natural and constructed streams, rivers, lakes, ponds, and estuaries that in most years are covered with water at least during the period warm enough for plants to grow. Many areas are covered with water throughout the year. Pits, blowouts, playas, and reservoirs that contain water are also mapped as water. Areas of this unit were selected from the aerial imagery used during compilation of maps. Water bodies that are too small or too narrow were not mapped.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both descriptive and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate whether or not the soils are limited by soil features that affect a specified use or in terms that indicate the suitability or potential of the soils for the use. Thus, the tables may show limitation classes, suitability classes, or classes indicating the potential of the soils for the use.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations

appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe is listed last.

For additional component horizon data, see the “Soil Properties” section of this publication. Also, a description of typical soils, including a range in characteristics, is included in the “Classification of the Soils” section.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes (USDA–SCS, 1961).

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require

similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given for all capability classes.

The capability classification for each major component is given in table 4 and in the section “Detailed Soil Map Units.”

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation’s prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 369 acres, or only about 0.2 percent of the survey area, meets the requirements for prime farmland.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in table 5. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 3. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

Major Land Resource Areas

A major land resource area (MLRA) is a broad geographic area that has a distinct combination of climate, topography, elevation, potential natural vegetation, soils, hydrology, land use, and general type of farming (USDA–SCS, 1981). The two MLRAs in the survey area are 4B–Coastal Redwood Belt and 5–Siskiyou-Trinity Area. The major land resource area for each map unit is listed in the detailed soil map unit descriptions.

MLRA 4B, Coastal Redwood Belt.—More than 95 percent of the survey area is in MLRA 4B. In this major land resource area, the climate is tempered by cool marine air throughout the year. Winters are mild and wet, and summers are dry with frequent

coastal fog. The landscape is dominated by strongly sloping to very steep mountains and has nearly level to steep, dissected, uplifted marine terraces along the coast. Sedimentary rocks of the Franciscan complex underlie most areas. Plio-Pliestocene fluvial and marine sediments underlie some areas between Holter Ridge and the Pacific Ocean south of Klamath and on Child's Hill in the Mill Creek watershed. The natural vegetation is mainly redwood, Douglas-fir, and western hemlock with Sitka spruce along the immediate coast. Elevation ranges from sea level to 3,262 feet (944 meters) at an unnamed summit south of Coyote Peak. The average annual precipitation ranges from 60 inches (1,520 millimeters) near Orick to over 100 inches (2,550 millimeters) at the higher elevations and inland areas along the Smith River. The average annual air temperature ranges from 50 to 55 degrees F (10 to 13 degrees C), and the average frost-free season ranges from 250 to 325 days. The soil temperature regime is generally isomesic along the coastal region within the fog belt and mesic in more inland areas. The soil moisture regime is udic near the coast and ustic farther inland.

In the survey area, most of the land in this major land resource area was formerly used for timber production and grazing and is currently used for wildlife, recreation, and watershed.

MLRA 5, Siskiyou-Trinity Area.—Less than 5 percent of the survey area is in MLRA 5, including the eastern portion of the Bald Hills and the eastern portion of the Lower Park Protection Zone in the Lower Redwood Creek basin and the Little Bald Hills area east of Crescent City. This major land resource area consists of the mountainous terrain outside the strong coastal influence of maritime climate. Winters are cold and wet, and summers are warm and dry. The landscape is dominated by strongly sloping to very steep mountains. Metamorphic rocks of the Western Jurassic Belt of the Klamath terrane dominate in this area. The natural vegetation is mainly Douglas-fir and tanoak. Elevation ranges from 160 to 4,920 feet (50 to 1,500 meters). The average annual precipitation ranges from 70 to 100 inches (1,780 to 2,550 millimeters). The average annual air temperature ranges from 50 to 59 degrees F (10 to 15 degrees C), and the average frost-free season ranges from 100 to 250 days. The soil temperate regime is generally mesic, and the soil moisture regime is typically xeric.

In the survey area, most of the land in this major land resource area was formerly used for timber production and grazing and is currently used for wildlife, recreation, and watershed.

Forestland Productivity and Management

Judy Welles, forester, Natural Resources Conservation Service, helped prepare this section.

The general information provided in this section is intended as a guide. It may help resource managers, landowners, and visitors to understand the characteristics and management of forest soils within the survey area. Onsite investigation by resource professionals is needed for the acquisition of site-specific data. Such investigation may result in better solutions to specific resource problems than the general information in this section and associated tables.

Forestland Productivity

In table 6, the *potential productivity* of *common trees* is expressed as an average site index and as a volume number. Also listed in the table are the standard deviation for the site index, the base age for the site index, and the age for which the culmination of mean annual increment is calculated. The *site index* is the average height in feet that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. The

average (mean) site index is listed for each soil for which adequate data is available. Redwood site indexes are based on 100-year curves by Lindquist and Palley (1963) and 50-year curves by Wensel and Krumland (1986). Douglas-fir site indexes are based on 100-year curves by McArdle, Meyer, and Bruce (1961) and 50-year curves by King (1966). Sitka spruce site indexes are based on 100-year curves by Meyer (1937). Western hemlock site indexes are based on 100-year curves by Barnes (1962).

The *volume of wood fiber* is the yield likely to be produced by a given tree species, expressed as cubic feet per acre per year. The volume is calculated at the age of culmination of the mean annual increment (CMAI) for fully stocked, unmanaged, natural stands as given in standard normal yield tables. Values are based on yield tables by McArdle, Meyer, and Bruce (1961) for Douglas-fir, Lindquist and Palley (1963) for redwood, Meyer (1937) for Sitka spruce, and Barnes (1962) for western hemlock. Wind can reduce productivity well below the estimates for soils on exposed ridges or on sites adjacent to the ocean.

Areas supporting large amounts of hardwood, such as tanoak, madrone, red alder, and Oregon white oak, were not measured, and estimates of potential productivity are not available.

Forest trees are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvesting.

Forestland Management

Tables 7a through 7e can be utilized by resource managers in planning the use of forestland within the survey area. Rating class terms indicate the degree to which the soils are suited to specified management practices. Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified forest management practice (1.00) and the point at which the soil feature is not a limitation (0.00). More detailed information about the criteria used in the ratings is available in the “National Forestry Manual,” which is available at the local offices of the Natural Resources Conservation Service or online (http://soils.usda.gov/).

Table 7a

Table 7a shows suitability for hand planting, mechanical planting, and use of harvesting equipment.

Soil properties and the aspects of the physical environment that affect planting depth affect reforestation options. Erosion, coarse fragments, and steep slopes may contribute to difficulty in planting. Limitations that affect planting are considered in terms of site factors that obstruct planting and reduce planting efficiency. Locally, hand planting is generally more common than mechanical planting due to the slope and rocks. Mechanical planting is generally limited to areas that have a slope of less than 15 percent and that are relatively free of rocks. Rating class terms for suitability for hand planting and mechanical planting are based on slope, depth to a restrictive layer, rock fragments on or below the surface, plasticity index, content of sand, depth to water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted. Compaction due to harvesting or other site activities is not considered. *Well suited* indicates that few or no restrictions to planting are expected, and planting rates should not be affected; *moderately suited* indicates one or more restrictions exist that impede planting and reduce planting rates; *poorly suited* indicates one or more restrictions that severely impede planting and reduce planting rates; and *unsuited* indicates that site factors and features prevent the proper planting of seedlings.

Soil wetness caused by seasonal precipitation influences the type of harvesting equipment that can be used and the season of use. The soils in the survey area are usually too wet for the use of ground-yarding systems from about November 15 to April 1. Except for the sandy or very gravelly soils, all of the soils are susceptible to compaction by wheeled or tracked equipment when wet. Heavily compacted or puddled soils are generally less productive than other soils.

Slope gradient is another important consideration affecting the selection of harvesting equipment and systems. In areas where slopes are less than 30 percent, few limitations affect the use of wheeled or tracked equipment. In areas where slopes are 30 to 50 percent, extra care is needed in the selection of equipment. Cable-yarding systems generally cause the least soil disturbance where the terrain and road systems are conducive to their use. In large areas where slopes are more than 50 percent, less soil disturbance results from cable- or helicopter-yarding than from tractor yarding.

Table 7b

Table 7b shows suitability for surface mechanical site preparation and deep mechanical site preparation.

Ratings in the table are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. Ratings for surface mechanical site preparation are for the part of the soil from the surface to a depth of about 12 inches (30 centimeters). Ratings for deep mechanical site preparation are for the part of the soil from the surface to a depth of 36 inches (90 centimeters).

Ratings of well suited, poorly suited, or unsuited are used to indicate the degree to which the physical properties of a site limit efficiency of mechanical site preparation. Slope gradient and the amount of rock fragments generally limit the potential for mechanical site preparation. Slopes greater than 15 percent are generally poorly suited to mechanical site preparation, and slopes greater than 35 percent are generally unsuited. Equipment use should be limited or avoided on soils that are subject to ponding or that have a water table at a shallow depth.

Compaction and loss of organic matter and nutrients caused by mechanical site preparation can degrade a site. To minimize compaction, mechanical site preparation should be restricted to dry soils. The use of equipment with teeth limits the amount of soil going into brush piles and reduces the loss of organic matter. On previously compacted soils, mechanical site preparation to a depth of greater than 20 inches (50 centimeters) can improve seedling growth (Adams, 1992).

Table 7c

Table 7c indicates the limitations affecting construction of haul roads and log landings, suitability for log landings, and soil rutting hazard.

Ratings in the table are based on slope, flooding, permafrost, plasticity index, hazard of soil slippage, content of sand, Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. These ratings reflect the aspects of the physical environment that make road construction difficult. Slope gradient, bedrock type, and the soil properties and characteristics that reduce road-building efficiency increase construction costs and the potential for road failure and landslides. The potential for erosion and sedimentation can be minimized by careful planning and placement of roads (Weaver and Hagans, 1994).

Limitations affecting construction of haul roads and log landings are rated as slight, moderate, or severe. The ratings indicate the potential for reduced efficiency in the construction of haul roads and log landings, increased costs due to physical obstructions or soil characteristics, and increased incidence of road failure or landslides. A rating of *slight* indicates few or no limitations to construction activities,

moderate indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or more costly.

Slope gradient affects the cost and efficiency of constructing haul roads and log landings. Erosion and stability issues also increase as slope gradient increases. Erodibility and road stability are controlled by soil texture and depth to bedrock or a restrictive layer. Road construction in areas of weathered or fractured bedrock typically results in road-building problems and increased construction and maintenance costs. Shallow soils or soils that have a high content of clay or sand can create similar impacts. Geology and topography affect the potential for soil slippage, landslides, and road failure.

Ratings in the column *suitability for log landings* are based on slope, surface rock fragments, plasticity index, content of sand, Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited. A rating of *well suited* indicates that there are no significant limitations affecting landing suitability, *moderately suited* indicates that there are limitations affecting landing suitability, and *poorly suited* indicates that there are one or more limitations that make landing suitability highly unfavorable. The ratings relate to the efficiency and costs of landing construction and the potential for landing failure or unsafe operation. Slope gradient, bedrock type and location, and soil strength are the main factors that affect suitability of sites for log landings (Weaver and Hagans, 1994).

Soil rutting hazard reflects the erodibility caused by the operation of ground-based forest management equipment. Soil deformation and compaction can occur simultaneously with rutting. Rutting acts to collect runoff and cause additional erosion of roads or trails. Operation of heavy equipment and/or multiple passes of equipment over an area under wet conditions can affect site productivity and groundwater hydrology of the area. Predesignation of skid trails, use of high flotation equipment, or use of alternative logging methods may be needed to minimize compaction. The rating criteria are based on depth to a water table, the amount of rock fragments at or below the surface, Unified classification, depth to a restrictive layer, and slope. Slopes that are greater than 20 percent can adjust ratings to one class more limiting. Ratings are slight, moderate, and severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates rutting is likely, and *severe* indicates that ruts form readily.

Table 7d

Table 7d indicates the hazard of off-road and off-trail erosion, the hazard of erosion on road and trails, and the suitability of the natural surface for roads.

According to Weaver and Hagans (1994), forest roads and ranch roads have the potential to contribute significantly to runoff and stream sedimentation by increasing the hazard of erosion, the amount of sediment transfer, and the number of landslides. Insufficient inspection and maintenance of roads and drainage structures can also lead to the movement of soil and delivery of sediment to water courses.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and soil erodibility factor K. The soil loss is caused by sheet or rill erosion where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that the amount of erosion is small under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed during logging or road building; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, is advised to prevent soil loss; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on road and trails* are based on soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. Some soil textures, such as silt, silt loam, and sandy loam, have higher erodibility factors and in sloping areas can lead to increased erosion, sedimentation, road maintenance, and costs. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, roads or trails may require occasional maintenance, and simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, roads or trails require frequent maintenance, and costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, surface rock fragments, plasticity index, content of sand, Unified classification, depth to water table, ponding, flooding, and hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. Soils that are not well suited may need enhanced surfacing to improve trafficability and to reduce the hazard of erosion. The soils are described as well suited, moderately suited, or poorly suited to this use. *Well suited* indicates few or no restrictions to natural road suitability, *moderately suited* indicates one or more restrictions reduce site suitability, and *poorly suited* indicates one or more restrictions generally make the natural surface of the soil very difficult or unsafe to use as a site for a road.

Roads may be frequently impassable during the rainy season, except where they are covered with rocks or are on very gravelly or sandy soils. Roads that are used during winter months should be surfaced to improve efficiency, provide for safe operation, and reduce the hazard of erosion. Some soils are dusty when dry and require watering or other road-surface and dust-control treatments during periods of heavy use.

Maintenance of the road surface can significantly reduce the amount of sediment that enters streams from road surfaces (Weaver and Hagans, 1994). Conservation practices that can prevent excessive soil loss and degradation of water quality include properly locating, designing, and installing skid trails, roads, culverts, waterbars, and stream crossings. Seeding and mulching cut-and-fill slopes can reduce the hazard of sheet and rill erosion. Vegetative buffer strips along streams help to prevent sedimentation, control streambank erosion, and maintain favorable water temperature.

Table 7e

Table 7e indicates the potential for damage to soil by fire and the potential for seedling mortality.

Ratings in the column *potential for damage to soil by fire* are based on the texture of the surface layer, the content of rock fragments and organic matter in the surface layer, the thickness of the surface layer, and slope. The ratings can be used as general guidelines when plans are made for prescribed burns or for revegetation after wildfire. The risk of damage to soils by fire increases with the intensity of heat. Physical properties of soils, such as porosity and the content of organic matter, can be significantly altered by hot fires (Daniels, Helms, and Baker, 1979). Some soils have characteristics that enable them to withstand these changes better than other soils. Loss of the duff layer and alteration of soil structure following prescribed burning can lead to a decrease in pore volume and rate of water passage through the soil, thereby resulting in increased runoff and erosion (Minard, 2003).

A rating of *low* indicates that most types of fire will not adversely affect soil characteristics and future productivity, *moderate* indicates that some extra care in planning is needed to maintain favorable soil characteristics, and *high* indicates that special management is needed to protect organic matter and thus maintain productivity. Moderate or high ratings can indicate the need to burn in a specific season, reduce the quantity of fuel, or lengthen the period between burns (Wells and others, 1979).

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, reaction, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. Low, moderate, and high ratings indicate the degree to which soil affects the mortality of tree seedlings. Plant competition, which may be a significant factor, is not considered in the ratings. The ratings apply to good stock that is properly planted during a period of sufficient rainfall. A rating of *low* indicates that seedlings are expected to develop normally and become established; *moderate* indicates that root development may be restricted sufficiently to cause death of seedlings, that establishment of surviving seedlings may be delayed, and that extra precautions are advisable; and *high* indicates that seedlings are not expected to survive without special treatment or management and that replanting may be necessary.

The trees selected for planting should be those that are suited to the soils. Natural reforestation by Douglas-fir seed trees and redwood sprouts provides variable stocking results and may not be dependable for attaining the earliest optimum stocking.

A few soils in the survey area have chemical toxicities or imbalances that hinder tree growth. Soils that formed in serpentinitic parent material are known to have ratios of calcium to magnesium that are detrimental to the growth of Douglas-fir and redwood (Zinke and Colwell, 1965). Additionally, serpentinitic soils are commonly derived from rock outcrops on steep ground. This harsh environment can present significant challenges to plant growth and survival (Kruckeberg, 1984).

The soil properties that commonly influence seedling mortality include texture, content of rock fragments, temperature, and drainage. Soils in the udic-isomesic soil climate regime generally have few limitations affecting seedling survival. Exceptions may be found on poorly drained soils or steep and gravelly soils. In the ustic-isomesic soil climate regime, soil and air temperatures are slightly higher and soil moisture is less abundant because of reduced marine influence. These characteristics are especially apparent if the tree canopy is removed. The available water capacity in the upper 2 feet of the soil influences seedling mortality. Soils with an available water capacity of less than 2.5 inches in the upper 2 feet are severely limited for redwood seedlings, especially on south-facing slopes. Partial shading may be desirable, or a different species, such as Douglas-fir, may be planted.

Forest Cover Types

The major forest cover types in the survey area are redwood, Pacific Douglas-fir, Douglas-fir–tanoak–madrone, and Sitka spruce (Eyre, 1980). Cover types of limited extent include red alder, Oregon white oak, Jeffrey pine, canyon live oak, and knobcone pine.

Forest Soil Climate Zones

The plant species and forest ecological sites in the survey area vary with distance from the ocean, elevation, soil, relief, aspect, and history of disturbance. Three major soil climate regimes, as recognized by “Keys to Soil Taxonomy” (Soil Survey Staff, 2003), exist under forest vegetation in the survey area. Soil temperature at a depth of 50 centimeters (20 inches) and duration and season of soil moisture at a depth of 10 to 100 centimeters (4 to 40 inches), depending on the texture and content of rock fragments, are used to establish the soil climate regimes.

The soil climate regimes in the survey area are strongly influenced by the cool, moist marine air from the Pacific Ocean and by the extent and duration of fog. Each soil climate regime and the plant communities that typify these regimes are described in this section. Vegetation studies by Mahoney (1999), Popenoe (1998), and Muldavin and others (1981) were used in the establishment of soil-plant relationships. Soil scientists used key indicator species as an aid in identifying and mapping soil climate regimes.

Udic-Isomesic (general soil map units 1 to 11)

This soil climate regime is directly adjacent to the ocean and extends inland along the Smith and Klamath Rivers and Redwood, Mill, Prairie, Lagoon, and Wilson Creeks. It extends 3 to 10 miles or to the first major north-south ridge. Elevation ranges from sea level to 2,790 feet (850 meters). Heavy fog occurs frequently throughout areas of this climate regime, but the extent and duration lessens significantly at about 2 miles inland.

The soils hold plant-available water during most or all of the year. The upper part of soils on the inland margin of this climate regime may experience drying for 30 to 45 days from late September into early October. Soil temperature at a depth of 50 centimeters (20 inches) varies less than 9 degrees F (6 degrees C) between summer and winter. The canopy is dominated by Redwood, Sitka spruce, and red alder with lesser amounts of western hemlock, Douglas-fir, tanoak, and cascara. Shrubs, in the order of dominance, are evergreen (California) huckleberry, Pacific rhododendron, salmonberry, thimbleberry, and salal. Pacific rhododendron, salmonberry, western hemlock, or a thick cover of western swordfern are key indicators for ecological sites in this climate regime.

Western swordfern and redwood-sorrel dominate the understory forb cover in the moister ecological sites within this climate zone. The drier sites have some western swordfern but are dominated by the shrub species.

Ustic-Isomesic (general soil map unit 12)

This climate regime is on steep mountain slopes and ridges east of Redwood Creek and on the eastern edge of the Mill Creek and Rock Creek watersheds. Elevation ranges from 340 to 3,200 feet (105 to 975 meters). A moderately weak marine influence minimizes seasonal fluctuations in air temperature and thus results in minimal fluctuations in soil temperature. The fog influence is less pronounced than in the udic-isomesic regime, but some fog occurs.

The soils may be dry from July through early October, and soil temperature at a depth of 50 centimeters (20 inches) varies less than 9 degrees F (6 degrees C) between summer and winter. The vegetation is mainly Douglas-fir, tanoak, madrone, California bay, and scattered pockets of redwood with a sparse evergreen shrub layer dominated by California huckleberry and salal. The absence of Pacific rhododendron, salmonberry, and western hemlock are used to identify ecological sites within this climate regime.

Xeric-Mesic (general soil map units 13 to 16)

This soil climate regime is on steep mountain slopes and ridges in the lower Redwood Creek and Lacks Creek watersheds and upper mountain slopes and ridges along the eastern margins of the Mill Creek and Rock Creek watersheds. Elevation ranges from 165 to 4,085 feet (50 to 1,245 meters). This soil climate regime is subject to little or no marine influence.

The soils are dry from late June through October, and soil temperature at a depth of 50 centimeters (20 inches) varies more than 9 degrees F (6 degrees C) between summer and winter. Plant communities are diverse and are determined by soil type, aspect, elevation, and past disturbance. On soils derived from sandstone and mudstone, the main tree species are Douglas-fir, tanoak, madrone, and California bay with a sparse evergreen shrub layer dominated by California huckleberry. On soils derived from serpentinite, peridotite, and serpentinized peridotite along the eastern margins of the Mill Creek and Rock Creek watersheds, the vegetation is mainly Jeffery pine, knobcone pine, Douglas-fir, and tanoak with huckleberry oak, pinemat manzanita, greenleaf manzanita, forbs, and grasses. The absence of Pacific rhododendron, salmonberry, and western hemlock and the presence of a sparse forb layer are used to identify ecological sites within this climate regime.

Forestland Ecological Sites

Forestland, for the purposes of developing ecological site descriptions, is a spatially defined site where the historic climax plant community was dominated by a 25 percent overstory canopy of trees, as determined by a crown perimeter vertical projection. Rangeland, sometimes referred to as “wildland,” has a native vegetation of grasses, grasslike plants, forbs, shrubs, and trees with a total tree canopy cover of less than 25 percent.

Forested landscapes are divided into ecological sites for purposes of inventory, evaluation, and management. Ecological sites that characterize and quantify forestland based on its ability to produce various kinds, amounts, and proportions of vegetation are useful tools for resource managers. The productive capacity of each site, along with its characteristic plant community, is largely dependent on the soils, climate, topography, aspect, slope, and other abiotic features under which it developed. The Natural Resources Conservation Service classifies forestland and rangeland into ecological sites to help in the understanding of the commonly complex soil-plant interactions and effects of natural disturbance and management practices on plant communities. An ecological site is defined as a distinctive kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation.

Twenty-four ecological sites have been developed for the survey area. The correlation between soil types and plant communities served as the basis for the development of each of the ecological site descriptions. Geology and climate play a large role in the location of plant communities across the landscape and are also reflected in soil properties. The survey area has mild, wet winters and cool, moist summers. Average precipitation ranges from 70 to 100 inches per year. Coastal fog is an integral part of the coastal effect and ameliorates the effects of solar radiation and evapotranspiration on vegetation. Condensation from fog is thought to be an additional source of moisture to the redwood *(Sequoia sempervirens)* forest. Transitioning from the coast towards the eastern edge of Redwood National Park and the Lower Park Protection Zone, summer temperatures increase and the fog effect is lessened, altering plant community composition and distribution. Sitka spruce *(Picea sitchensis)* forest forms a fringe along the coast. Farther inland, nearly pure redwood *(Sequoia sempervirens)* forests dominate with some other conifers, including western hemlock *(Tsuga heterophylla)* and Douglas-fir*(Pseudotsuga menziesii)*. Still farther inland, Douglas-fir *(Pseudotsuga menziesii)* becomes more prevalent in the overstory, coexisting with redwood *(Sequoia sempervirens)* and tanoak *(Lithocarpus densiflorus)*. Far enough inland, the forest finally merges into Douglas-fir–tanoak–madrone forest type or to oak woodland or prairie.

The soil properties that have the greatest influence on the productivity of forest vegetation and the composition and distribution of the plant community are those that affect moisture supply and plant nutrients. Examples include soil texture, depth, and content of rock fragments. Differences in the soil properties that affect the composition, production, and distribution of the plant community are accounted for in the correlation of ecological sites to individual map unit components.

A brief description of each forestland ecological site in the survey area is given in the following paragraphs. A complete description of each can be obtained at the local office of the Natural Resources Conservation Service or from the Web site of the Ecological Site Information System at http://esis.sc.egov.usda.gov/.

See the section “Detailed Soil Map Units” for the specific soils that are correlated to each ecological site in the survey area. Ecological sites were not assigned to units with nonnative forest or to units where the trees were not suitable for sampling.

F004BX101CA, *Sequoia sempervirens–Pseudotsuga menziesii/Rhododendron macrophyllum* (Redwood–Douglas-fir/Pacific rhododendron, mountain slopes, schist, clay loam).—This ecological site is on mountain slopes west of Redwood Creek. It is

on the uniform to slightly convex summits and shoulders of broad ridges and in gently concave to slightly convex positions on strongly sloping to steep mountain slopes. The soils are well drained and formed in colluvium and residuum weathered from schist.

This site is dominated by an overstory community of redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Western hemlock *(Tsuga heterophylla)* grows in a few places. The understory is dominated by shrubs, including Pacific rhododendron *(Rhododendron macrophyllum)*, California huckleberry *(Vaccinium ovatum)*, and small amounts of salal *(Gaultheria shallon)*. The herbaceous cover is limited in extent.

F004BX102CA, *Pseudotsuga menziesii–Sequoia sempervirens/Lithocarpus densiflorus* (Douglas-fir–redwood/tanoak, mountain slopes, sandstone, clay loam).—This ecological site is on the inland mountain slopes of the lower Redwood Creek and Prairie Creek basins. It is on the shoulders of ridges and in uniform to slightly convex positions on the middle and lower mountain slopes. The mountain slopes are deeply incised and steep or very steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from sandstone and mudstone.

The site is dominated by an overstory community of Douglas-fir *(Pseudotsuga menziesii)* with small amounts of redwood *(Sequoia sempervirens)*. Redwood is not on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* is in the subcanopy. In a few places, Pacific madrone *(Arbutus menziesii)* is in the subcanopy along with the tanoak. The understory is dominated by shrubs, including the shrub form of tanoak *(Lithocarpus densiflorus)*, salal *(Gaultheria shallon)*, and California huckleberry *(Vaccinium ovatum)*. The herbaceous cover is either very limited in extent or not present.

F004BX103CA, *Sequoia sempervirens–Pseudotsuga menziesii/Rhododendron macrophyllum* (Redwood–Douglas-fir/Pacific rhododendron, mountain slopes, sandstone, clay loam).—This ecological site is within the watersheds of Mill, Rock, Wilson, and Hunter Creeks and east of Redwood Creek near and southeast of Orick Valley. It is on uniform to slightly convex summits and shoulders of broad ridges and uniform to slightly convex mountain slopes. The mountain slopes are strongly sloping to very steep. The soils are well drained and formed in colluvium and residuum derived from sandstone and mudstone.

A redwood *(Sequoia sempervirens)* overstory dominates the canopy cover. Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)* are present in small amounts. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum)*, California huckleberry *(Vaccinium ovatum)*, and salal *(Gaultheria shallon)*. The herbaceous cover is limited in extent.

F004BX104CA, *Sequoia sempervirens–Pseudotsuga menziesii/Rhododendron macrophyllum* (Redwood–Douglas-fir/Pacific rhododendron, ridgetops, schist, red clay).—This ecological site is on ridgetops and upper mountain slopes west of Redwood Creek and east of Prairie Creek. It is on uniform, nearly level to moderately steep summits and slightly convex shoulders of broad ridges and moderately steep to steep mountain slopes. The soils are well drained and dominantly formed in residuum and colluvium derived dominantly from schist. Some soils of lesser extent developed from residuum and colluvium derived from sandstone and mudstone or weakly consolidated fluvial and marine deposits.

The site is primarily an overstory of redwood *(Sequoia sempervirens)* and Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is a minor overstory component on most sites. Redwood and Douglas-fir are represented nearly equally, although redwood is commonly more dominant. Tanoak *(Lithocarpus densiflorus)* is present in the subcanopy in places. California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)* dominate the shrub layer. Tanoak and salal *(Gaultheria shallon)* are present in a few places. The herbaceous cover is sparse and may consist of western swordfern *(Polystichum munitum)*.

F004BX105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/Vaccinium ovatum* (Douglas-fir–tanoak/California huckleberry, ridgetops, schist, red clay).—This ecological site is on dry, upper mountain slopes and narrow ridgetops west of Redwood Creek and within the Mill Creek and Rock Creek watersheds near the boundary of Six Rivers National Forest. It is on uniform to slightly convex, strongly sloping and moderately steep summits and shoulders and steep mountain slopes. The soils are well drained and formed in colluvium and residuum derived from schist and metasedimentary rocks.

The site is dominated by an overstory of Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Redwood *(Sequoia sempervirens)* is a minor associate of the overstory. The understory is dominated by shrubs, including California huckleberry *(Vaccinium ovatum)*, with small amounts of Pacific rhododendron *(Rhododendron macrophylum)* and salal *(Gaultheria shallon)*. The herbaceous cover is limited in extent or not present.

F004BX106CA, *Sequoia sempervirens–Pseudotsuga menziesii/Vaccinium ovatum/Polystichum munitum* (Redwood–Douglas-fir/California huckleberry/western swordfern, hills, soft sandstone, very gravelly loam).—This ecological site is north and northeast of Orick in the Prairie Creek watershed. It is on uniform to slightly convex summits, shoulders, and backslopes of hills and steep mountain slopes. The soils are well drained, very deep, and formed in colluvium and residuum derived from weakly consolidated sandstone and conglomerate of the Prairie Creek formation.

The site is dominated by an overstory of redwood *(Sequoia sempervirens)* with moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Sitka spruce *(Picea sitchensis)* is present in a few places and replaces Douglas-fir on some sites that are in close proximity to the coast. The amount of shrubs and the herbaceous cover are nearly equal. The shrub layer is dominated by California huckleberry *(Vaccinium ovatum)*, with small amounts salal *(Gaultheria shallon)* in a few places. Ground cover is dominated by western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*.

F004BX107CA, *Sequoia sempervirens/Polystichum munitum* (Redwood/western swordfern, hills, soft sandstone, clay loam).—This site is along the coast and inland between Goldbluffs beach and Prairie Creek and in areas northeast of Orick and east of the Prairie Creek. It is on uniform to slightly convex summits, shoulders, and backslopes of hills and steep mountain slopes. Hillslopes are strongly sloping to steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from weakly consolidated sandstone and conglomerate of the Prairie Creek formation.

This site has an overstory almost completely dominated by redwood *(Sequoia sempervirens)*. Disturbance, however, has modified species composition on some sites, leading to moderate amounts of Douglas-fir *(Pseudotsuga menziesii)*. Western hemlock *(Tsuga heterophylla)* is also on most sites in very small amounts. The understory is dominated by forbs with western swordfern *(Polystichum munitum)* and redwood-sorrel *(Oxalis oregana)*. The shrub layer, though sparse, is on most sites and consists of California huckleberry *(Vaccinium ovatum)* and, in some instances, salal *(Gaultheria shallon)*.

F004BX108CA, *Sequoia sempervirens/Polystichum munitum* (Redwood/western swordfern, mountain slopes, sandstone and schist, clay loam).—This ecological site is generally in close proximity to the coast throughout the survey area. It is on uniform to slightly convex summits and shoulders of broad ridges and slightly concave to convex positions on mountain slopes. The mountain slopes are gently sloping to very steep. The soils are well drained and formed in colluvium and residuum derived dominantly from sandstone and mudstone with small areas weathered from schist.

The site is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)*. Douglas-fir is not on all sites, and Sitka spruce

(Picea sitchensis) is the more common species in many areas near the coast. Both western hemlock *(Tsuga heterophylla)* and red alder *(Alnus rubra)* are present in small amounts in some of these sites. The understory is dominated by western swordfern *(Polystichum munitum)* with occasional patches of California huckleberry *(Vaccinium ovatum)*, salmonberry *(Rubus spectabilis)*, and salal *(Gaultheria shallon)*.

F004BX109CA, *Pseudotsuga menziesii–Sequoia sempervirens/Lithocarpus densiflorus–Vaccinium ovatum* (Douglas-fir–redwood/tanoak–California huckleberry, mountain slopes, sandstone and schist, clay loam).—This ecological site is within the Mill Creek and Rock Creek watersheds. It is on dry, uniform to slightly convex summits and shoulders of broad ridges and upper mountain slopes. The mountain slopes are gently sloping to steep. The soils are well drained and formed in colluvium and residuum derived dominantly from sandstone and mudstone with small areas weathered from schist.

The site is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts on some sites. Tanoak and California huckleberry *(Vaccinium ovatum)* are in the shrub layer.

F004BX110CA, *Picea sitchensis–Alnus rubra/Rubus spectabilis–Polystichum munitum* (Sitka spruce–red alder/salmonberry/western swordfern, hills, sandstone and mudstone, clay loam).—This ecological site is along the immediate coast throughout the survey area. It is on moist, uniform to slightly convex summits, shoulders, and backslopes of hills and debris slide areas. The hillslopes are moderately steep to very steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from sandstone and mudstone.

The site is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* in the overstory with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder are in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is a codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites salal *(Gaultheria shallon)* coexists with the salmonberry.

F004BX111CA, *Sequoia sempervirens/Polystichum munitum–Oxalis oregana* (Redwood/western swordfern–redwood-sorrel, flood plains and terraces, loam).—This ecological site is throughout the survey area. It is on low terraces, alluvial fans, fan remnants, and moist valley floors near creeks and rivers. Slopes are nearly level and gently sloping. The soils are very poorly drained to well drained, very deep, and formed in alluvium derived from mixed sources.

The site is comprised of redwood *(Sequoia sempervirens)* in the overstory with western swordfern *(Polystichum munitum)* in the understory. Small groups or individuals of Sitka spruce *(Picea sitchensis)*, western hemlock *(Tsuga heterophylla)*, or Douglas-fir *(Pseudotsuga menziesii)* are present in some places throughout the site. Grand fir *(Abies grandis)* is present in a few places. The understory is dominated by western swordfern *(Polystichum munitum)*, deer fern *(Blechnum spicant)*, and redwood-sorrel *(Oxalis oregana)*; salal *(Gaultheria shallon)* is in small amounts in some places. Moist areas also include rushes *(Juncus* spp.), sedges *(Carex* spp.), and American skunkcabbage *(Lysichiton americanus)*.

F004BX112CA, *Quercus garryana/Dactylis glomerata* (Oregon white oak/orchardgrass, lower mountain slopes, sandstone and mudstone, silty clay loam).—This ecological site is east of Redwood Creek. It is on uniform to slightly convex shoulders of broad ridges and upper mountain slopes. The mountain slopes are steep and very steep. The soils are somewhat poorly drained, very deep, and formed in colluvium and residuum derived from sandstone and mudstone.

The existing plant community is dominated by Oregon white oak *(Quercus garryana)* with an understory of orchardgrass *(Dactylis glomerata)*, woodland strawberry *(Fragaria vesca)*, sanicle *(Sanicula* spp.), and vetch *(Vicia* spp.).

F004BX113CA, *Pseudotsuga menziesii–Chrysolepis chrysophylla/Vaccinium ovatum* (Douglas-fir–giant chinquapin/California huckleberry, ridgetops, soft sandstone, clay loam).—This ecological site is on and near Childs Hill in the Mill Creek watershed. It is on uniform to slightly convex summits and shoulders of broad ridges and upper mountain slopes. The mountain slopes are nearly level to moderately steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from weakly consolidated sandstone and conglomerate of the Wimer Formation.

The site is dominated by an overstory of Douglas-fir *(Pseudotsuga menziesii)* with giant chinquapin *(Chrysolepis chrysophylla)* and tanoak *(Lithocarpus densiflorus)* in the subcanopy. Shrubs dominate the understory, including California huckleberry *(Vaccinium ovatum)* and Pacific rhododendron *(Rhododendron macrophylum)*. The understory cover includes common beargrass *(Xerophyllum tenax)* and western brackenfern *(Pteridium aquilinum)*.

F004BX114CA, *Quercus garryana/Cynosurus echinatus* (Oregon white oak/bristly dogstail grass, mountain slopes, sandstone and mudstone, clay loam).—This ecological site is east of Redwood Creek. It is in uniform positions on mountain slopes. The soils are dominantly well drained and formed in colluvium weathered from sandstone and mudstone.

The existing plant community is dominated by Oregon white oak *(Quercus garryana)* in the overstory. The understory is dominated by bristly dogstail grass *(Cynosurus echinatus)* and woodland strawberry *(Fragaria vesca)*. The shrub cover is low and may include creeping snowberry *(Symphoricarpos mollis)* and Pacific poison oak *(Toxicodendron diversilobum)*.

F004BX115CA, *Pseudotsuga menziesii–Sequoia sempervirens/Vaccinium ovatum* (Douglas-fir–redwood/California huckleberry, mountain slopes, schist, very gravelly loam).—This ecological site is on mountain slopes west of Redwood Creek. It is on slightly convex to strongly convex shoulders of broad ridges and strongly sloping to steep mountain slopes. The soils are well drained, moderately deep, and formed in colluvium and residuum weathered from schist.

The site is dominated by Douglas-fir *(Pseudotsuga menziesii)* with a small amount of redwood *(Sequoia sempervirens)*. Redwood is not on all sites. A moderate amount of tanoak *(Lithocarpus densiflorus)* is in the subcanopy with Pacific madrone *(Arbutus menziesii)* in some places. The understory is dominated by shrubs and includes tanoak, salal *(Gaultheria shallon)*, and California huckleberry *(Vaccinium ovatum)*. The herbaceous cover is either very limited in extent or not present.

F005XB101CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/Lithocarpus densiflorus* (Douglas-fir–tanoak/tanoak, mountain slopes, sandstone and mudstone, clay loam).—This ecological site is near Beaver and Pine Ridge. It is on uniform to slightly convex summits of broad ridges. The mountain slopes are strongly sloping and moderately steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from sandstone.

The site is dominated by Douglas-fir *(Pseudotsuga menziesii)* with a subcanopy of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The dominant shrub species in the understory is tanoak. The understory also includes small amounts of Cascade barberry *(Mahonia nervosa)*. The dominant herbaceous species include modesty *(Whipplea modesta)* and western brackenfern *(Pteridium aquilinum)*.

F005XB102CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/Lithocarpus densiflorus* (Douglas-fir–tanoak/tanoak, mountain slopes, sandstone and mudstone, very gravelly clay loam).—This ecological site is near Beaver and Pine Ridge. It is on uniform to slightly convex summits of broad ridges and mountain slopes. The mountain slopes are strongly sloping to very steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from sandstone and mudstone.

The site is dominated by Douglas-fir *(Pseudotsuga menziesii)* with a subcanopy of tanoak *(Lithocarpus densiflorus)* and Pacific madrone *(Arbutus menziesii)*. The shrub

layer is dominantly tanoak. The herbaceous cover is dominantly modesty *(Whipplea modesta)*.

F005XB103CA, *Pseudotsuga menziesii–Quercus chrysolepis/Lithocarpus densiflorus* var. *echinoides* (Douglas-fir–canyon live oak/tanoak, mountain slopes, sandstone and mudstone, very gravelly loam).—This ecological site is near Beaver and Pine Ridge. It is on uniform to slightly convex mountain slopes. The mountain slopes are steep and very steep. The soils are well drained and formed in colluvium and residuum derived from sandstone and mudstone.

The site is dominated by Douglas-fir *(Pseudotsuga menziesii)* with canyon live oak *(Quercus chrysolepis)* as a subordinate species. The fire regime may lead to patches or mosaics of both species. Tanoak *(Lithocarpus densiflorus)* and canyon live oak dominate the shrub understory.

F005XB104CA, *Pinus jeffreyi/Quercus vacciniifolia* (Jeffrey pine/huckleberry oak, mountain slopes, serpentinite and peridotite, clay loam).—This ecological site is on the eastern margins of Mill Creek and Rock Creek. It is on mountain slopes and ridges. The mountain slopes are strongly sloping to very steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from serpentine, peridotite, and serpentinized peridotite of the Klamath terrane.

The site is dominated by Jeffrey pine *(Pinus jeffreyi)* with an understory dominated by huckleberry oak *(Quercus vacciniifolia)* and pinemat manzanita *(Arctostaphylos nevadensis)*. The herbaceous cover is dominated by Idaho fescue *(Festuca idahoensis)* and California fescue *(Festuca californica)*.

F005XB105CA, *Pseudotsuga menziesii–Lithocarpus densiflorus/Quercus vacciniifolia* (Douglas-fir/huckleberry oak, mountain slopes, serpentinite and peridotite, clay loam).—This ecological site is on the eastern margins of Mill Creek and Rock Creek. It is on lower mountain slopes. The mountain slopes are strongly sloping to very steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from serpentine, peridotite, and serpentinized peridotite of the Klamath terrane.

The site is dominated by Douglas-fir *(Pseudotsuga menziesii)* in the overstory. The understory is dominated by shrubs. The main shrubs are huckleberry oak *(Quercus vacciniifolia)*, Pacific rhododendron *(Rhododendron macrophyllum)*, and various manzanita species, including sticky whiteleaf manzanita *(Arctostaphylos viscida)* and pinemat manzanita *(Arctostaphylos nevadensis)*. Other common shrubs may include red huckleberry *(Vaccinium parvifolium)* and California buckthorn *(Rhamnus californica)*.

Rangeland

Loretta J. Metz, Marchel Munnecke, and Kendra Moseley, rangeland management specialists, and Judy Welles, forester, Natural Resources Conservation Service, prepared this section.

Rangeland, sometimes referred to as “wildland,” has native vegetation consisting of grasses, grasslike plants, forbs, shrubs, and trees with a total tree canopy cover of less than 25 percent. The vegetation in areas of rangeland provides many habitat components, helps to control erosion, may be suitable for grazing or browsing by wildlife and domestic animals, and offers scenic and recreational opportunities. Rangeland is important environmentally and economically.

Characterization and Management

Rangeland is characterized and quantified based on its ability to produce various kinds, proportions, and amounts of plants. The plant communities are largely dependent on the soils, climate, topography, aspect, slope, and other abiotic features of the landscape. To assist in the understanding of soil-plant interactions and the effects of selected management practices, the Natural Resources Conservation

Service classifies rangeland into ecological sites. An ecological site is a distinctive kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation (USDA–NRCS, National Range and Pasture Handbook; no date).

Soil types and plant communities are correlated and serve as the basis for the development of ecological site descriptions. Soil properties that affect moisture supply and plant nutrients, such as texture, depth, and amount of coarse fragments, have the greatest influence on the productivity of rangeland plants and the composition and distribution of the plant community. Soil reaction, salt content, fog drip, and a seasonal high water table are also important. Geography and climate influence the location of plant communities across the landscape and affect various soil properties. For example, soils on southerly and westerly slopes commonly support chaparral-type species and plant communities as a result of the intense heat, high evapotranspiration rate, and resultant droughtiness. Soils on northerly and easterly slopes are exposed to less solar radiation and generally support forestland species and plant communities. Differences in the soil properties that affect the composition, production, and distribution of plant communities are considered in correlating ecological sites to individual soil map unit components.

Table 8 shows, for each map unit in the survey area that supports rangeland vegetation, the ecological site; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the expected composition of each species.

An *ecological site* is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, which has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of the site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production.

Total dry-weight production is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture.

Yields are adjusted to a common percent of air-dry moisture content. The relationship of green weight to air-dry weight varies according to such factors as exposure, amount of shade, recent rains, and unseasonable dry periods. The total production figures can be used to calculate carrying capacity and stocking rates for management of domestic animals or wildlife and to determine fuel loading for prescribed burning or fire modeling.

Characteristic vegetation is the grasses, grasslike plants, forbs, and shrubs that make up most of the potential natural plant community. The species are listed by common name. Table 9 is an index that cross-references common names, scientific names, and symbols from the PLANTS database. All of the plant names are correlated directly with the PLANTS database (http://plants.usda.gov).

Under *species composition*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Rangeland Ecological Sites

A brief description of each rangeland ecological site in the survey area is given in the following paragraphs. A complete description of each can be obtained at the local office of the Natural Resources Conservation Service or from the Web site of the Ecological Site Information System at http://esis.sc.egov.usda.gov/. See table 8 for the specific soils in the survey area that are correlated to each ecological site.

R004BX101CA, Upper prairie, mountain slopes, sandstone and mudstone, clay loam.—This ecological site is east of Redwood Creek in the Bald Hills. It is on uniform to slightly convex summits and shoulders of broad ridges and upper mountain slopes. The soils are well drained and formed in colluvium and residuum derived from sandstone and mudstone.

The existing plant community is dominated by tall oatgrass *(Arrhenatherum elatius)*, annual vernalgrass *(Anthoxanthum aristatum)*, bentgrass *(Agrostis)*, and bristly dogstail grass *(Cynosurus echinatus)*. Forbs include common sheep sorrel *(Rumex acetosella)*, hairy cat's ear *(Hypochaeris radicata)*, and western brackenfern *(Pteridium aquilinium)*.

R004BX102CA, Coastal scrub and prairie, hills, sandstone and mudstone, gravelly clay loam.—This ecological site is along the immediate coast throughout the survey area. It is on moist, uniform to slightly convex summits, shoulders, and backslopes of hills and debris slide areas. The hillslopes are strongly sloping to steep. The soils are well drained, very deep, and formed in colluvium and residuum derived from mudstone and sandstone.

The existing plant community is a complex mosaic of coastal scrub and prairie and is comprised of perennial grasses and forbs. Dominant perennials grasses include various fescues *(Festuca* spp.), tall oatgrass *(Arrhenatherum elatius)*, and sweet vernalgrass *(Anthroxanthum aristatum)*. Shrubs and woody vines, such as coyotebrush *(Baccharis pilularus)*, California buckthorn *(Rhammus californica)*, thimbleberry *(Rubus parviflorus)*, California blackberry *(Rubus ursinus)* and Himalayan blackberry *(Rubus discolor)*, are also present. Cow parsnip *(Heracleum* spp.) is common on some sites.

R004BX103CA, Lower prairie, earthflows, sandstone and mudstone, gravelly loam.—This ecological site is east of Redwood Creek. It is in uniform to slightly concave slump positions on lower mountain slopes. The mountain slopes are moderately steep and steep. The soils are moderately well drained or somewhat poorly drained, very deep, and formed in colluvium derived from earthflow deposits of mudstone and sandstone.

The existing plant community is dominated by herbaceous species, such as bristly dogstail grass *(Cynosurus echinatus)*, orchardgrass *(Dactylis glomerata)*, annual vernalgrass *(Anthroxanthum aristatum)*, and hairy cat's ear *(Hypochaeris radicata)*. Shrubs species, such as coyotebrush *(Baccharis pilularis)* and Scotch broom *(Cytisus scoparius)*, are also present on some sites.

R004BX104CA, Middle prairie, mountain slopes, sandstone and mudstone, gravelly clay loam.—This ecological site is east of Redwood Creek. It is in uniform to slightly concave slump positions on middle mountain slopes. The soils are well drained, very deep, and formed in colluvium derived from earthflow deposits of mudstone and sandstone.

The existing plant community is dominated by blue wildrye *(Elymus glaucus)*, soft chess brome *(Bromus hordeaceus)*, tall oatgrass *(Arrhenatherum elatius)*, and bristly dogstail grass *(Cynosurus echinatus)*. Some Scotch broom *(Cytisus scoparius)* is present on some sites.

Recreation

The soils of the survey area are rated in table 10a and table 10b according to limitations that affect their suitability for recreation. The ratings are both descriptive and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *No limitations* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Limitations* indicates that the soil has some features that are favorable for the specified use and some that are unfavorable. Ratings between 0.01 and 1.00 indicate limitations that can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Limitations with a rating of 1.00 indicate that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00). Values of 0.00 are not shown in the tables.

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in the tables can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Table 10a

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic

areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Table 10b

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Lawns, landscaping, and golf fairways are subject to heavy foot traffic and some light vehicular traffic and require soils on which turf, ornamental trees, and shrubs can be established and maintained. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

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 and test data in the tables described under the heading “Soil Properties.”

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 11a and table 11b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, and shallow excavations.

The ratings in the tables are both descriptive and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00). Values of 0.00 are not shown in the tables.

Table 11a

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced

concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Table 11b

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Sanitary Facilities

Table 12a and table 12b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both descriptive and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the

specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00). Values of 0.00 are not shown in the tables.

Table 12a

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

Table 12b

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material

at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Table 13a and table 13b give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

Table 13a

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 13a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of gravel or sand are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains gravel or sand, the soil is considered a likely source regardless of thickness. The assumption is that the gravel or sand layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The numbers 0.00 to 0.07 indicate that the layer is a poor source. The numbers 0.75 to 1.00 indicate that the layer is a good source. The numbers 0.08 to 0.74 indicate the degree to which the layer is a likely source.

The soils are rated *good, fair,* or *poor* as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Table 13b

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Water Management

Table 14 provides information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas and for embankments, dikes, and levees. The ratings are both descriptive and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *No limitations* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Limitations* indicates that the soil has some features that are favorable for the specified use and some that are unfavorable. Ratings between 0.01 and 1.00 indicate limitations that can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Limitations with a rating of 1.00 indicate that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00). Values of 0.00 are not shown in the tables.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

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.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas (USDA, 1995). Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering properties, physical and chemical properties, and pertinent soil and water features.

Engineering Properties

Table 15 gives the engineering classifications and the range of properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2001) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2000).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement,

the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 16 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 16, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^{1}/_{3}$- or $^{1}/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root

penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (Ksat). The estimates in the table indicate the rate of water movement, in micrometers per second (µm/sec), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 16, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion Properties

Erosion factors are shown in table 17 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Depth to the upper and lower boundaries of each layer is indicated.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. A description of the wind erodibility groups is available in the National Soil Survey Handbook (http://soils.usda.gov/technical/handbook/).

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 18 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 18, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of

Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and “Keys to Soil Taxonomy” (Soil Survey Staff, 2003) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 2004).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2004).

102 Fluvents, 2 to 5 percent slopes
110 Weott, 0 to 2 percent slopes
116 Swainslough, 0 to 2 percent slopes
119 Arlynda, 0 to 2 percent slopes
126 Loleta, 2 to 5 percent slopes
155 Samoa-Clambeach-Dune land complex, 0 to 50 percent slopes (Clambeach component only)
171 Worswick-Arlynda, 0 to 2 percent slopes

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The following map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map

units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

100 Riverwash
157 Beaches-Samoa-Dune land complex, 0 to 50 percent slopes
172 Bigriver, 2 to 5 percent slopes
173 Bigriver-Ferndale-Russ complex, 2 to 5 percent slopes
174 Bigtree-Mystery complex, 2 to 9 percent slopes
177 Battery, dry, 15 to 50 percent slopes
178 Battery, 15 to 50 percent slopes
191 Talawa, 0 to 2 percent slopes
192 Aubell, 2 to 9 percent slopes
194 Tsunami, 2 to 9 percent slopes
220 Ferndale, 0 to 2 percent slopes
222 Ferndale, moderately well drained, 0 to 5 percent slopes
251 Surpur, 2 to 9 percent slopes
289 Espa, 2 to 9 percent slopes
290 Surpur-Mettah complex, 9 to 30 percent slopes
291 Ossagon-Squashan complex, 9 to 30 percent slopes
292 Ossagon-Squashan complex, 30 to 50 percent slopes
293 Ossagon-Goldbluffs-Squashan complex, 9 to 30 percent slopes
294 Ossagon-Goldbluffs-Squashan complex, 30 to 50 percent slopes
462 Mooncreek-Noisy-Tossup complex, 9 to 30 percent slopes
463 Mooncreek-Noisy-Sidehill complex, 30 to 75 percent slopes
464 Mooncreek-Tossup-Noisy complex, 15 to 50 percent slopes
465 Sidehill-Oakside-Darkwoods complex, 50 to 100 percent slopes
473 Highoaks-Noisy-Mudhorse complex, 9 to 50 percent slopes
480 Dolason-Countshill-Airstrip complex, 9 to 30 percent slopes
481 Dolason-Airstrip-Countshill complex, cool, 15 to 50 percent slopes
482 Dolason-Countsill complex, 30 to 50 percent slopes
483 Doolyville-Pasturerock complex, 30 to 50 percent slopes
484 Elkcamp-Dolason-Airstrip complex, 15 to 50 percent slopes
485 Pasturerock-Coyoterock-Maneze complex, 30 to 50 percent slopes
531 Atwell-Coppercreek complex, 30 to 50 percent slopes
532 Atwell-Ladybird complex, 30 to 50 percent slopes
533 Coppercreek-Ahpah complex, 15 to 30 percent slopes
534 Coppercreek-Ahpah-Lackscreek complex, 15 to 30 percent slopes
535 Wiregrass-Scaath complex, 15 to 30 percent slopes
536 Coppercreek-Ahpah-Lackscreek complex, 30 to 50 percent slopes
537 Wiregrass-Scaath complex, dry, 15 to 30 percent slopes
538 Wiregrass-Pittplace complex, 15 to 30 percent slopes
539 Wiregrass-Scaath complex, 30 to 50 percent slopes
541 Wiregrass-Rockysaddle complex, 30 to 50 percent slopes
542 Coppercreek-Slidecreek-Lackscreek complex, 30 to 50 percent slopes
543 Wiregrass-Rockysaddle-Scaath complex, 30 to 50 percent slopes
544 Coppercreek-Tectah-Lackscreek complex, 30 to 50 percent slopes
545 Devilscreek-Panthercreek-Coppercreek complex, 30 to 50 percent slopes
546 Lackscreek-Coppercreek complex, 50 to 75 percent slopes
549 Scaath-Rockysaddle-Wiregrass complex, 50 to 75 percent slopes
550 Scaath-Rockysaddle-Wiregrass complex, dry, 50 to 75 percent slopes
553 Ladybird-Stonehill complex, 30 to 50 percent slopes
554 Ladybird-Trailhead complex, 15 to 30 percent slopes
555 Panthercreek-Devilscreek-Coppercreek complex, 50 to 75 percent slopes
556 Rodgerpeak-Wiregrass complex, 0 to 15 percent slopes

557 Ustic Palehumults, 15 to 50 percent slopes
558 Tectah-Coppercreek-Trailhead complex, 0 to 30 percent slopes
559 Trailhead, 0 to 9 percent slopes
560 Trailhead, 15 to 30 percent slopes
561 Trailhead, dry, 15 to 30 percent slopes
562 Trailhead-Fortyfour complex, 30 to 50 percent slopes
563 Trailhead-Fortyfour complex, dry, 30 to 50 percent slopes
580 Coppercreek-Tectah-Slidecreek complex, 9 to 30 percent slopes
581 Coppercreek-Slidecreek-Tectah complex, 30 to 50 percent slopes
582 Slidecreek-Lackscreek-Coppercreek complex, 50 to 75 percent slopes
583 Trailhead-Wiregrass complex, 9 to 30 percent slopes
584 Wiregrass-Pittplace-Scaath complex, 9 to 30 percent slopes
585 Wiregrass-Rockysaddle complex, 30 to 50 percent slopes
586 Wiregrass-Rockysaddle-Trailhead complex, 30 to 50 percent slopes
587 Childshill, 5 to 30 percent slopes
588 Surpur, dry, 2 to 15 percent slopes
590 Sasquatch-Yeti-Footstep complex, 5 to 30 percent slopes
591 Sasquatch-Sisterrocks-Ladybird complex, 30 to 50 percent slopes
592 Sisterrocks-Ladybird-Footstep complex, 50 to 75 percent slopes
593 Sasquatch-Yeti-Sisterocks complex, 15 to 30 percent slopes
594 Sisterrocks-Sasquatch-Houda complex, 30 to 75 percent slopes
595 Battery-Catchings complex, 5 to 30 percent slopes
596 Flintrock-Highprairie complex, 15 to 75 percent slopes
597 Tarquin, 9 to 30 percent slopes
598 Ladybird-Stonehill complex, moist, 30 to 50 percent slopes
659 Raingage-Pigpen complex, 15 to 50 percent slopes
756 Oragran-Weitchpec complex, 30 to 50 percent slopes
759 Jayel-Walnett-Oragran complex, 30 to 75 percent slopes, extremely stony
760 Jayel-Walnett-Oragran complex, 9 to 30 percent slopes, extremely stony
761 Gasquet-Walnett-Jayel complex, 9 to 50 percent slopes, extremely stony

Soil Features

Table 19 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of

uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Water Features

Table 20 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 20 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 20 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but

possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Selected Soil and Site Features

Table 21 provides information about the climate and geomorphology for the map units in the survey area. It also lists the ecological sites.

MAP stands for mean annual precipitation, which is the average of the total annual liquid precipitation over the latest standard “normal” period of 30 years.

Landscape is a group of spatially related, natural landforms over a relatively large area. The landscape is the land surface that the eye can comprehend in a single view.

Landform is any physical, recognizable form or feature on the earth’s surface having a characteristic shape and range in composition and produced by natural causes. A landform can span a wide range in size.

Parent material is the unconsolidated and more or less chemically weathered mineral or organic matter from which a soil forms.

An *ecological site* is an area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2004). 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 22 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Ultisol (*Ult,* meaning, last).

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 Humult (*Hum*, meaning presence of organic matter, plus *Ult*, from Ultisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Palehumults (*Pale*, meaning old, excessive development, plus *humult*, the suborder of the Ultisols that has organic matter in the subsurface).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Palehumults.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, semiactive, isomesic Typic Palehumults.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. An example is the Coppercreek series. The soils of the Coppercreek series are fine-loamy, mixed, semiactive, isomesic Typic Palehumults.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 2003). Unless otherwise indicated, colors in the descriptions are for moist soil if the soil is udic or ustic and for dry soils if the soil is xeric. Following the pedon description is the range of important characteristics of the soils in the series.

Ahpah Series

Setting

Landscape position: Ridges and convex mountain slopes
Parent material: Residuum and colluvium derived from schist and sandstone
Slope: 15 to 50 percent
Elevation: 60 to 3,035 feet (19 to 926 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 75 to 100 inches (1,900 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 220 to 290 days
Taxonomic classification: Fine-loamy, mixed, active, isomesic Typic Dystrudepts

Modal Pedon

Ahpah gravelly clay loam, in an area of Coppercreek-Ahpah-Lackscreek complex, 30 to 50 percent slopes, on a convex, northeast-facing slope of 32 percent, under redwood, Pacific rhododendron, and California huckleberry, at an elevation of 1,558 feet (475 meters); in Redwood National Park, Humboldt County, California; USGS Rodger’s Peak quadrangle; UTM zone 10, 411639mE, 4558856mN, NAD83.

Oi—0 to 2 inches (0 to 5 centimeters); fresh and slightly decomposed tanoak leaves, conifer needles, and twigs.

A—2 to 9 inches (5 to 22 centimeters); brown (7.5YR 4/4) gravelly clay loam, brownish yellow (10YR 6/6) dry; weak fine subangular blocky structure; slightly hard, friable, moderately sticky and slightly plastic; common very fine, fine, and medium roots; few very fine irregular and common very fine and fine tubular pores; 18 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

Bw1—9 to 21 inches (22 to 53 centimeters); yellowish brown (10YR 5/6) gravelly silty clay loam, yellow (10YR 7/6) dry; weak fine and medium subangular blocky structure; soft, friable, moderately sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium tubular pores; 19 percent gravel; strongly acid (pH 5.5); gradual wavy boundary.

Bw2—21 to 28 inches (53 to 70 centimeters); yellowish brown (10YR 5/6) gravelly clay loam, yellow (10YR 7/6) dry; weak medium subangular blocky structure; slightly hard, friable, moderately sticky and slightly plastic; few very fine, fine, and coarse and common medium roots; few very fine and fine tubular pores; 15- by 30-centimeter krotovina filled with yellowish red (5YR 5/6) clay loam, reddish yellow (5YR 6/6) dry; 21 percent gravel; strongly acid (pH 5.5); clear irregular boundary.

C—28 to 34 inches (70 to 87 centimeters); variegated olive gray (5Y 5/2) and yellowish brown (10YR 5/6) very gravelly loam, light gray (2.5Y 7/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; few very fine and fine tubular pores; 42 percent gravel, consisting mostly of bedrock fractured in place; strongly acid (pH 5.5); clear wavy boundary.
Cr—34 to 45 inches (87 to 115 centimeters); highly weathered schist saprolite, easily cut with a knife; schist foliation and rock macrostructure still evident; contains pockets of hard (lithic) rock, amounting to approximately 5 percent of the area exposed.

Range in Characteristics

Depth to soft bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 20 to 32 percent clay, 15 to 30 percent gravel, and 0 to 5 percent cobbles
Water table: None noted
Reaction: Moderately acid or strongly acid

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Strongly acid or very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 5 or 6 dry, 3 to 5 moist
Chroma: 2 to 6 dry or moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 20 to 30 percent
Rock fragments: 15 to 25 percent gravel and 0 to 10 percent cobbles

Bw horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Sandy clay loam, loam, clay loam, or silty clay loam
Content of clay: 20 to 32 percent
Rock fragments: 15 to 30 percent gravel and 0 to 5 percent cobbles

C horizon
Hue: 7.5YR, 10YR, 2.5Y, or 5Y
Value: 5 to 7 dry, 3 to 6 moist
Chroma: 2 to 6 dry or moist
Texture of the fine-earth fraction: Sandy clay loam, loam, clay loam, or silty clay loam
Content of clay: 20 to 27 percent
Rock fragments: 35 to 50 percent gravel and 0 to 5 percent cobbles

Airstrip Series

Setting

Landscape position: Strongly convex ridgetops, spur ridges, and mountain slopes
Parent material: Residuum and colluvium derived from sandstone and siltstone
Slope: 9 to 50 percent
Elevation: 500 to 3,385 feet (153 to 1,032 meters)

Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Mean annual precipitation: 85 to 100 inches (2,160 to 2,550 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 200 to 280 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Humic Dystroxerepts

Modal Pedon

Airstrip gravelly loam, in an area of Dolason-Countshill-Airstrip complex, 9 to 30 percent slopes, on a convex, southwest-facing slope of 9 percent, under western brackenfern and velvetgrass, at an elevation of 2,985 feet (910 meters); on Trail Ridge, in Trail Ridge Prairie, Humboldt County, California; USGS Hupa Mountain quadrangle; UTM zone 10, 428469mE, 4551271mN, NAD83.

A1—0 to 3 inches (0 to 7 centimeters); dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; weak fine and medium and granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; common very fine and fine interstitial and very fine and fine tubular pores; 15 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.
A2—3 to 8 inches (7 to 20 centimeters); dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine and medium granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine interstitial and very fine and fine tubular pores; 15 percent gravel; very strongly acid (pH 5.0); gradual wavy boundary.
A3—8 to 17 inches (20 to 42 centimeters); dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak medium and coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine and few medium tubular pores; 10 percent gravel; strongly acid (pH 5.2); clear wavy boundary.
AC—17 to 26 inches (42 to 67 centimeters); brown (10YR 5/3) extremely gravelly loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine interstitial pores; 45 percent gravel and 15 percent cobbles; strongly acid (pH 5.4); gradual wavy boundary.
R—26 inches (67 centimeters); fractured sandstone, fractures are greater than 10 centimeters apart.

Range in Characteristics

Depth to hard bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 12 to 26 percent clay, 35 to 60 percent gravel, and 0 to 25 percent cobbles
Water table: None noted
Surface fragments: 15 to 35 percent gravel and 0 to 5 percent cobbles

A horizon
Hue: 10YR or 2.5Y
Value: 4 or 5 dry, 2 or 3 moist
Chroma: 1 to 3 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 12 to 24 percent
Rock fragments: 10 to 25 percent gravel and 0 to 10 percent cobbles
Reaction: Strongly acid or very strongly acid

Bw horizon (where present)
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 3 or 4 dry, 3 moist
Texture of the fine-earth fraction: Loam
Content of clay: 20 to 26 percent
Rock fragments: 35 to 60 percent gravel and 0 to 25 percent cobbles
Reaction: Strongly acid or very strongly acid

C horizon (where present)
Hue: 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 20 to 26 percent
Rock fragments: 35 to 60 percent gravel and 0 to 25 percent cobbles
Reaction: Strongly acid or very strongly acid

The Airstrip soils in map unit 481 are taxadjuncts to the series. These soils have an isomesic soil temperature regime and a udic soil moisture regime. Also, in some pedons they have an Oi horizon. These differences, however, do not affect use and management.

Arlynda Series

Setting

Landscape position: Backswamps, depressions, meander scars, and low flood-plain steps
Parent material: Alluvium derived from mixed sources
Slope: 0 to 2 percent
Elevation: 0 to 160 feet (0 to 50 meters)
Depth class: Very deep
Drainage class: Very poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Flooding: Occasional
Ponding: Frequent
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Fine-silty, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts

Modal Pedon

Arlynda peat, in an area of Arlynda, 0 to 2 percent slopes, on a slope of 1 percent, under pasture grasses, ryegrass, barley, and buttercup, at an elevation of 3 feet (1 meter); Humboldt County, California; USGS Cannibal Island quadrangle; UTM zone 10, 392976mE, 4502447mN, NAD83.

Oi—0 to 3 inches (0 to 8 centimeters); very dark gray (10YR 3/1) peat, very dark grayish brown (10YR 3/2) dry and rubbed; 80 percent fiber unrubbed, 50 percent rubbed; moderately acid (pH 5.6); massive; hard, firm, slightly sticky and slightly plastic; many fine prominent dark yellowish brown (10YR 4/6) iron-manganese masses; neutral (pH 6.8); clear smooth boundary.
A—3 to 14 inches (8 to 36 centimeters); dark gray (2.5Y 4/1) silty clay loam, gray (2.5Y 6/1) dry; moderate coarse subangular blocky structure; hard, firm, slightly

sticky and slightly plastic; many very fine and fine roots; common very fine and fine tubular pores; many medium prominent dark yellowish brown (10YR 4/6) iron-manganese masses; neutral (pH 6.8); gradual wavy boundary.

Bg1—14 to 22 inches (36 to 56 centimeters); dark gray (2.5Y 4/1) silty clay loam, gray (2.5Y 6/1) dry; moderate fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and fine tubular pores; many medium prominent dark yellowish brown (10YR 4/6) iron-manganese masses; neutral (pH 6.8); gradual wavy boundary.

Bg2—22 to 41 inches (56 to 104 centimeters); dark gray (2.5Y 4/1) silty clay loam, gray (2.5Y 6/1) dry; massive; hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; many medium prominent dark yellowish brown (10YR 4/6) iron-manganese masses; common prominent strong brown (7.5YR 4/6) iron stains lining root channels and/or pores; slightly acid (pH 6.2); gradual wavy boundary.

Bg3—41 to 63 inches (104 to 160 centimeters); dark gray (5Y 4/1) silty clay loam, gray (5Y 6/1) dry; massive; hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; many medium prominent strong brown (7.5YR 4/6) masses of iron accumulation; common prominent strong brown (7.5YR 4/6) iron stains lining root channels and/or pores; few medium prominent strong brown (7.5YR 4/6) cylindrical very weakly cemented iron-manganese concretions; neutral (pH 6.8).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 25 to 34 percent clay

Water table: At a depth of 0 to 4 inches (0 to 10 centimeters) December through April, 6 to 35 inches (15 to 90 centimeters) in May, 12 to 35 inches (5 to 90 centimeters) June through July, 35 to greater than 72 inches (90 to greater than 182 centimeters) August through November

O horizon

Hue: 10YR

Value: 3 or 4 dry or moist

Chroma: 1 or 2 dry or moist

Kind of organic material: Peat

Reaction: Neutral

A horizon

Hue: 10YR, 2.5Y, or 5Y

Value: 5 to 7 dry, 3 or 4 moist

Chroma: 1 or 2 dry or moist

Texture of the fine-earth fraction: Silt loam or silty clay loam

Content of clay: 25 to 34 percent

Reaction: Slightly acid or neutral

Redoximorphic features:

Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores

Quantity—common or many

Hue—2.5YR, 5YR, 7.5YR, or 10YR

Value—3 to 6

Chroma—6 to 8

Upper part of the Bg horizon

Hue: 2.5Y or 5Y

Value: 5 to 7 dry, 4 or 5 moist

Chroma: 1 or 2 dry or moist

Texture of the fine-earth fraction: Silt loam or silty clay loam
Content of clay: 25 to 34 percent
Reaction: Slightly acid to slightly alkaline
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—2.5YR, 5YR, 7.5YR, or 10YR
Value—3 to 6
Chroma—4 to 8

Lower part of the Bg horizon
Hue: 2.5Y, 5Y, or neutral
Value: 5 to 7 dry, 4 or 5 moist
Chroma: Neutral or 1 dry or moist
Texture of the fine-earth fraction: Silt loam, clay loam, or silty clay loam
Content of clay: 21 to 39 percent
Reaction: Slightly acid to slightly alkaline
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores; few medium cylindrical very weakly cemented iron-manganese concretions
Quantity—few to many
Hue—2.5YR, 5YR, 7.5YR, or 10YR
Value—3 to 6
Chroma—4 to 8

The Arlynda soils in map unit 171 are taxadjuncts to the series. These soils are fine-loamy in the particle-size control section. This difference, however, does not affect use and management.

Atwell Series

Setting

Landscape position: Steep, wet, irregular mountain slopes
Parent material: Earthflow colluvium derived from sheared sandstone and mudstone (fig. 15)
Slope: 30 to 50 percent
Elevation: 55 to 2,870 feet (18 to 874 meters)
Depth class: Very deep
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Low
Slowest permeability: Very slow
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 250 to 290 days
Taxonomic classification: Fine, mixed, active, isomesic Oxyaquic Hapludalfs

Modal Pedon

Atwell silt loam, in an area of Atwell-Ladybird complex, 30 to 50 percent slopes, on a southwest-facing slope of 30 percent, under redwood, Douglas-fir, tanoak, western hemlock, grand fir, rhododendron, huckleberry, Cascade barberry, salal, swordfern, deer fern, and redwood-sorrel, at an elevation of 699 feet (213 meters); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 416420mE, 4564884mN, NAD83.

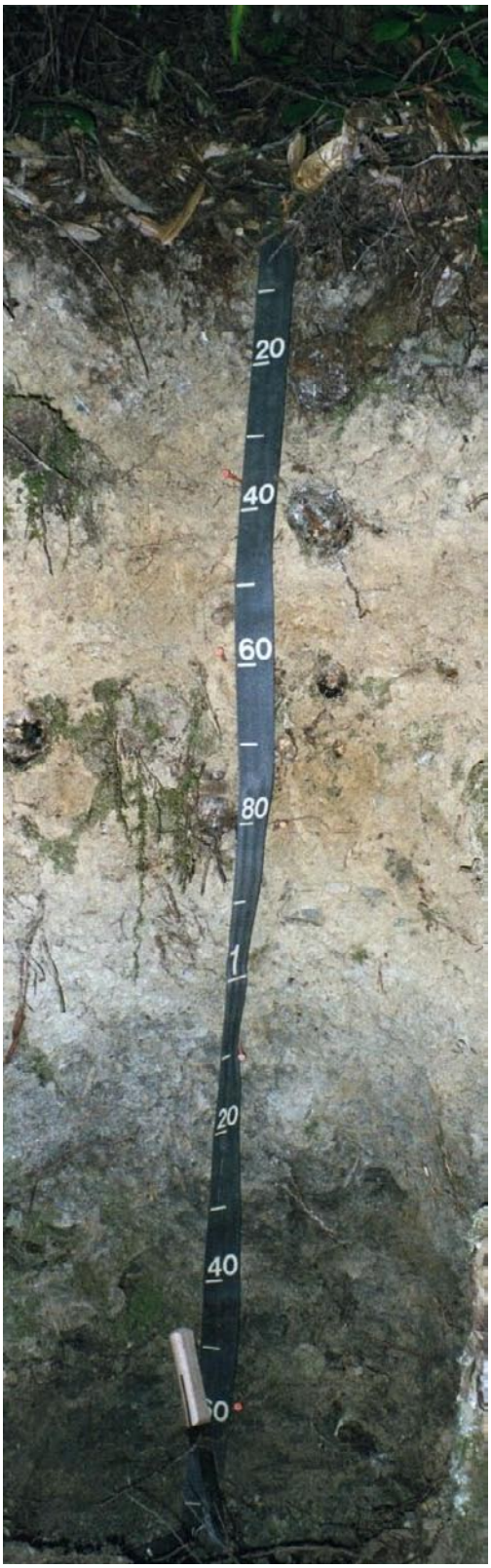

Figure 15.—A profile of an Atwell soil. These soils form in earthflow deposits on unstable mountain slopes. Depth is marked in centimeters.

Oi—0 to 2 inches (0 to 5 centimeters); slightly decomposed needles, leaves, and twigs; clear wavy boundary.
A—2 to 7 inches (5 to 17 centimeters); brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular and moderate very fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many fine irregular pores; about 10 percent gravel; slightly acid (pH 6.5); clear wavy boundary.
AB—7 to 11 inches (17 to 29 centimeters); dark brown (10YR 4/3) clay loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; hard, firm, moderately sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine tubular and common fine irregular pores; about 10 percent gravel; moderately acid (pH 6.0); clear wavy boundary.
ABt—11 to 23 inches (29 to 59 centimeters); yellowish brown (10YR 4/4) clay loam, dark yellowish brown (10YR 5/4) dry; moderate coarse subangular blocky structure parting to moderate medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine, fine, and coarse and many medium roots; few fine irregular and common very fine, fine, and medium tubular pores; common faint clay films on faces of peds; about 10 percent gravel; moderately acid (pH 6.0); clear irregular boundary.
Bt—23 to 32 inches (59 to 81 centimeters); light olive brown (2.5Y 5/4) gravelly clay loam, pale yellow (2.5Y 7/4) dry; moderate medium subangular blocky structure; hard, firm, moderately sticky and very plastic; common very fine and fine roots; few very fine and fine tubular pores; few distinct clay films on faces of peds; about 30 percent gravel; moderately acid (pH 6.0); clear wavy boundary.
2Cg1—32 to 41 inches (81 to 103 centimeters); greenish gray (5GY 5/1) clay, light gray (N 7/0) dry; massive; very hard, very firm, moderately sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; many medium prominent reddish yellow (7.5YR 6/6) masses of iron accumulation, strong brown (7.5YR 5/6) moist; about 10 percent gravel; moderately acid (pH 6.0); clear smooth boundary.
2Cg2—41 to 61 inches (103 to 155 centimeters); dark bluish gray (5B 4/1) clay, gray (N 6/0) dry; massive; very hard, very firm, moderately sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; common fine prominent brown (10YR 5/4) masses of iron accumulation, brownish yellow (10YR 6/6) dry; about 10 percent gravel; slightly acid (pH 6.5); diffuse smooth boundary.
2Cg3—61 to 81 inches (155 to 205 centimeters); black (5Y 2.5/1) clay, gray (N 5/0) dry; massive; very hard, very firm, moderately sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; common prominent brown (10YR 5/4) masses of iron accumulation, brownish yellow (10YR 6/6) dry; about 10 percent gravel; many slickensides; slightly acid (pH 6.5).

Range in Characteristics

Depth to soft bedrock: Greater than 80 inches (200 centimeters)
Control section (by weighted average): 35 to 50 percent clay and 5 to 30 percent gravel
Water table: At a depth of 32 to 40 inches (81 to 100 centimeters)
Surface fragments: 3 to 15 percent gravel

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 2 or 3 dry or moist
Texture of the fine-earth fraction: Silt loam
Content of clay: 23 to 27 percent
Rock fragments: 3 to 13 percent gravel
Reaction: Moderately acid or strongly acid

Bt horizon
Hue: 10YR or 2.5Y
Value: 6 or 7 dry, 4 or 5 moist
Chroma: 3 or 4 dry or moist
Texture of the fine-earth fraction: Clay loam or clay
Content of clay: 30 to 50 percent
Rock fragments: 3 to 30 percent gravel
Reaction: Moderately acid or strongly acid
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—6 to 8

Cg horizon
Hue: 5Y, 2.5Y, neutral, 5GY, or 5B
Value: 5 to 7 dry, 2 to 6 moist
Chroma: Neutral to 2 dry or moist
Texture of the fine-earth fraction: Clay loam, clay, or silty clay
Content of clay: 35 to 50 percent
Rock fragments: 3 to 30 percent gravel
Reaction: Neutral to moderately acid
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—6 to 8

Aubell Series

Setting

Landscape position: Dissected fan remnants
Parent material: Alluvium derived from mixed sources
Slope: 2 to 9 percent
Elevation: 65 to 140 feet (21 to 43 meters)
Depth class: Very deep
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately low to moderately high
Slowest permeability: Moderately slow or slow
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Fine, mixed, active, mesic Oxyaquic Dystrudepts

Modal Pedon

Aubell clay loam, in an area of Aubell, 2 to 9 percent slopes, on a slightly convex, south-facing slope of 4 percent, under sweet vernalgrass, velvetgrass, orchardgrass, small Douglas-fir, and cascara, at an elevation of 98 feet (30 meters); in Jedediah Smith Redwoods State Park, Del Norte County, California; east of Aubell Road at the North Operations Center; USGS Crescent City quadrangle; UTM zone 10, 404762mE, 4624753mN, NAD83.

Ap1—0 to 4 inches (0 to 10 centimeters); very dark gray (2.5Y 3/1) clay loam, dark grayish brown (2.5Y 4/2) dry; moderate very fine and fine subangular blocky and moderate medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and common fine tubular and common very fine, fine, and medium irregular pores; 1 percent gravel; strongly acid (pH 5.4); clear smooth boundary.

Ap2—4 to 10 inches (10 to 26 centimeters); very dark gray (2.5Y 3/1) clay loam, dark grayish brown (2.5Y 4/2) dry; strong very fine and weak fine subangular blocky and moderate medium granular structure; slightly hard, friable, moderately sticky and moderately plastic; many very fine and common fine roots; many very fine and common fine tubular and common very fine and fine irregular pores; 1 percent gravel; strongly acid (pH 5.4); clear smooth boundary.

Bw1—10 to 16 inches (26 to 41 centimeters); light olive brown (2.5Y 5/4) clay loam, pale yellow (2.5Y 7/4) dry; moderate fine subangular blocky structure; moderately hard, firm, moderately sticky and very plastic; common very fine and fine roots; common very fine and fine tubular and common very fine irregular pores; few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; 3 percent gravel; strongly acid (pH 5.2); clear smooth boundary.

Bw2—16 to 23 inches (41 to 58 centimeters); light olive brown (2.5Y 5/4) clay loam, light yellowish brown (2.5Y 6/3) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine tubular and common very fine irregular pores; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; 3 percent gravel; strongly acid (pH 5.2); clear smooth boundary.

Bw3—23 to 27 inches (58 to 69 centimeters); light olive brown (2.5Y 5/4) clay loam, pale yellow (2.5Y 7/3) dry; weak medium and coarse subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine tubular and common very fine irregular pores; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; few fine prominent black (N 2.5/0) masses of manganese accumulations in the matrix; 3 percent gravel; very strongly acid (pH 5.0); clear smooth boundary.

C1—27 to 39 inches (69 to 100 centimeters); light olive brown (2.5Y 5/3) silty clay loam, pale yellow (2.5Y 7/3) dry; massive; moderately hard, firm, moderately sticky and very plastic; moderately few very fine roots; common very fine tubular and irregular pores; many fine and medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; many fine and medium distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; 3 percent gravel and 1 percent paragravel; very strongly acid (pH 5.0); clear wavy boundary.

C2—39 to 60 inches (100 to 152 centimeters); light olive brown (2.5Y 5/3) very gravelly clay loam, pale yellow (2.5Y 7/3) dry; massive; slightly hard, friable, moderately sticky and moderately plastic; common very fine irregular pores; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; 50 percent gravel; very strongly acid (pH 5.0).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 35 to 40 percent clay and 0 to 7 percent gravel
Water table: At a depth of 26 to 100 centimeters (10 to 39 inches)

A or Ap horizon
Hue: 10YR or 2.5Y
Value: 3 to 5 dry, 2 or 3 moist
Chroma: 1 to 3 dry or moist
Texture of the fine-earth fraction: Clay loam
Rock fragments: 0 to 7 percent gravel
Content of clay: 27 to 30 percent
Reaction: Strongly acid

Bw horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 to 6 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Clay loam
Rock fragments: 0 to 7 percent gravel
Content of clay: 35 to 40 percent
Reaction: Strongly acid
Redoximorphic features:
Type—masses of iron and manganese and iron depletions
Quantity—few to many
Hue—7.5YR, 10YR, 2.5Y, or neutral
Value—2.5 to 5 moist
Chroma—neutral to 8 moist

C horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Silty clay loam, clay loam, or clay
Rock fragments: 0 to 60 percent gravel
Content of clay: 30 to 45 percent
Reaction: Moderately acid to very strongly acid
Redoximorphic features:
Type—masses of iron and manganese and iron depletions
Quantity—few to many
Hue—7.5YR, 10YR, 2.5Y, or neutral
Value—2.5 to 5 moist
Chroma—neutral to 8 moist

Battery Series

Setting

Landscape position: Uplifted, dissected stream terraces and remnants
Parent material: Alluvium derived from mixed sources
Slope: 5 to 50 percent
Elevation: 55 to 915 feet (17 to 280 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow

Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 300 days
Taxonomic classification: Fine-loamy, mixed, semiactive, isomesic Typic Palehumults

Modal Pedon

Battery gravelly clay loam, in an area of Battery-Catchings complex, 5 to 30 percent slopes, on a convex, north-facing slope of 25 percent, under redwood, Douglas-fir, tanoak, red alder, Pacific rhododendron, California huckleberry, and swordfern, at an elevation of 340 feet (104 meters); in Jedediah Smith Redwoods State Park, Del Norte County, California; USGS Hiouchi quadrangle; UTM zone 10, 406883mE, 4629294mN, NAD83.

A1—0 to 7 inches (0 to 19 centimeters); dark brown (10YR 3/3) gravelly clay loam, pale brown (10YR 6/3) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine and fine tubular and irregular pores; 20 percent gravel; strongly acid (pH 5.2); clear wavy boundary.

A2—7 to 13 inches (19 to 32 centimeters); dark brown (10YR 3/3) gravelly clay loam, yellowish brown (10YR 5/4) dry; moderate very fine and weak fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, medium, coarse, and very coarse roots; common very fine, fine, and coarse tubular and common very fine and fine irregular pores; 15 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

Bt1—13 to 25 inches (32 to 64 centimeters); brown (7.5YR 4/4) gravelly clay loam, light brown (7.5YR 6/4) dry; moderate medium and weak fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; moderately few very fine and common fine and medium roots; common very fine and fine irregular pores; few distinct clay films on faces of peds and on rock fragments; 25 percent gravel; strongly acid (pH 5.4); abrupt wavy boundary.

Bt2—25 to 39 inches (64 to 100 centimeters); yellowish brown (10YR 5/6) gravelly clay loam, yellow (10YR 7/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; common very fine, fine, and medium irregular pores; few distinct clay films on faces of peds and on rock fragments; 20 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

Bt3—39 to 54 inches (100 to 138 centimeters); strong brown (7.5YR 5/6) gravelly clay loam, yellow (10YR 7/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; moderately few fine and common very fine, medium, and very coarse roots; common fine tubular and common very fine and fine irregular pores; few distinct clay films on faces of peds and on rock fragments; 20 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

Bt4—54 to 70 inches (138 to 179 centimeters); strong brown (7.5YR 5/6) gravelly clay loam, yellow (10YR 7/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, medium, and very coarse roots; common very fine and fine tubular and irregular pores; few distinct clay films on faces of peds and on rock fragments; 20 percent gravel and 5 percent paragravel; very strongly acid (pH 5.0); abrupt wavy boundary.

2C—70 to 79 inches (179 to 200 centimeters); 70 percent light olive brown (2.5Y 5/3) and 30 percent strong brown (7.5YR 5/8) paragravelly clay loam, light gray (2.5Y 7/2) and reddish yellow (7.5YR 6/8) dry; massive; moderately hard, firm, moderately sticky and moderately plastic; common very fine and fine roots;

moderately few very fine and fine irregular pores; 10 percent gravel and 10 percent paragravel; very strongly acid (pH 5.0).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay, 15 to 30 percent gravel, 0 to 10 percent paragravel, and 0 to 10 percent cobbles
Water table: None noted
Reaction: Strongly acid or very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 4 to 7 dry, 3 or 4 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 20 to 33 percent
Rock fragments: 15 to 35 percent gravel and 0 to 5 percent cobbles

Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 4 to 7 dry, 2 to 6 moist
Chroma: 2 to 6 dry, 3 to 8 moist
Texture of the fine-earth fraction: Clay loam
Content of clay: 27 to 35 percent
Rock fragments: 15 to 30 percent gravel, 0 to 10 percent paragravel, and 0 to 10 percent cobbles

C horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 6 to 8 dry, 4 to 6 moist
Chroma: 2 to 8 dry, 3 to 8 moist
Texture of the fine-earth fraction: Clay loam
Content of clay: 27 to 35 percent
Rock fragments: 0 to 40 percent gravel, 0 to 25 percent paragravel, and 0 to 10 percent cobbles

The Battery soils in map unit 177 are taxadjuncts to the series. These soils have an ustic soil moisture regime. This difference, however, does not affect use and management.

Bigriver Series

Setting

Landscape position: Lower alluvial flats; flood plains
Parent material: Alluvium derived from mixed sources (fig. 16)
Slope: 2 to 5 percent
Elevation: 0 to 745 feet (0 to 228 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Flooding: Occasional
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 300 to 330 days
Taxonomic classification: Coarse-loamy, mixed, superactive, nonacid, isomesic Typic Udifluvents

Figure 16.—A profile of a Bigriver soil. These soils form in overbank flood deposits. Texture ranges from loamy sand to very fine sandy loam. Depth is marked in centimeters.

Modal Pedon

Bigriver fine sandy loam, in an area of Bigriver, 2 to 5 percent slopes, on a nearly level slope of 2 percent, under redwood, California laurel, tanoak, red alder, swordfern, and redwood-sorrel, at an elevation of 39 feet (12 meters); in Redwood National Park, Humboldt County, California; USGS Rodger's Peak quadrangle; UTM zone 10, 415267mE, 4562684mN, NAD83.

A—0 to 4 inches (0 to 9 centimeters); black (10YR 2/1) fine sandy loam, gray (10YR 5/1) dry; weak fine granular structure; soft, friable, nonsticky and nonplastic; common very fine and few fine and medium roots; many very fine interstitial and common very fine and few fine tubular pores; moderately acid (pH 6.0); clear wavy boundary.

C—4 to 61 inches (9 to 156 centimeters); stratified very dark gray (10YR 3/1) to very dark grayish brown (10YR 3/2) loamy fine sand to silt loam, gray (10YR 5/1) dry; soft, very friable and friable, nonsticky and slightly sticky and nonplastic; massive; common to many very fine to coarse roots; common very fine and fine tubular pores; moderately acid (pH 6.0).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 5 to 18 percent clay and 0 to 5 percent gravel
Water table: None noted

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 2 to 4 moist
Chroma: 1 or 2 dry or moist
Texture of the fine-earth fraction: Fine sandy loam or silt loam
Content of clay: 5 to 18 percent
Rock fragments: 0 to 5 percent gravel
Reaction: Slightly acid or moderately acid

C horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 1 to 3 dry, 1 or 2 moist
Texture of the fine-earth fraction: Stratified loamy sand, loamy fine sand, fine sandy loam, very fine sandy loam, loam, and silt loam
Content of clay: 5 to 18 percent
Rock fragments: 0 to 5 percent gravel
Reaction: Slightly acid or moderately acid

Bigtree Series

Setting

Landscape position: Alluvial fans, fan remnants, and low terraces
Parent material: Alluvium derived from mixed sources
Slope: 2 to 9 percent

Elevation: 5 to 670 feet (2 to 205 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Flooding: Rare
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 300 to 320 days
Taxonomic classification: Fine-loamy, isotic, isomesic Andic Dystrudepts

Modal Pedon

Bigtree loam, in an area of Bigtree-Mystery complex, 2 to 9 percent slopes, on a linear, northeast-facing slope of 2 percent, under redwood, hemlock, California huckleberry, Cascade barberry, trillium, and swordfern, at an elevation of 280 feet (85 meters); in Prairie Creek Redwoods State Park, Humboldt County, California; 0.2 kilometer (0.1 mile) east on South Fork trail; USGS Fern Canyon quadrangle; UTM zone 10, 415058mE, 4582332mN, NAD83.

A1—0 to 6 inches (0 to 15 centimeters); very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; moderate very fine and fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium, coarse, and very coarse roots; many very fine and fine interstitial and common fine and medium tubular pores; 3 percent gravel; slightly acid (pH 6.2); abrupt smooth boundary.

A2—6 to 10 inches (15 to 26 centimeters); dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; moderate very fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many medium and coarse and common very fine, fine, and very coarse roots; many very fine and fine interstitial and common fine and medium tubular pores; 3 percent gravel; moderately acid (pH 6.0); abrupt wavy boundary.

Bw1—10 to 22 inches (26 to 56 centimeters); strong brown (7.5YR 4/6) loam, yellowish brown (10YR 5/6) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium and common coarse and very coarse roots; common very fine and fine interstitial and common fine tubular pores; 2 percent gravel; strongly acid (pH 5.4); abrupt smooth boundary.

Bw2—22 to 41 inches (56 to 105 centimeters); dark yellowish brown (10YR 3/4) loam, light yellowish brown (2.5Y 6/4) dry; weak fine subangular blocky structure; moderately hard, firm, slightly sticky and slightly plastic; common fine, medium, and very coarse roots; common very fine and fine interstitial and common fine tubular pores; 1 percent gravel; moderately acid (pH 5.6); abrupt smooth boundary.

Bw3—41 to 47 inches (105 to 120 centimeters); olive brown (2.5Y 4/4) loam, light yellowish brown (2.5Y 6/4) dry; weak fine subangular blocky structure; moderately hard, firm, slightly sticky and slightly plastic; common fine, medium, and coarse roots; common very fine interstitial pores; 1 percent gravel; strongly acid (pH 5.2); abrupt smooth boundary.

2C1—47 to 57 inches (120 to 145 centimeters); olive brown (2.5Y 3/2) sandy loam, grayish brown (2.5Y 5/2) dry; single grain; loose, loose, slightly sticky and slightly plastic; moderately few very fine roots; common very fine interstitial pores; 7 percent gravel; strongly acid (pH 5.2); clear smooth boundary.

2C2—57 to 63 inches (145 to 160 centimeters); olive brown (2.5Y 4/3) silt loam, light yellowish brown (2.5Y 6/3) dry; massive; slightly hard, friable, slightly sticky and

slightly plastic; moderately few very fine roots; common very fine interstitial pores; 1 percent gravel; very strongly acid (pH 5.0).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 18 to 25 percent clay, 0 to 15 percent gravel, and 0 to 5 percent cobbles
Water table: None noted

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR or 2.5Y
Value: 3 to 5 dry, 2 to 4 moist
Chroma: 2 to 4 dry 2 or 3 moist
Texture of the fine-earth fraction: Loam
Rock fragments: 0 to 10 percent gravel
Content of clay: 15 to 25 percent
Reaction: Moderately acid or strongly acid

Bw horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 2 to 6 dry, 3 to 6 moist
Texture of the fine-earth fraction: Loam or silt loam
Rock fragments: 0 to 15 percent gravel and 0 to 5 percent cobbles
Content of clay: 18 to 25 percent
Reaction: Moderately acid or strongly acid

C horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Sandy loam or silt loam
Rock fragments: 0 to 35 percent gravel, 0 to 5 percent cobbles, and 0 to 5 percent paragravel
Content of clay: 5 to 18 percent
Reaction: Strongly acid

Catchings Series

Setting

Landscape position: Uplifted, dissected stream terrace remnants
Parent material: Alluvium derived from mixed sources
Slope: 5 to 30 percent
Elevation: 75 to 845 feet (24 to 258 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow

Mean annual precipitation: 75 to 90 inches (1,900 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 280 days
Taxonomic classification: Loamy-skeletal, mixed, semiactive, isomesic Typic Haplohumults

Modal Pedon

Catchings very gravelly loam, in an area of Battery-Catchings, 5 to 30 percent slopes, on a convex, northwest-facing slope of 20 percent, under redwood, Douglas-fir, western hemlock, tanoak, Pacific rhododendron, California huckleberry, red huckleberry, and salal, at an elevation of 120 feet (37 meters); in Jedediah Smith Redwoods State Park, Del Norte County, California; USGS Hiouchi quadrangle; UTM zone 10, 410475mE, 4626925mN, NAD83.

A—0 to 10 inches (0 to 25 centimeters); dark brown (10YR 3/3) very gravelly loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine and fine tubular and many very fine and fine irregular pores; 35 percent subrounded pebbles and 1 percent subrounded cobbles; strongly acid (pH 5.4); clear wavy boundary.

BA—10 to 16 inches (25 to 40 centimeters); dark brown (10YR 3/3) very gravelly loam, pale brown (10YR 6/3) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, moderately sticky and slightly plastic; common very fine, fine, and medium roots; common very fine and fine tubular and irregular pores; 45 percent subrounded pebbles and 1 percent subrounded cobbles; strongly acid (pH 5.3); clear wavy boundary.

Bt1—16 to 22 inches (40 to 57 centimeters); dark yellowish brown (10YR 4/4) very gravelly clay loam, yellowish brown (10YR 5/4) dry; moderate very fine and weak fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine, fine, and medium roots; common very fine and fine tubular pores; few distinct clay films on rock fragments; 45 percent subrounded pebbles; very strongly acid (pH 5.0); clear wavy boundary.

Bt2—22 to 31 inches (57 to 78 centimeters); dark yellowish brown (10YR 4/6) very gravelly clay loam, brownish yellow (10YR 6/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, medium, coarse, and very coarse roots; common very fine and fine tubular and irregular pores; few distinct clay films on faces of peds and on rock fragments; 45 percent subrounded pebbles; very strongly acid (pH 5.0); clear smooth boundary.

Bt3—31 to 39 inches (78 to 100 centimeters); dark yellowish brown (10YR 4/6) very gravelly loam, brownish yellow (10YR 6/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine and fine tubular and irregular pores; few distinct clay films on rock fragments; 40 percent subrounded pebbles; very strongly acid (pH 4.9); clear smooth boundary.

Bt4—39 to 52 inches (100 to 132 centimeters); dark yellowish brown (10YR 4/6) gravelly sandy loam, brownish yellow (10YR 6/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine, fine, and medium tubular and common very fine and fine irregular pores; few distinct clay films on rock fragments; 15 percent subrounded pebbles and 2 percent subrounded cobbles; very strongly acid (pH 4.9); clear smooth boundary.

Bt5—52 to 63 inches (132 to 160 centimeters); dark yellowish brown (10YR 4/6) extremely gravelly coarse sandy loam, brownish yellow (10YR 6/6) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly

plastic; moderately few very fine roots; common very fine and fine irregular pores; few distinct clay films on rock fragments; 70 percent subrounded pebbles and 3 percent subrounded cobbles; very strongly acid (pH 4.9); clear smooth boundary.

Bt6—63 to 69 inches (160 to 175 centimeters); dark yellowish brown (10YR 4/6) silt loam, brownish yellow (10YR 6/6) dry; weak medium and coarse subangular blocky structure; moderately hard, firm, slightly sticky and slightly plastic; common fine and medium roots; common very fine and fine tubular and irregular pores; few distinct clay films on faces of peds; 10 percent subrounded pebbles; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 25 to 33 percent clay, 35 to 55 percent gravel, and 0 to 5 percent cobbles
Water table: None noted
Reaction: Strongly acid or very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 3 or 4 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 20 to 26 percent
Rock fragments: 35 to 55 percent gravel and 0 to 5 percent cobbles

Upper part of the Bt horizon
Hue: 7.5YR or 10YR
Value: 5 or 6 dry, 4 or 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 23 to 33 percent
Rock fragments: 35 to 55 percent gravel and 0 to 5 percent cobbles

Lower part of the Bt horizon
Hue: 7.5YR or 10YR
Value: 5 or 6 dry, 4 or 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Coarse sandy loam, sandy loam, and silt loam
Content of clay: 5 to 20 percent
Rock fragments: 10 to 85 percent gravel and 0 to 7 percent cobbles

C horizon (where present)
Hue: 7.5YR or 10YR
Value: 6 or 7 dry, 4 to 6 moist
Chroma: 3 to 6 dry, 3 to 5 moist
Texture of the fine-earth fraction: Loamy coarse sand, sandy loam, or loam
Content of clay: 2 to 20 percent
Rock fragments: 40 to 60 percent gravel, 15 to 25 percent cobbles, and 0 to 15 percent stones

Childshill Series

Setting

Landscape position: Moderately broad ridges
Parent material: Colluvium and residuum from weakly consolidated fluvial deposits derived from mixed sources

Slope: 5 to 30 percent
Elevation: 1,785 to 2,350 feet (545 to 717 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 280 days
Taxonomic classification: Fine-loamy, mixed, semiactive, isomesic Ustic Palehumults

Modal Pedon

Childshill loam, in an area of Childshill, 5 to 30 percent slopes, on a linear northeast-facing slope of 15 percent, under Douglas-fir, tanoak, Pacific rhododendron, salal, brackenfern, and California huckleberry, at an elevation of 643 meters (2,110 feet); in Redwood National and State Parks, Del Norte County, California; USGS Childs Hill quadrangle; UTM zone 10, 415282mE, 4617101mN, NAD83.

A1—0 to 3 inches (0 to 8 centimeters); dark brown (10YR 3/3) loam, yellowish brown (10YR 5/4) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine and fine irregular and common fine tubular pores; 5 percent subrounded pebbles and 1 percent subrounded cobbles; moderately acid (pH 5.8); clear wavy boundary.

A2—3 to 9 inches (8 to 22 centimeters); dark brown (7.5YR 3/3) sandy clay loam, brown (7.5YR 5/4) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine and fine irregular and fine tubular pores; 10 percent subrounded pebbles and 1 percent subrounded cobbles; very strongly acid (pH 4.9); abrupt wavy boundary.

Bt1—9 to 22 inches (22 to 55 centimeters); strong brown (7.5YR 4/6) gravelly clay loam, strong brown (7.5YR 5/6) dry; moderate fine and weak medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few very fine and common fine, medium, and coarse roots; common very fine and fine irregular and common medium tubular pores; few distinct clay films on faces of peds and on rock fragments; 15 percent subrounded pebbles and 5 percent subrounded cobbles; very strongly acid (pH 4.8); clear wavy boundary.

Bt2—22 to 35 inches (55 to 90 centimeters); strong brown (7.5YR 4/6) gravelly clay loam, strong brown (7.5YR 5/6) dry; moderate fine and medium and weak coarse subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common fine, medium, and coarse roots; common very fine and medium tubular pores; few distinct clay films on faces of peds and on rock fragments; 15 percent subrounded pebbles, 3 percent subrounded paragravel, and 5 percent subrounded cobbles; very strongly acid (pH 4.5); clear wavy boundary.

Bt3—35 to 47 inches (90 to 120 centimeters); strong brown (7.5YR 4/6) very cobbly clay loam, strong brown (7.5YR 5/6) dry; moderate fine subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few fine roots; common very fine irregular and moderately few fine tubular pores; few distinct clay films on faces of peds and on rock fragments; 20 percent subrounded pebbles, 5 percent subrounded paragravel, 15 percent subrounded cobbles, and 5 percent subrounded stones; very strongly acid (pH 4.5); clear wavy boundary.

Bt4—47 to 55 inches (120 to 140 centimeters); strong brown (7.5YR 4/6) very cobbly clay loam, strong brown (7.5YR 5/6) dry; moderate fine subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few fine roots; common very fine irregular pores; few distinct clay films on faces of peds and on rock fragments; 20 percent subrounded pebbles, 5 percent subrounded paragravel, 15 percent subrounded cobbles, and 5 percent subrounded stones; very strongly acid (pH 4.5); clear wavy boundary.

Bt5—55 to 65 inches (140 to 165 centimeters); strong brown (7.5YR 4/6) very cobbly loam, strong brown (7.5YR 5/6) dry; moderate fine and weak medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine irregular pores; few distinct clay films on faces of peds and on rock fragments; 15 percent subrounded pebbles, 10 percent subrounded paragravel, 20 percent subrounded cobbles, 3 percent subrounded paracobbles, and 5 percent subrounded stones; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 27 to 35 percent clay, 0 to 30 percent gravel, 0 to 5 percent paragravel, and 0 to 10 percent cobbles

Water table: None noted

Reaction: Moderately acid to very strongly acid

O horizon (where present)

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 7.5YR or 10YR

Value: 4 to 6 dry, 3 or 4 moist

Chroma: 2 to 4 dry or moist

Texture of the fine-earth fraction: Loam and sandy clay loam

Content of clay: 20 to 27 percent

Rock fragments: 0 to 10 percent gravel and 0 to 5 percent cobbles

Upper part of the Bt horizon

Hue: 7.5YR or 10YR

Value: 4 to 6 dry, 2 to 6 moist

Chroma: 4 to 6 dry, 3 to 7 moist

Texture of the fine-earth fraction: Clay loam

Content of clay: 27 to 35 percent

Rock fragments: 0 to 30 percent gravel, 0 to 5 percent paragravel, and 0 to 10 percent cobbles

Lower part of the Bt horizon

Hue: 7.5YR or 10YR

Value: 4 to 6 dry, 2 to 6 moist

Chroma: 4 to 6 dry, 3 to 7 moist

Texture of the fine-earth fraction: Loam or clay loam

Content of clay: 25 to 35 percent

Rock fragments: 15 to 25 percent gravel, 0 to 10 percent paragravel, 15 to 30 percent cobbles, 0 to 5 percent paracobbles, and 0 to 5 percent stones

Clambeach Series

Setting

Landscape position: Deflation basins and depressions
Parent material: Eolian and marine sand derived from mixed sources
Slope: 0 to 2 percent
Elevation: 0 to 65 feet (0 to 20 meters)
Depth class: Very deep
Drainage class: Very poorly drained
Slowest saturated hydraulic conductivity: Moderate
Slowest permeability: Moderately slow
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Mixed, isomesic Typic Psammaquents

Modal Pedon

Clambeach sand, in an area of Samoa-Clambeach-Dune land complex, 0 to 50 percent slopes, on a slope of less than 1 percent, under slough sedge, Brewer's rush, Pacific silverweed, and dune willow, at an elevation of 10 feet (3 meters); about 3 miles west of the town of Arcata on the Samoa peninsula, Humboldt County, California; USGS Eureka quadrangle; UTM zone 10, 402054mE, 4524644mN, NAD83.

A—0 to 9 inches (0 to 22 centimeters); very dark grayish brown (2.5Y 3/2) sand, gray (2.5Y 5/1) dry; weak very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine irregular pores; 10 percent medium prominent dark yellowish brown (10YR 4/6) iron-manganese masses in the matrix; moderately acid (pH 6.0); clear smooth boundary.

Cg1—9 to 20 inches (22 to 50 centimeters); dark greenish gray (10Y 3/1) sand, greenish gray (10Y 5/1) dry; single grain; loose, loose, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine and fine interstitial pores; 30 percent coarse prominent olive brown (2.5Y 4/4) iron-manganese masses in the matrix; slightly acid (pH 6.2); clear smooth boundary.

Cg2—20 to 63 inches (50 to 160 centimeters); dark greenish gray (5GY 3/1) sand, greenish gray (5GY 5/1) dry; single grain; loose, loose, nonsticky and nonplastic; many very fine and fine interstitial pores; 10 percent coarse prominent olive brown (2.5Y 4/3) iron-manganese masses in the matrix; slightly acid (pH 6.4).

Range in Characteristics

Control section (by weighted average): 0 to 1 percent clay and 0 to 30 percent gravel
Water table: At a depth of 6 to 24 inches (15 and 60 centimeters) in December, 0 to 4 inches (0 to 10 centimeters) January through March, 6 to 24 inches (15 and 60 centimeters) in April, 12 to 35 inches (30 and 90 centimeters) May through June, and 35 inches (90 centimeters) to greater than 72 inches (182 centimeters) from June through November
Surface fragments: 0 to 5 percent gravel

A horizon
Hue: 10YR or 2.5Y
Value: 3 to 5 dry, 2 or 3 moist
Chroma: 1 or 2 dry or moist
Content of clay: 0 to 5 percent
Texture of the fine-earth fraction: Sand
Rock fragments: 0 to 5 percent gravel

Reaction: Moderately acid or slightly acid
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix
Quantity—few or common
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—3 to 6

Bg horizon (where present)
Hue: 2.5Y or 5Y
Value: 4 or 5 dry, 3 or 4 moist
Chroma: 1 or 2 dry or moist
Content of clay: 0 to 1 percent
Texture of the fine-earth fraction: Sand or fine sand
Reaction: Slightly acid or neutral
Redoximorphic features:
Type—medium or coarse iron-manganese masses in the matrix
Quantity—common or many
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—3 to 6

Cg horizon
Hue: 5Y, 10Y, 5GY, or neutral
Value: 4 to 6 dry, 3 or 4 moist
Chroma: 0 to 2 dry or moist
Content of clay: 0 to 1 percent
Texture of the fine-earth fraction: Sand or fine sand
Reaction: Moderately acid to neutral
Rock fragments: 0 to 30 percent gravel
Redoximorphic features:
Type—medium or coarse iron-manganese masses in the matrix
Quantity—common or many
Hue—7.5YR, 10YR, or 2.5Y
Value—3 to 5
Chroma—3 to 8

Coppercreek Series

Setting

Landscape position: Mountain slopes and broad ridgetops
Parent material: Colluvium and residuum derived from schist, sandstone, and mudstone (fig. 17)
Slope: 9 to 75 percent
Elevation: 50 to 3,040 feet (15 to 926 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 220 to 300 days
Taxonomic classification: Fine-loamy, mixed, semiactive, isomesic Typic Palehumults

Figure 17.—A profile of a Coppercreek soil. These soils form in colluvium and residuum derived from sandstone, mudstone, or schist. Coppercreek soils are the most abundant soils in the survey area. Depth is marked in centimeters.

Modal Pedon

Coppercreek loam, in an area of Coppercreek-Slidecreek-Tectah complex, 30 to 50 percent slopes, on a uniform, northwest-facing slope of 30 percent, under redwood, Douglas-fir, Pacific rhododendron, California huckleberry, and swordfern, at an elevation of 850 feet (279 meters); in Redwood National and State Parks, Del Norte County, California; USGS Childs Hill quadrangle; UTM zone 10, 412388mE, 4621545mN, NAD83.

A—0 to 8 inches (0 to 20 centimeters); very dark brown (10YR 2/2) loam, brown (10YR 4/3) dry; weak fine granular and moderate very fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine and fine irregular and common fine and medium tubular pores; 2 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

BAt—8 to 15 inches (20 to 38 centimeters); dark yellowish brown (10YR 3/4) clay loam, light yellowish brown (10YR 6/4) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, medium, and very coarse roots; common very fine and fine irregular and common medium and coarse tubular pores; very few distinct clay films on faces of peds and on rock fragments; 2 percent gravel; very strongly acid (pH 4.9); clear wavy boundary.

Bt1—15 to 20 inches (38 to 52 centimeters); dark yellowish brown (10YR 3/4) clay loam, light yellowish brown (10YR 6/4) dry; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; few very fine, fine, and medium and common very coarse roots; common very fine and fine irregular and common fine, medium, coarse, and very coarse tubular pores; few distinct clay films on faces of peds and on rock fragments; 2 percent gravel; very strongly acid (pH 4.7); clear smooth boundary.

Bt2—20 to 30 inches (52 to 75 centimeters); dark yellowish brown (10YR 4/4) clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine, fine, medium, coarse, and very coarse roots; common very fine and fine irregular and common fine, coarse, and very coarse tubular pores; few distinct clay films on faces of peds and on rock fragments; 3 percent gravel; very strongly acid (pH 4.6); clear smooth boundary.

Bt3—30 to 43 inches (75 to 110 centimeters); dark yellowish brown (10YR 4/4) clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine, fine, medium, coarse, and very coarse roots; common very fine and fine irregular and common fine tubular pores; few distinct clay films on faces of peds and on rock fragments; 3 percent gravel; very strongly acid (pH 4.6); clear smooth boundary.

Bt4—43 to 55 inches (110 to 140 centimeters); strong brown (7.5YR 5/6) clay loam, brownish yellow (10YR 6/6) dry; moderate medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few fine and common medium roots; common very fine and fine irregular and common fine tubular pores; common distinct clay films on faces of peds and on rock fragments; 3 percent gravel; very strongly acid (pH 4.5); clear smooth boundary.

Bt5—55 to 65 inches (140 to 165 centimeters); strong brown (7.5YR 5/6) paragravelly clay loam, yellow (10YR 7/6) dry; weak medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few fine and common coarse roots; moderately few very fine and fine irregular pores; common distinct clay films on faces of peds and on rock fragments; 5 percent

gravel, 1 percent cobbles, and 10 percent paragravel; very strongly acid (pH 4.5); clear smooth boundary.

BCt—65 to 79 inches (165 to 200 centimeters); strong brown (7.5YR 5/6) paragravelly clay loam, yellow (10YR 7/6) dry; weak fine subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few fine and common medium roots; moderately few very fine irregular pores; common faint clay films on faces of peds; 5 percent gravel, 1 percent cobbles, and 12 percent paragravel; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay, 0 to 35 percent gravel, and 0 to 10 percent cobbles
Water table: None noted
Reaction: Strongly acid or very strongly acid

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 4 to 7 dry, 2 to 4 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Silt loam or loam
Content of clay: 20 to 27 percent
Rock fragments: 0 to 45 percent gravel and 0 to 10 percent cobbles

Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 4 to 7 dry, 2 to 6 moist
Chroma: 2 to 6 dry, 3 to 8 moist
Texture of the fine-earth fraction: Loam, silty clay loam, or clay loam
Content of clay: 25 to 35 percent
Rock fragments: 0 to 55 percent gravel, 0 to 30 percent paragravel, and 0 to 10 percent cobbles

C horizon (where present)
Hue: 10YR, 2.5Y, or 5Y
Value: 6 to 8 dry, 4 to 6 moist
Chroma: 2 to 4 dry, 2 to 8 moist
Texture of the fine-earth fraction: Sandy clay loam, loam, or clay loam
Content of clay: 23 to 35 percent
Rock fragments: 15 to 55 percent gravel, 0 to 10 percent cobbles, and 0 to 10 percent stones

Cg horizon below 125 centimeters (where present)
Hue: 5Y, 2.5Y, neutral, 5GY, or 5B
Value: 5 to 7 dry, 2 to 6 moist
Chroma: Neutral to 2 dry, neutral to 2 moist
Texture of the fine-earth fraction: Clay or silty clay
Content of clay: 40 to 50 percent
Rock fragments: 3 to 13 percent

Redoximorphic features:
Type—masses of iron and manganese; iron depletions
Quantity—few or common
Hue—7.5YR or 10YR
Value—6 dry, 5 moist
Chroma—6 dry, 4 to 6 moist

Countshill Series

Setting

Landscape position: Gently convex ridgetops, spur ridges, and mountain slopes
Parent material: Colluvium and residuum derived from siltstone and sandstone
Slope: 9 to 50 percent
Elevation: 500 to 3,385 feet (153 to 1,032 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Mean annual precipitation: 85 to 100 inches (2,160 to 2,550 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 200 to 280 days
Taxonomic classification: Fine-loamy, mixed, superactive, mesic Humic Dystroxerepts

Modal Pedon

Countshill loam, in an area of Dolason-Countshill-Airstrip complex, 9 to 30 percent slopes, on a gently convex, southwest-facing slope of 13 percent, under bristly dogstail grass and common sheep sorrel, at an elevation of 2,400 feet (732 meters); in Airstrip Prairie, Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 421594mE, 4560248mN, NAD83.

A1—0 to 7 inches (0 to 19 centimeters); dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium granular and subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common very fine irregular and common very fine and fine tubular pores; strongly acid (pH 5.5); 3 percent gravel; gradual wavy boundary.

A2—7 to 20 inches (19 to 51 centimeters); dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; weak coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine, fine, and medium tubular pores; strongly acid (pH 5.5); 5 percent gravel; abrupt irregular boundary.

AC—20 to 28 inches (51 to 72 centimeters); brown (10YR 5/3) and light olive brown (2.5Y 5/4) variegated very gravelly loam, dark yellowish brown (10YR 3/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine and fine tubular pores; strongly acid (pH 5.5); 35 percent gravel and 15 percent cobbles; abrupt wavy boundary.

Cr—28 to 36 inches (72 to 91) centimeters; saprolitic sandy siltstone, easily dug and crushable in one hand; original rock macrostructure still intact throughout; becomes harder at a depth of about 90 centimeters; depth to Cr ranges from 24 to 34 inches (62 to 87 centimeters) across pit face.

Range in Characteristics

Depth to soft bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 18 to 30 percent clay, 5 to 35 percent gravel, and 0 to 15 percent cobbles
Water table: None noted

A horizon
Hue: 10YR or 2.5Y
Value: 4 or 5 dry, 2 or 3 moist
Chroma: 1 to 3 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 15 to 30 percent
Rock fragments: 0 to 30 percent gravel and 0 to 5 percent cobbles
Reaction: Strongly acid or very strongly acid

Bw horizon (where present)
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 3 or 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Sandy loam, loam, or clay loam
Content of clay: 20 to 35 percent
Rock fragments: 35 to 50 percent gravel and 0 to 5 percent cobbles
Reaction: Strongly acid or very strongly acid

C horizon (where present)
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 3 or 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Sandy loam, loam, or clay loam
Content of clay: 20 to 35 percent
Rock fragments: 35 to 50 percent gravel and 0 to 55 percent cobbles
Reaction: Strongly acid or very strongly acid

The Countshill soils in map unit 481 are taxadjuncts to the series. These soils have an isomesic soil temperature regime and a udic soil moisture regime. Also, in some pedons they have an Oi horizon. These differences, however, do not affect use and management.

Coyoterock Series

Setting

Landscape position: Poorly incised drainages, hillslope hollows, and lower mountain slopes
Parent material: Colluvium and residuum derived from sandstone, mudstone, and siltstone
Slope: 15 to 50 percent
Elevation: 515 to 3,160 feet (158 to 964 meters)
Depth class: Very deep
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Low
Slowest permeability: Very slow
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 200 to 260 days
Taxonomic classification: Fine, mixed, active, mesic Ultic Haploxeralfs

Modal Pedon

Coyoterock cobbly clay loam, in an area of Pasturerock-Coyoterock-Maneze complex, 30 to 50 percent slopes, on a uniform, west-facing slope of 40 percent, under Oregon white oak, poison oak, snowberry, Sierra gooseberry, annual grasses, perennial grasses, and forbs, at an elevation of 2,450 feet (747 meters); in Redwood

National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 425216mE, 4556279mN, NAD83.

Oi—0 to 1 inch (0 to 1 centimeter); fresh and slightly decomposed oak leaves, forbs, and grass stems; abrupt wavy boundary.

A1—1 to 9 inches (1 to 21 centimeters); very dark grayish brown (2.5Y 3/2) cobbly clay loam, grayish brown (2.5Y 5/2) dry; moderate medium and coarse subangular blocky structure; friable, slightly hard, slightly sticky and slightly plastic; many very fine and few fine and medium roots; many very fine and fine irregular pores; 8 percent gravel and 8 percent cobbles; moderately acid (pH 6.0); gradual smooth boundary.

A2—9 to 16 inches (21 to 41 centimeters); very dark grayish brown (2.5Y 3/2) gravelly clay loam, light brownish gray (2.5Y 6/2) dry; moderate coarse and very coarse subangular blocky structure; friable, slightly hard, slightly sticky and slightly plastic; common very fine and few fine and medium roots; common very fine irregular pores; 15 percent gravel; moderately acid (pH 6.0); abrupt irregular boundary.

BAt—16 to 29 inches (41 to 73 centimeters); light olive brown (2.5Y 5/4) gravelly clay loam, pale yellow (2.5Y 7/4) dry; moderate coarse and very coarse subangular blocky structure; firm, moderately hard, moderately sticky and moderately plastic; few very fine, fine, and medium roots; few very fine irregular pores; many faint clay films on faces of peds and in pores; 15 percent gravel and 3 percent cobbles; strongly acid (pH 5.5); gradual smooth boundary.

Bt—29 to 39 inches (73 to 99 centimeters); light olive brown (2.5Y 5/4) gravelly clay, pale yellow (2.5Y 7/4) dry; weak coarse and very coarse subangular blocky structure; firm, moderately hard, very sticky and moderately plastic; common medium and coarse and few very fine and fine roots; few very fine irregular pores; common faint clay films on faces of peds and in pores; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation, strong brown (7.5YR 5/8) moist; 15 percent gravel; strongly acid (pH 5.5); clear smooth boundary.

Cg—39 to 60 inches (99 to 152 centimeters); gray (10YR 5/1) gravelly silty clay, light gray (10YR 7/1) dry; massive; very firm, very hard, very sticky and very plastic; few very fine, fine, medium, and coarse roots; few very fine interstitial pores; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation, strong brown (7.5YR 5/8) moist; 20 percent gravel and 2 percent cobbles, rock content increasing with depth; pH indicator fades.

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 35 to 45 percent clay, 8 to 20 percent gravel, and 0 to 20 percent cobbles

Water table: At a depth of 28 to 40 inches (70 to 102 centimeters)

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Neutral to moderately acid

A horizon

Hue: 10YR or 2.5Y

Value: 4 to 7 dry, 2 to 5 moist

Chroma: 1 to 3 dry, 1 to 4 moist

Texture of the fine-earth fraction: Loam or clay loam

Content of clay: 27 to 30 percent

Rock fragments: 8 to 15 percent gravel and 0 to 15 percent cobbles
Reaction: Moderately acid or strongly acid

Bt horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Clay loam, silty clay loam, or clay
Content of clay: 35 to 45 percent
Rock fragments: 8 to 20 percent gravel and 0 to 20 percent cobbles
Reaction: Moderately acid or strongly acid
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6 dry, 4 or 5 moist
Chroma—6 to 8 dry, 4 to 8 moist

Cg horizon
Hue: 10YR, 2.5Y, 5Y, or neutral
Value: 5 to 7 dry, 3 or 5 moist
Chroma: Neutral to 2 dry or moist
Texture of the fine-earth fraction: Clay loam, silty clay loam, silty clay, or clay
Content of clay: 35 to 50 percent
Rock fragments: 5 to 25 percent gravel and 0 to 20 percent cobbles
Reaction: Moderately acid to very strongly acid
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6 dry, 4 or 5 moist
Chroma—6 to 8 dry, 4 to 8 moist

Darkwoods Series

Setting

Landscape position: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Slope: 50 to 75 percent
Elevation: 65 to 4,755 feet (20 to 1,450 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 150 to 250 days
Taxonomic classification: Loamy-skeletal, mixed, active, mesic Typic Haploxerults

Modal Pedon

Darkwoods extremely gravelly loam, in an area of Sidehill-Oakside-Darkwoods complex, 50 to 100 percent slopes, on a convex, northeast-facing slope of 75 percent, under tree cover of tanoak and Douglas-fir with an understory of California

huckleberry, salal, and swordfern, at an elevation of 2,650 feet (810 meters); Humboldt County, California; UTM zone 10, 433325mE, 4539140mN, NAD83.

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed plant material; whole leaves that do not break down with rubbing; abrupt smooth boundary.

A—1 to 7 inches (2 to 19 centimeters); brown (10YR 5/3) extremely gravelly loam, dark brown (10YR 3/3) moist; moderate medium granular and moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium roots; many very fine and fine tubular and common very fine and fine interstitial pores; 60 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

ABt—7 to 16 inches (19 to 39 centimeters); pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; moderate medium and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; common very fine and fine tubular and common very fine interstitial pores; 50 percent gravel; moderately acid (pH 5.8); clear wavy boundary.

Bt1—16 to 25 inches (39 to 63 centimeters); dark yellowish brown (10YR 4/4) extremely gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and very fine subangular blocky and moderate medium granular structure; slightly hard, friable, moderately sticky and moderately plastic; common medium, common fine, common very fine, and common coarse roots; common very fine tubular, common fine tubular, common very fine interstitial, and common fine interstitial pores; few distinct clay films on all faces of peds; 65 percent gravel; moderately acid (pH 5.6); gradual wavy boundary.

Bt2—25 to 31 inches (63 to 80 centimeters); strong brown (7.5YR 5/6) gravelly clay loam, strong brown (7.5YR 4/6) moist; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common fine, common medium, and common very fine to coarse roots; common very fine and fine tubular and common very fine and fine interstitial pores; common distinct clay films on all faces of peds; 20 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

Bt3—31 to 44 inches (80 to 113 centimeters); yellowish brown (10YR 5/4) gravelly loam, strong brown (7.5YR 4/6) moist; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine, common medium, common fine, and common coarse roots; common very fine and fine tubular and common very fine and fine interstitial pores; common distinct clay films on all faces of peds; 25 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

BCt—44 to 52 inches (113 to 131 centimeters); light yellowish brown (10YR 6/4) extremely gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular and common very fine and fine interstitial pores; common distinct clay films on all faces of peds and few distinct clay films on surfaces along pores; 60 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

C—52 to 80 inches (131 to 200 centimeters); pale yellow (2.5Y 7/4) very gravelly loamy sand, light olive brown (2.5Y 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine and fine tubular and common very fine to medium interstitial pores; 55 percent gravel; strongly acid (pH 5.2).

Range in Characteristics

Depth to fractured bedrock: None observed

Control section (by weighted average): 28 to 35 percent clay and 35 to 75 percent gravel
Water table: None noted
Reaction: Moderately acid to very strongly acid
Surface fragments: 10 to 35 percent gravel and 0 to 10 percent cobbles

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Neutral to moderately acid

A horizon
Hue: 7.5YR or 10YR
Value: 4 to 7 dry, 2 to 5 moist
Chroma: 3 to 6 dry, 2 to 6 moist
Texture of the fine-earth fraction: Loam
Content of clay: 15 to 25 percent
Rock fragments: 60 to 85 percent gravel

Upper part of the Bt horizon
Hue: 7.5YR or 10YR
Value: 4 to 7 dry, 4 to 6 moist
Chroma: 4 to 6 dry, 4 to 8 moist
Texture of the fine-earth fraction: Clay loam
Content of clay: 28 to 35 percent
Rock fragments: 35 to 75 percent gravel

Lower part of the Bt horizon
Hue: 7.5YR or 10YR
Value: 4 to 7 dry, 4 to 6 moist
Chroma: 4 to 6 dry, 4 to 8 moist
Texture of the fine-earth fraction: Sandy loam, loam, or clay loam
Content of clay: 15 to 30 percent
Rock fragments: 15 to 55 percent gravel

C horizon (where present)
Hue: 2.5Y, 7.5YR, or 10YR
Value: 4 to 7 dry, 4 to 6 moist
Chroma: 5 or 6 dry, 4 to 8 moist
Texture of the fine-earth fraction: Loamy sand
Content of clay: 5 to 8 percent
Rock fragments: 60 to 75 percent gravel

Devilscreek Series

Setting

Landscape position: Mountain slopes near drainage headwaters
Parent material: Colluvium derived from schist
Slope: 30 to 75 percent
Elevation: 45 to 2,480 feet (15 to 757 meters)
Depth class: Very deep
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate

Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 300 days
Taxonomic classification: Fine-loamy, mixed, semiactive, isomesic Oxyaquic Dystrudepts

Modal Pedon

Devilscreek gravelly loam, in an area of Devilscreek-Panthercreek-Coppercreek complex, 30 to 50 percent slopes, on a north-facing uniform slope of 48 percent, under redwood, hemlock, tanoak, dogwood, Pacific rhododendron, salal, swordfern, deer fern, and fivefinger fern, at an elevation of 499 feet (152 meters); in Redwood National Park, Humboldt County, California; USGS Rodger's Peak quadrangle; UTM zone 10, 414152mE, 4560206mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed redwood twigs, leaves, and bark, tanoak leaves, and fern fronds; clear smooth boundary.
A—1 to 6 inches (3 to 15 centimeters); light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/6) dry; weak medium granular and subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common fine irregular and many very fine and fine tubular pores; 33 percent gravel; strongly acid (pH 5.4); gradual wavy boundary.
BA—6 to 14 inches (15 to 35 centimeters); yellowish brown (10YR 5/8) clay loam, light yellowish brown (10YR 6/4) dry; moderate coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine tubular pores; 6 percent gravel; strongly acid (pH 5.4); gradual wavy boundary.
Bw1—14 to 21 inches (35 to 54 centimeters); strong brown (7.5YR 5/6) clay loam, brownish yellow (10YR 6/6) dry; moderate coarse and very coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine, fine, and medium tubular pores; 6 percent gravel; strongly acid (pH 5.5); gradual wavy boundary.
Bw2—21 to 30 inches (54 to 75 centimeters); yellowish brown (10YR 5/8) cobbly clay loam, yellowish brown (10YR 5/6) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine, fine, medium, and coarse roots; few very fine and fine tubular pores; 12 percent gravel and 10 percent cobbles; strongly acid (pH 5.2); gradual smooth boundary.
Cg1—30 to 37 inches (75 to 95 centimeters); gray (2.5Y 5/1) very gravelly silt loam, light gray (2.5Y 7/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine and fine tubular pores; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation, yellowish brown (10YR 5/8) moist; 40 percent gravel and 10 percent cobbles; strongly acid (pH 5.2); clear wavy boundary.
Cg2—37 to 67 inches (95 to 171 centimeters); variegated olive (5Y 5/3) and gray (5Y 6/1) very gravelly silt loam, light gray (5Y 7/1) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine, fine, medium, and coarse roots; few very fine tubular pores; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation, strong brown (7.5YR 5/8) moist; 38 percent gravel and 10 percent cobbles; strongly acid (pH 5.1).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 25 to 35 percent clay, 3 to 25 percent gravel, and 0 to 15 percent cobbles
Water table: At a depth of 24 to 40 inches (60 to 100 centimeters)
Reaction: Moderately acid or strongly acid

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR
Value: 4 to 7 dry, 3 to 6 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam
Content of clay: 25 to 27 percent
Rock fragments: 15 to 35 percent gravel and 0 to 5 percent cobbles

Bw horizon
Hue: 7.5YR or 10YR
Value: 5 to 8 dry, 4 to 6 moist
Chroma: 4 to 6 dry, 4 to 8 moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 27 to 35 percent
Rock fragments: 3 to 25 percent gravel and 0 to 15 percent cobbles

C or Cg horizon
Hue: 2.5Y, 5Y, or neutral
Value: 4 to 8 dry, 4 to 6 moist
Chroma: Neutral to 3 dry or moist
Texture of the fine-earth fraction: Loam or silt loam
Content of clay: 10 to 25 percent
Rock fragments: 35 to 50 percent gravel and 0 to 10 cobbles
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR or 10YR
Value—5 or 6 moist
Chroma—6 to 8 moist

Dolason Series

Setting

Landscape position: Mountain slopes and ridges
Parent material: Colluvium and residuum derived from siltstone and sandstone (fig. 18)
Slope: 9 to 50 percent
Elevation: 500 to 3,385 feet (153 to 1,032 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 85 to 100 inches (2,160 to 2,550 millimeters)
Mean annual temperature: 50 to 59 degree F (10 to 15 degrees C)
Frost-free season: 200 to 280 days
Taxonomic classification: Fine-loamy, mixed, superactive, mesic Humic Dystroxerepts

Figure 18.—A profile of a Dolason soil. These soils are in prairies of the Bald Hills area. The thick, dark surface layer is the dominant feature of soils that form under grasses and forbs.

Modal Pedon

Dolason loam, in an area of Dolason-Countshill-Airstrip complex, 9 to 30 percent slopes, on a southwest-facing slope of 15 percent, under western brackenfern and

velvetgrass, at an elevation of 3,000 feet (915 meters); on Trail Ridge, Humboldt County, California; USGS Hupa Mountain quadrangle; UTM zone 10, 428525mE, 4551310mN, NAD83.

A1—0 to 6 inches (0 to 16 centimeters); dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak medium granular and weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; common very fine and fine irregular and tubular pores; 5 percent gravel; strongly acid (pH 5.2); gradual wavy boundary.

A2—6 to 17 inches (16 to 44 centimeters); dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; soft, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine and fine tubular pores; 5 percent gravel; strongly acid (pH 5.4); gradual wavy boundary.

A3—17 to 27 inches (44 to 68 centimeters); grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; 8 percent gravel; strongly acid (pH 5.2); gradual wavy boundary.

A4—27 to 35 inches (68 to 89 centimeters); dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine and fine tubular pores; 10 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

Bw1—35 to 51 inches (89 to 130 centimeters); yellow (2.5Y 7/6) gravelly loam, yellowish brown (10YR 5/6) moist; moderate medium subangular structure; slightly hard, friable, slightly sticky and moderately plastic; few very fine and fine roots; few very fine, fine, and medium tubular pores; 30 percent gravel and 1 percent cobbles; strongly acid (pH 5.2); gradual wavy boundary.

Bw2—51 to 59 inches (130 to 150 centimeters); yellow (2.5Y 7/6) gravelly loam, yellowish brown (10YR 5/6) moist; weak medium and coarse subangular structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine tubular pores; 30 percent gravel; strongly acid (pH 5.4); gradual wavy boundary.

BC—59 to 65 inches (150 to 165 centimeters); pale yellow (2.5Y 7/4) gravelly loam, olive brown (2.5Y 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine interstitial pores; 15 percent gravel; strongly acid (pH 5.4); gradual wavy boundary.

C—65 to 77 inches (165 to 195 centimeters); pale yellow (2.5Y 7/4) very gravelly sandy loam, yellowish brown (10YR 5/6) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine interstitial pores; 35 percent gravel; strongly acid (pH 5.4).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 20 to 25 percent clay, 5 to 35 percent gravel, and 0 to 10 percent cobbles

Water table: None noted

Reaction: Strongly acid or very strongly acid

Surface fragments: 0 to 12 percent gravel and 0 to 3 percent cobbles

A horizon

Hue: 10YR or 2.5Y

Value: 4 or 5 dry, 2 or 3 moist

Chroma: 1 to 3 dry or moist

Texture of the fine-earth fraction: Loam

Content of clay: 15 to 27 percent
Rock fragments: 3 to 23 percent gravel and 0 to 10 percent cobbles
Reaction: Strongly acid or very strongly acid

Bw horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 5 or 6 moist
Chroma: 3 to 6 dry, 4 to 6 moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 20 to 32 percent
Rock fragments: 3 to 50 percent gravel and 0 to 10 percent cobbles
Pararock fragments: 0 to 50 percent paragravel
Reaction: Strongly acid or very strongly acid

C horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 3 to 6 dry, 4 to 6 moist
Texture of the fine-earth fraction: Sandy loam, loam, or clay loam
Content of clay: 20 to 30 percent
Rock fragments: 35 to 50 percent gravel and 0 to 10 percent cobbles
Reaction: Strongly acid or very strongly acid

The Dolason soils in map unit 481 are taxadjuncts to the series. These soils have an isomesic soil temperature regime and a udic soil moisture regime. Also, in some pedons they have an Oi horizon. These differences, however, do not affect use and management.

Doolyville Series

Setting

Landscape position: Lower mountain slopes or near earthflows
Parent material: Colluvium derived from mudstone and sandstone
Slope: 30 to 50 percent
Elevation: 170 to 2,950 feet (53 to 900 meters)
Depth class: Very deep
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Low
Slowest permeability: Very slow
Mean annual precipitation: 70 to 85 inches (1,780 to 2,160 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 240 to 270 days
Taxonomic classification: Fine-loamy, mixed, superactive, mesic Aquultic Haploxeralfs

Modal Pedon

Doolyville silt loam, in an area of Doolyville-Pasturerock complex, 30 to 50 percent slopes, on a uniform, west-facing slope of 31 percent, under Oregon white oak, poison oak, annual grasses, and perennial grasses, at an elevation of 820 feet (250 meters); in Redwood National Park, Humboldt County, California; USGS Panther Creek quadrangle; UTM zone 10, 422345mE, 4553592mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed oak leaves, grass litter, and moss.
A—1 to 6 inches (3 to 15 centimeters); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and

common fine roots; common very fine and few fine tubular pores; strongly acid (pH 5.5); 6 percent gravel; gradual wavy boundary.

ABt—6 to 11 inches (15 to 28 centimeters); dark brown (10YR 3/3) silty clay loam, grayish brown (2.5Y 5/2) dry; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium roots; common very fine and fine tubular pores; few faint clay films on faces of peds; strongly acid (pH 5.5); 5 percent gravel; gradual wavy boundary.

Bt—11 to 15 inches (28 to 37 centimeters); olive brown (2.5Y 4/3) silty clay loam, light brownish gray (2.5Y 6/2) dry; moderate medium and coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine and fine tubular pores; common faint clay films on faces of peds and in pores; strongly acid (pH 5.5); 5 percent gravel; gradual wavy boundary.

Btg—15 to 18 inches (37 to 46 centimeters); dark gray (5Y 4/1) gravelly silty clay loam, gray (5Y 6/1) dry; weak coarse subangular blocky structure; hard, firm, moderately sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and few fine tubular pores; common distinct clay films on faces of peds and in pores; common medium distinct light yellowish brown (2.5Y 6/4) masses of iron accumulation, light olive brown (2.5Y 5/4) moist; strongly acid (pH 5.5); 25 percent gravel; clear wavy boundary.

Cg1—18 to 22 inches (46 to 55 centimeters); dark gray (5Y 4/1) gravelly silty clay loam, gray (5Y 5/1) dry; massive; very hard, firm, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine tubular pores; common medium faint light brownish gray (2.5Y 6/2) iron depletions, dark grayish brown (2.5Y 4/2) moist; moderately acid (pH 6.0); 31 percent gravel; clear wavy boundary.

Cg2—22 to 31 inches (55 to 79 centimeters); dark gray (N 4/0) gravelly silty clay loam, gray (N 5/0) dry; massive; very hard, firm, slightly sticky and slightly plastic; few very fine and fine roots; few very fine tubular pores; neutral (pH 7.0); 24 percent gravel; gradual wavy boundary.

Cg3—31 to 61 inches (79 to 154 centimeters); dark gray (5Y 4/1) very gravelly loam, gray (N 5/0) dry; massive; hard, firm, slightly sticky and slightly plastic; few very fine and fine roots; few very fine tubular pores; moderately alkaline (pH 8.0); slightly effervescent; 50 percent gravel.

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 27 to 35 percent clay, 10 to 35 percent gravel, and 0 to 15 percent cobbles

Water table: At a depth of 12 to 20 inches (30 to 50 centimeters)

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Neutral to moderately acid

A horizon

Hue: 10YR or 2.5Y

Value: 4 or 5 dry, 2 to 4 moist

Chroma: 1 to 3 dry or moist

Texture of the fine-earth fraction: Silt loam or loam

Content of clay: 20 to 26 percent
Rock fragments: 0 to 13 percent gravel
Reaction: Moderately acid or strongly acid

Bt horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 4 or 5 moist
Chroma: 2 to 4 dry, 2 or 3 moist
Texture of the fine-earth fraction: Silty clay loam
Content of clay: 30 to 35 percent
Rock fragments: 5 to 35 percent gravel and 0 to 15 percent cobbles
Reaction: Moderately acid or strongly acid

Btg horizon
Hue: 10YR, 2.5Y, or 5YR
Value: 4 to 6 dry, 3 to 5 moist
Chroma: 1 or 2 dry or moist
Texture of the fine-earth fraction: Silty clay loam
Content of clay: 27 to 35 percent
Rock fragments: 15 to 30 percent gravel and 0 to 5 percent cobbles
Reaction: Moderately acid to moderately alkaline
Redoximorphic features:
- *Type*—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
- *Quantity*—common or many
- *Hue*—7.5YR, 10YR, or 2.5Y
- *Value*—5 or 6 dry, 4 or 5 moist
- *Chroma*—4 to 6 dry, 4 to 8 moist

Cg horizon
Hue: 10YR, 2.5Y, 5Y, or neutral
Value: 5 or 6 dry, 3 to 5 moist
Chroma: Neutral to 2 dry or moist
Texture of the fine-earth fraction: Loam or silty clay loam
Content of clay: 24 to 40 percent
Rock fragments: 15 to 50 percent gravel and 0 to 10 percent cobbles
Reaction: Moderately acid to moderately alkaline
Redoximorphic features:
- *Type*—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
- *Quantity*—common or many
- *Hue*—7.5YR, 10YR, or 2.5Y
- *Value*—5 or 6 dry, 4 or 5 moist
- *Chroma*—2 to 6 dry, 2 to 8 moist

Elkcamp Series

Setting

Landscape position: Irregular mountain slopes
Parent material: Colluvium and residuum derived from siltstone, sandstone, and mudstone
Slope: 15 to 50 percent
Elevation: 610 to 3,230 feet (187 to 985 meters)
Depth class: Very deep
Drainage class: Well drained

Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 200 to 250 days
Taxonomic classification: Fine-loamy, mixed, superactive, mesic Ultic Palexeralfs

Modal Pedon

Elkcamp loam, in an area of Elkcamp-Dolason-Airstrip complex, 15 to 50 percent slopes, on a convex, southwest-facing slope of 30 percent, under blue wildrye, soft brome, tall oatgrass, and bristly dogstail grass, at an elevation of 2,350 feet (716 meters); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 421239mE, 4560474mN, NAD83.

A—0 to 8 inches (0 to 20 centimeters); grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate very fine and fine granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine and fine irregular and few fine and medium tubular pores; 14 percent gravel; very strongly acid (pH 5.0); gradual smooth boundary.

ABt—8 to 21 inches (20 to 54 centimeters); grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate very fine and fine granular; slightly hard, firm, slightly sticky and slightly plastic; common very fine roots; common very fine and fine irregular and few fine and medium tubular pores; 15 percent gravel; few faint clay films in pores; strongly acid (pH 5.2); gradual wavy boundary.

Bt1—21 to 37 inches (54 to 95 centimeters); light gray (10YR 7/2) gravelly clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; slightly hard and hard, firm, moderately sticky and moderately plastic; common very fine roots; few very fine irregular and fine and medium tubular pores; many distinct clay films on faces of peds and in pores; 16 percent gravel; strongly acid (pH 5.3); gradual wavy boundary.

Bt2—37 to 49 inches (95 to 125 centimeters); light gray (10YR 7/1) gravelly clay loam, light olive brown (2.5Y 5/4) moist; moderate medium subangular blocky structure; slightly hard and hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine irregular and tubular and medium tubular pores; common faint and few distinct clay films on faces of peds and many distinct clay films in pores; 25 percent gravel; strongly acid (pH 5.3); gradual wavy boundary.

Bt3—49 to 65 inches (125 to 166 centimeters); light gray (10YR 7/1) very gravelly clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine interstitial and tubular pores; common faint and few distinct clay films on faces of peds and many distinct clay films in pores; many medium distinct yellow (10YR 7/8) masses of iron accumulation, yellowish brown (10YR 5/6) moist, and few fine prominent reddish yellow (7.5YR 6/8) masses of iron accumulation, yellowish brown (10YR 5/8) moist; 39 percent gravel; manganese coatings on gravel surfaces; strongly acid (pH 5.4).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 23 to 35 percent clay, 10 to 25 percent gravel, and 0 to 10 percent cobbles
Water table: At a depth of 40 to 60 inches (100 to 152 centimeters)
Reaction: Moderately acid to very strongly acid
Surface fragments: 0 to 15 percent gravel

A horizon
Hue: 10YR or 2.5Y
Value: 4 or 5 dry, 2 or 3 moist
Chroma: 1 to 3 dry, 1 or 2 moist
Texture of the fine-earth fraction: Loam
Content of clay: 20 to 26 percent
Rock fragments: 0 to 15 percent gravel

Bt horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 1 to 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Clay loam or silty clay loam
Content of clay: 27 to 35 percent
Rock fragments: 15 to 50 percent gravel and 0 to 10 percent cobbles
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—5YR, 7.5YR, 10YR, or 2.5Y
Value—5 to 7 dry or moist
Chroma—6 to 8 dry, 4 to 8 moist

Cg horizon (where present)
Hue: 2.5Y or 5Y
Value: 5 to 8 dry, 4 to 6 moist
Chroma: 1 to 4 dry, neutral to 4 moist
Texture of the fine-earth fraction: Clay loam or silty clay
Rock fragments: 10 to 40 percent gravel
Content of clay: 35 to 45 percent
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—5YR, 7.5YR, or 10YR
Value—5 to 7 dry or moist
Chroma—6 to 8 dry or moist

Espa Series

Setting

Landscape position: Uplifted, dissected marine terrace remants
Parent material: Colluvium and residuum from weakly consolidated beach and dune deposits
Slope: 2 to 9 percent
Elevation: 160 to 740 feet (49 to 227 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 280 to 325 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Typic Haplohumults

Modal Pedon

Espa loam, in an area of Espa, 2 to 9 percent slopes, on a slightly convex, northeast-facing slope of 9 percent, under redwood, Sitka spruce, red alder, cascara, Douglas-fir, western thimbleberry, salmonberry, salal, and swordfern, at an elevation of 580 feet (176 meters); in Redwood National Park, Humboldt County, California; USGS Orick quadrangle; UTM zone 10, 411041mE, 4575503mN, NAD83.

Oi—0 to 3 inches (0 to 7 centimeters); fresh and slightly decomposed conifer needles, alder leaves, alder twigs, mosses, and fungus; clear smooth boundary.

A—3 to 8 inches (7 to 20 centimeters); very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular and interstitial pores; moderately acid (pH 6.0); clear wavy boundary.

ABt—8 to 16 inches (20 to 41 centimeters); very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium and coarse tubular pores; few faint clay films on surfaces along root channels and on faces of peds; moderately acid (pH 6.0); clear smooth boundary.

Bt1—16 to 25 inches (41 to 63 centimeters); light yellowish brown (10YR 6/4) loam, brownish yellow (10YR 6/6) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular pores; common distinct clay films on surfaces along root channels and common distinct clay films on faces of peds; strongly acid (pH 5.2); clear wavy boundary.

Bt2—25 to 35 inches (63 to 89 centimeters); strong brown (7.5YR 5/8) loam, reddish yellow (7.5YR 6/8) dry; moderate medium subangular blocky structure; moderately hard, firm, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular and interstitial pores; common distinct clay films on surfaces along root channels, few distinct clay films on faces of peds, and few distinct clay films between sand grains; very strongly acid (pH 5.0); clear wavy boundary.

Bt3—35 to 47 inches (89 to 120 centimeters); strong brown (7.5YR 5/8) loam, brownish yellow (10YR 6/8) dry; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few coarse and very coarse roots; common very fine and fine tubular and interstitial pores; common distinct clay films on surfaces along root channels, many distinct clay films between sand grains, and few faint clay films on faces of peds; very strongly acid (pH 5.0); clear smooth boundary.

BCt—47 to 61 inches (120 to 156 centimeters); strong brown (7.5YR 5/8) sandy loam, reddish yellow (7.5YR 6/8) dry; weak coarse and very coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine, medium, and coarse roots; common very fine and fine interstitial and few very fine and fine tubular pores; common distinct clay films lining surfaces along root channels and common clay films between sand grains; very strongly acid (pH 5.0); clear wavy boundary.

C—61 to 79 inches (156 to 200 centimeters); yellowish brown (10YR 5/8) sandy loam, brownish yellow (10YR 6/8) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine, coarse, and very coarse roots; common very fine and fine interstitial and few very fine tubular pores; very strongly acid (pH 5.0).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay
Water table: None noted
Reaction: Moderately acid to very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 3 to 5 dry, 2 or 3 moist
Chroma: 2 or 3 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 18 to 25 percent

Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 4 to 7 dry, 3 to 6 moist
Chroma: 4 to 8 dry or moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 18 to 35 percent

C horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 2 to 8 dry or moist
Texture of the fine-earth fraction: Sandy loam or fine sandy loam
Content of clay: 5 to 18 percent

Ferndale Series

Setting

Landscape position: High flood-plain steps
Parent material: Alluvium derived from mixed sources
Slope: 0 to 5 percent
Elevation: 5 to 160 feet (3 to 50 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Flooding: Rare
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Fine-silty, mixed, superactive, nonacid, mesic Typic Udifluvents

Modal Pedon

Ferndale silt loam, in an area of Ferndale, 0 to 2 percent slopes, on a slope of 1 percent, under pasture grasses, buttercup, and clover, at an elevation of 33 feet (10

meters); Humboldt County, California; USGS Fortuna quadrangle; UTM zone 10, 397578mE, 4493778mN, NAD83.

Ap—0 to 11 inches (0 to 28 centimeters); very dark grayish brown (2.5Y 3/2) silt loam, light brownish gray (2.5Y 6/2) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to medium roots; many very fine and fine tubular pores; few fine distinct dark yellowish brown (10YR 4/6) iron-manganese masses; slightly acid (pH 6.5); gradual wavy boundary.

C1—11 to 16 inches (28 to 41 centimeters); dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (2.5Y 6/2) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine tubular pores; neutral (pH 7.0); gradual wavy boundary.

C2—16 to 21 inches (41 to 53 centimeters); dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; neutral (pH 7.0); gradual wavy boundary.

C3—21 to 50 inches (53 to 127 centimeters); dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; neutral (pH 7.0); clear wavy boundary.

C4—50 to 60 inches (127 to 152 centimeters); dark grayish brown (2.5Y 4/2) fine sandy loam, light brownish gray (2.5Y 6/2) dry; massive; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; common very fine tubular pores; slightly alkaline (pH 7.5).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 18 to 30 percent clay
Water table: None noted within a depth of 40 inches (102 centimeters)
Reaction: Slightly acid to slightly alkaline

A or Ap horizon
Hue: 10YR or 2.5Y
Value: 6 dry, 2 to 4 moist
Chroma: 1 to 3 dry, 1 or 2 moist
Texture of the fine-earth fraction: Silt loam
Content of clay: 18 to 27 percent
Redoximorphic features:
- *Type*—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
- *Quantity*—few or common
- *Hue*—10YR or 2.5Y
- *Value*—5 to 7 dry, 3 or 4 moist
- *Chroma*—4 to 6 moist

Upper part of the C horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 or 4 moist
Chroma: 1 to 3 dry, 1 or 2 moist
Texture of the fine-earth fraction: Silt loam or silty clay loam
Content of clay: 18 to 30 percent

Lower part of the C horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 or 4 moist

Chroma: 1 to 3 dry, 1 or 2 moist
Texture of the fine-earth fraction: Silt loam, silty clay loam, or fine sandy loam
Content of clay: 10 to 30 percent
Redoximorphic features (where present):
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—few or common
Hue—10YR or 2.5Y
Value—4 or 5 dry or moist
Chroma—4 to 6 dry or moist

The Ferndale soils in map units 173 and 222 are taxadjuncts to the series. These soils are moderately well drained. This difference, however, does not affect use and management.

Flintrock Series

Setting

Landscape position: Unstable lower hillslopes
Parent material: Debris-flow colluvium derived from sandstone and mudstone (fig. 19)
Slope: 15 to 75 percent
Elevation: 0 to 695 feet (0 to 213 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderate
Slowest permeability: Slow
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 300 to 365 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, isomesic Typic Hapludolls

Modal Pedon

Flintrock very gravelly clay loam, in an area of Flintrock-Highprairie complex, 15 to 75 percent slopes, on a linear, west-facing slope of 65 percent, under prostrate Sitka spruce, cowparsnip, brackenfern, wild cucumber, fireweed, foxglove, and ripgut brome, at an elevation of 120 feet (37 meters); in Redwood National Park, Del Norte County, California; USGS Requa quadrangle; UTM zone 10, 409841mE, 4596236mN, NAD83.

A—0 to 10 inches (0 to 25 centimeters); very dark grayish brown (10YR 3/2) very gravelly clay loam, brown (10YR 4/3) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine tubular and common very fine, fine, and medium irregular tubular pores; 35 percent gravel; slightly acid (pH 6.2); clear wavy boundary.
Bw1—10 to 18 inches (25 to 47 centimeters); very dark grayish brown (2.5Y 3/2) very gravelly clay loam, light olive brown (2.5Y 5/3) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; common very fine and fine tubular and common very fine, fine, and medium irregular pores; 55 percent gravel, 2 percent cobbles, and 10 percent stones; slightly acid (pH 6.2); clear wavy boundary.
Bw2—18 to 31 inches (47 to 78 centimeters); dark olive gray (5Y 3/2) extremely

Figure 19.—A profile of a Flintrock soil. These soils are in coastal prairies and scrub communities on hillslopes adjacent to the ocean. These soils form in stabilized debris slides under grasses and forbs. Depth is marked in centimeters.

gravelly clay loam, olive gray (5Y 5/2) dry; weak fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine, fine, medium, coarse, and very coarse roots; common very fine and fine tubular and common very fine, fine, and medium irregular pores; 60 percent gravel and 1 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.

BC—31 to 38 inches (78 to 97 centimeters); very dark gray (5Y 3/1) very gravelly clay loam, gray (5Y 5/1) dry; weak medium subangular structure; moderately hard, firm, moderately sticky and moderately plastic; very few very fine, moderately few fine, and common very coarse roots; common very fine and fine tubular and very fine and fine irregular pores; 55 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

C1—38 to 46 inches (97 to 118 centimeters); very dark gray (5Y 3/1) extremely gravelly clay loam, dark gray (5Y 5/1) dry; massive; moderately hard, firm, moderately sticky and moderately plastic; very few very fine and common very coarse roots; common very fine and fine irregular pores; 65 percent gravel; slightly acid (pH 6.5); clear wavy boundary.

C2—46 to 63 inches (118 to 160 centimeters); black (5Y 2.5/1) extremely gravelly clay loam, dark gray (5Y 4/1) dry; massive; moderately hard, firm, moderately sticky and moderately plastic; very few very fine roots; common very fine and fine irregular pores; 70 percent gravel and 2 percent cobbles; slightly acid (pH 6.5).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay, 35 to 60 percent gravel, 0 to 10 percent cobbles, and 0 to 10 percent stones
Water table: None noted
Reaction: Moderately acid or slightly acid
Surface fragments: 0 to 30 percent gravel and 0 to 10 percent cobbles

A horizon
Hue: 10YR, 2.5Y, or 5Y
Value: 3 to 5 dry, 2.5 or 3 moist
Chroma: 1 to 3 dry or moist
Texture of the fine-earth fraction: Clay loam
Content of clay: 27 to 32 percent
Rock fragments: 35 to 50 percent gravel and 0 to 7 percent cobbles

Bw horizon
Hue: 10YR, 2.5Y, 5Y, or neutral
Value: 4 to 6 dry, 3 to 6 moist
Chroma: Neutral to 3 dry, neutral to 2 moist
Texture of the fine-earth fraction: Clay loam
Content of clay: 27 to 35 percent
Rock fragments: 35 to 60 percent gravel, 0 to 10 percent cobbles, and 0 to 10 percent stones

C horizon
Hue: 5Y or neutral
Value: 4 to 6 dry, 2.5 to 4 moist
Chroma: Neutral or 1 dry or moist
Texture of the fine-earth fraction: Clay loam
Content of clay: 27 to 40 percent
Rock fragments: 20 to 70 percent gravel and 0 to 50 percent cobbles

Fluvents

Setting

Landscape position: Terraces and flood plains
Parent material: Overbank alluvium derived from mixed sources
Slope: 2 to 5 percent
Elevation: 0 to 570 feet (0 to 175 meters)
Depth class: Very deep
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately rapid
Flooding: Frequent
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 300 to 330 days
Taxonomic classification: Fluvents

Modal Pedon

Fluvents, in an area of Fluvents, 2 to 5 percent slopes, on a level, gently undulating surface, under perennial grasses and forbs with scattered willows, coyotebrush, and red alder, at an elevation of 29 feet (9 meters); in Redwood National Park, Humboldt County, California; USGS Orick quadrangle; UTM zone 10, 413179mE, 4572408mN, NAD83.

A—0 to 2 inches (0 to 5 centimeters); gray (10YR 5/1) fine sandy loam, very dark gray (10YR 3/1) moist; gradual smooth boundary.
C1—2 to 9 inches (5 to 24 centimeters); gray (10YR 5/1) loam, very dark gray (10YR 3/1) moist; gradual smooth boundary.
2C2—9 to 37 inches (24 to 94 centimeters); gray (N 5/0) loamy sand, very dark gray (N 3/0) moist; gradual smooth boundary.
2C3—37 to 40 inches (94 to 102 centimeters); gray (N 5/0) very gravelly loamy coarse sand, very dark gray (N 3/0) moist; 40 percent gravel; gradual smooth boundary.
3C4—40 to 60 inches (102 to 152 centimeters); rounded pebbles and cobbles with coarse sand in interstices; impenetrable by a soil auger.

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 0 to 5 percent clay, 0 to 55 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones
Water table: At a depth of 0 to 10 centimeters (0 to 4 inches) November through April
Reaction: Moderately acid or slightly acid
Surface fragments: 0 to 10 percent gravel

A horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 1 or 2 dry or moist
Texture of the fine-earth fraction: Fine sandy loam
Content of clay: 0 to 15 percent
Rock fragments: 0 to 5 percent gravel

C horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 1 or 2 dry or moist

Texture of the fine-earth fraction: Fine sandy loam, very fine sandy loam, or loam
Content of clay: 0 to 15 percent
Rock fragments: 0 to 5 percent gravel

2C horizon
Hue: 10YR, 2.5Y, or neutral
Value: 5 or 6 dry, 3 or 4 moist
Chroma: Neutral or 1 dry, neutral or 1 moist
Texture of the fine-earth fraction: Loamy coarse sand, coarse sand, sand, or loamy sand
Content of clay: 0 to 5 percent
Rock fragments: 0 to 55 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones

3C horizon (where present)
Texture of the fine-earth fraction: Rounded river pebbles and cobbles packed with coarse loamy sand to a depth of many meters

Footstep Series

Setting

Landscape position: Narrow ridges and convex to uniform upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 5 to 75 percent
Elevation: 15 to 1,695 feet (5 to 518 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 250 to 300 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, isomesic Typic Haplohumults

Modal Pedon

Footstep gravelly loam, in an area of Sisterrrocks-Ladybird-Footstep complex, 50 to 75 percent slopes, on a convex, northwest-facing slope of 55 percent, under redwood, Douglas-fir, tanoak, California huckleberry, salal, and swordfern, at an elevation of 640 feet (195 meters); in Del Norte Redwoods State Park, Del Norte County, California; USGS Sister Rocks quadrangle; UTM zone 10, 405516mE, 4616844mN, NAD83.

A1—0 to 3 inches (0 to 7 centimeters); black (10YR 2/1) gravelly loam, dark grayish brown (10YR 4/2) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine and fine interstitial and tubular pores; 25 percent gravel; very strongly acid (pH 5.0); clear smooth boundary.
A2—3 to 7 inches (7 to 18 centimeters); very dark brown (10YR 2/2) gravelly loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine and fine interstitial and tubular pores; 30 percent gravel; very strongly acid (pH 4.9); clear smooth boundary.
Bt1—7 to 14 inches (18 to 35 centimeters); very dark grayish brown (10YR 3/2) very

gravelly loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; many fine and medium tubular and common very fine and fine interstitial pores; 40 percent gravel and 5 percent cobbles; very strongly acid (pH 4.7); clear wavy boundary.

Bt2—14 to 28 inches (35 to 70 centimeters); dark yellowish brown (10YR 4/4) extremely gravelly clay loam, light yellowish brown (10YR 6/4) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; few distinct clay films on rock fragments; common very fine and fine roots; many fine and medium tubular and common very fine and fine interstitial pores; 55 percent gravel and 10 percent cobbles; very strongly acid (pH 4.7); abrupt wavy boundary.

R—28 to 79 inches (70 to 200 centimeters); fractured hard sandstone, lithic material with cracks greater than 10 centimeters apart; approximately 1 percent soil material in fractures and pockets.

Range in Characteristics

Depth to hard bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 26 to 35 percent clay, 35 to 65 percent gravel, and 0 to 15 percent cobbles
Water table: None noted
Reaction: Strongly acid or very strongly acid
Surface fragments: 0 to 25 percent gravel and 0 to 5 percent cobbles

Oi horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR
Value: 4 or 5 dry, 2 or 3 moist
Chroma: 2 to 4 dry, 1 to 3 moist
Texture of the fine-earth fraction: Loam
Content of clay: 18 to 27 percent
Rock fragments: 15 to 30 percent gravel and 0 to 5 percent cobbles

Bt horizon
Hue: 10YR
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 3 or 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 23 to 35 percent
Rock fragments: 35 to 65 percent gravel and 0 to 15 percent cobbles

C horizon (where present)
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 3 to 6 dry, 2 to 6 moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 23 to 35 percent
Rock fragments: 35 to 85 percent gravel and 0 to 35 percent cobbles

Fortyfour Series

Setting

Landscape position: Spur ridges and convex upper mountain slopes
Parent material: Colluvium and residuum derived from schist
Slope: 30 to 50 percent
Elevation: 295 to 2,555 feet (90 to 780 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 280 days
Taxonomic classification: Fine, parasesquic, isomesic Typic Hapludults

Modal Pedon

Fortyfour silty clay loam, in an area of Trailhead-Fortyfour complex, 30 to 50 percent slopes, on a convex, southeast-facing slope of 30 percent, under Douglas-fir, hemlock, redwood, tanoak, red alder, Pacific rhododendron, California huckleberry, and salal, at an elevation of 1,230 feet (375 meters); in Redwood National Park, Humboldt County, California; USGS Rodger's Peak quadrangle; UTM zone 10, 412313mE, 4565346mN, NAD83.

Oi—0 to 1 inch (0 to 1 centimeter); slightly decomposed Douglas-fir needles and twigs.
A—1 to 12 inches (1 to 31 centimeters); yellowish red (5YR 4/6) silty clay loam, strong brown (7.5YR 5/6) dry; moderate medium subangular blocky structure parting to moderate fine subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine and fine irregular and common fine and medium tubular pores; 13 percent gravel; very strongly acid (pH 5.0); gradual wavy boundary.
BAt—12 to 18 inches (31 to 46 centimeters); yellowish red (5YR 4/6) silty clay, yellowish red (5YR 5/8) dry; moderate coarse subangular blocky structure parting to moderate medium subangular blocky; hard, friable, slightly sticky and slightly plastic; common fine and medium and few coarse roots; few very fine and fine irregular and common fine and medium tubular pores; 14 percent gravel; very strongly acid (pH 5.0); gradual wavy boundary.
Bt1—18 to 30 inches (46 to 77 centimeters); yellowish red (5YR 4/6) gravelly clay, yellowish red (5YR 5/8) dry; moderate coarse subangular blocky structure; hard, firm, moderately sticky and slightly plastic; common fine and medium and few coarse roots; common fine, medium, and coarse tubular pores; common distinct clay films on faces of peds, red (2.5YR 4/6) moist; 20 percent gravel; strongly acid (pH 5.2); gradual wavy boundary.
Bt2—30 to 39 inches (77 to 99 centimeters); yellowish red (5YR 5/8) clay, variegated reddish yellow (5YR 6/6) and yellow (10YR 7/8) dry; moderate medium subangular blocky structure parting to moderate fine subangular blocky; hard, firm, moderately sticky and slightly plastic; few fine, medium, and coarse roots; few fine, medium, and coarse tubular pores; few distinct clay films on faces of peds; 10 percent gravel; very strongly acid (pH 4.9); abrupt wavy boundary.
Cr—39 inches (99 centimeters); strongly reddened, fractured, weathered quartz-mica schist with a few narrow seams of red clay.

Range in Characteristics

Depth to soft bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 40 to 45 percent clay and 3 to 20 percent gravel

Water table: None noted
Reaction: Strongly acid or very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 5YR or 7.5YR
Value: 5 dry, 3 or 4 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Silty clay loam
Content of clay: 27 to 35 percent
Rock fragments: 3 to 13 percent gravel

Bt horizon
Hue: 2.5YR, 5YR, or 7.5YR
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 6 to 8 dry or moist
Texture of the fine-earth fraction: Silty clay or clay
Content of clay: 40 to 50 percent
Rock fragments: 3 to 20 percent gravel

The Fortyfour soils in map unit 563 are taxadjuncts to the series. These soils have an ustic soil moisture regime. This difference, however, does not affect use and management.

Gasquet Series

Setting

Landscape position: Mountain slopes
Parent material: Residuum and colluvium derived from serpentinized peridotite
Slope: 9 to 50 percent
Elevation: 510 to 2,515 feet (156 to 768 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low or low
Slowest permeability: Slow or very slow
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 140 to 180 days
Taxonomic classification: Fine, parasesquic, mesic Typic Haploxerults

Modal Pedon

Gasquet stony loam, in an area of Gasquet-Walnett-Jayel complex, 9 to 50 percent slopes, on a southwest-facing slope of 25 percent, under Douglas-fir, sugar pine, and shrubs, at an elevation of 560 feet (171 meters); in Six Rivers National Forest, Del Norte County, California; USGS Gasquet, California, quadrangle; NE$^1/_4$SW$^1/_4$ sec. 21, T. 17 N., R. 2 E., Humboldt Base Meridian.

Oi—0 to 1 inch (0 to 2 centimeters); fresh and decomposing leaf and needle litter; strongly acid (pH 5.3).

A—1 to 10 inches (2 to 25 centimeters); reddish yellow (5YR 6/6) stony loam, reddish brown (5YR 4/3) moist; moderate very fine granular structure; soft, friable, slightly sticky and slightly plastic; common very fine and fine, many medium, and common coarse roots; many very fine interstitial and tubular pores; 15 percent stones; moderately acid (pH 6.0); clear smooth boundary.

Bt1—10 to 22 inches (25 to 56 centimeters); red (2.5YR 4/6) stony clay loam, yellowish red (5YR 4/6) moist; weak very fine subangular blocky structure parting to strong very fine granular; slightly hard, firm, sticky and plastic; few very fine, fine, medium, and coarse roots; many very fine interstitial and tubular pores; common moderately thick clay films on peds and in pores; 15 percent stones; slightly acid (pH 6.2); gradual smooth boundary.

Bt2—22 to 43 inches (56 to 109 centimeters); dark red (2.5YR 3/6) stony clay loam, yellowish red (5YR 4/6) moist; moderate very fine subangular blocky structure parting to moderate fine granular; slightly hard, firm, slightly sticky and slightly plastic; few very fine and fine roots; many very fine interstitial and tubular pores; common moderately thick clay films on peds and in pores; 15 percent stones; slightly acid (pH 6.4); gradual smooth boundary.

Bt3—43 to 54 inches (109 to 137 centimeters); yellowish red (5YR 4/6) stony silty clay loam, reddish brown (5YR 4/4) moist; moderate very fine subangular blocky structure parting to moderate fine granular; hard, firm, sticky and plastic; few fine roots; many very fine interstitial pores; few moderately thick clay films on peds and in pores; 15 percent stones; slightly acid (pH 6.5); clear smooth boundary.

Bt4—54 to 61 inches (137 to 155 centimeters); strong brown (7.5YR 5/6) stony silty clay loam, strong brown (7.5YR 4/6) moist; weak very fine subangular blocky structure; slightly hard, firm, sticky and plastic; few medium roots; common very fine interstitial pores; few moderately thick clay films on peds and in pores; 15 percent stones; slightly acid (pH 6.4).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 35 to 45 percent clay and 10 to 35 percent rock fragments

Water table: None noted

Surface fragments: 3 to 15 percent stones

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 5YR or 7.5YR

Value: 3 to 6 dry, 3 or 4 moist

Chroma: 4 to 6 dry, 3 or 4 moist

Texture of the fine-earth fraction: Loam

Content of clay: 23 to 27 percent

Rock fragments: 0 to 20 percent cobbles and 10 to 20 percent stones

Reaction: Slightly acid or moderately acid

Bt horizon

Hue: 2.5YR, 5YR, or 7.5YR

Value: 3 to 5 dry, 4 moist

Chroma: 4 to 6 dry or moist

Texture of the fine-earth fraction: Clay loam, silty clay loam, or clay
Content of clay: 35 to 45 percent
Rock fragments: 0 to 15 percent cobbles and 5 to 15 percent stones
Reaction: Neutral to moderately acid

Goldbluffs Series

Setting

Landscape position: Narrow ridges on hillslopes
Parent material: Colluvium and residuum from weakly consolidated fluvial and beach deposits derived from mixed sources
Slope: 9 to 50 percent
Elevation: 15 to 1,010 feet (6 to 309 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 260 to 325 days
Taxonomic classification: Loamy-skeletal, isotic, isomesic Typic Dystrudepts

Modal Pedon

Goldbluffs gravelly loam, in an area of Ossagon-Goldbluffs-Squashan complex, 30 to 50 percent slopes, on a convex, southeast-facing slope of 45 percent, at an elevation of 197 feet (60 meters), under redwood, Douglas-fir, western hemlock, tanoak, California huckleberry, salmonberry, salal, swordfern, false lily of the valley, insideout flower, and Cascade barberry; in Prairie Creek Redwoods State Park, Humboldt County, California; on Miner's Ridge; 0.64 kilometers (0.25 miles) west on Miner's Ridge Trail from junction with James Irvine Trail in Prairie Creek Redwoods State Park; USGS Orick quadrangle; UTM zone 10, 414186mE, 4580155mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); very dark brown (10YR 2/2) fresh and slightly decomposed conifer needles, tanoak leaves, and twigs, brown (10YR 5/3) dry; common very fine roots; many very fine and fine interstitial pores; 2 percent well rounded pebbles and 1 percent well rounded cobbles; very strongly acid (pH 4.8); abrupt smooth boundary.

A—1 to 10 inches (3 to 25 centimeters); very dark brown (10YR 2/2) gravelly loam, brown (10YR 4/3) dry; moderate fine subangular blocky and strong medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine and fine interstitial and common very fine, fine, medium, and coarse tubular pores; 30 percent well rounded pebbles; very strongly acid (pH 4.7); abrupt smooth boundary.

Bt1—10 to 17 inches (25 to 42 centimeters); brown (7.5YR 4/4) very gravelly sandy loam, reddish yellow (7.5YR 6/6) dry; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common medium, coarse, and very coarse roots; common very fine and fine interstitial and common very fine and medium tubular pores; few distinct clay films on rock fragments; 45 percent well rounded pebbles; very strongly acid (pH 4.8); clear smooth boundary.

Bt2—17 to 23 inches (42 to 59 centimeters); strong brown (7.5YR 4/6) very gravelly sandy loam, reddish yellow (7.5YR 6/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine, medium, and coarse roots; common very fine and fine interstitial and common very fine, fine, and medium tubular pores; few distinct clay films on rock fragments;

50 percent well rounded pebbles; very strongly acid (pH 4.5); clear smooth boundary.

Bt3—23 to 37 inches (59 to 95 centimeters); strong brown (7.5YR 5/6) very gravelly sandy loam, reddish yellow (7.5YR 6/6) dry; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine, medium, coarse, and very coarse roots; common very fine and fine interstitial and tubular pores; few distinct clay films on rock fragments; 52 percent well rounded pebbles and 5 percent paragravel; extremely acid (pH 4.4); clear smooth boundary.

BC—37 to 47 inches (95 to 119 centimeters); yellowish brown (10YR 5/6) very gravelly coarse sandy loam, yellow (10YR 6/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common medium and coarse roots; common very fine interstitial and common very fine and fine tubular pores; 60 percent well rounded pebbles and 15 percent paragravel; extremely acid (pH 4.3); clear wavy boundary.

C1—47 to 56 inches (119 to 142 centimeters); yellowish brown (10YR 5/6) extremely gravelly coarse sandy loam, brownish yellow (10YR 6/6) dry; massive; moderately hard, firm, slightly sticky and nonplastic; common medium roots; common very fine interstitial and common fine tubular pores; 5 percent prominent manganese coats on rock fragments; 60 percent well rounded pebbles and 20 percent paragravel; extremely acid (pH 4.4); clear wavy boundary.

C2—56 to 69 inches (142 to 175 centimeters); yellowish brown (10YR 5/6) extremely gravelly sandy loam, brownish yellow (10YR 6/6) dry; massive; moderately hard, firm, slightly sticky and nonplastic; moderately few very fine interstitial pores; 10 percent prominent manganese coats on rock fragments; 70 percent well rounded pebbles, 20 percent paragravel, and 3 percent well rounded cobbles; extremely acid (pH 4.4).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 5 to 17 percent clay, 35 to 60 percent gravel, and 0 to 3 percent cobbles

Water table: None noted

Reaction: Moderately acid to very strongly acid

Surface fragments: 0 to 20 percent gravel and 0 to 5 percent cobbles

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 10YR

Value: 4 or 5 dry, 2 or 3 moist

Chroma: 3 dry, 2 or 3 moist

Texture of the fine-earth fraction: Loam

Content of clay: 15 to 25 percent

Rock fragments: 30 to 45 percent gravel and 0 to 3 percent cobbles

Bt horizon

Hue: 7.5YR or 10YR

Value: 5 or 6 dry, 4 or 5 moist

Chroma: 4 to 6 dry, 4 to 8 moist

Texture of the fine-earth fraction: Loamy sand, coarse sandy loam, sandy loam, or loam
Content of clay: 2 to 17 percent
Rock fragments: 35 to 60 percent gravel and 0 to 3 percent cobbles
Pararock fragments: 0 to 7 percent

C horizon
Hue: 10YR
Value: 6 or 7 dry, 4 or 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loamy sand, coarse sandy loam, or sandy loam
Content of clay: 2 to 10 percent
Rock fragments: 35 to 75 percent gravel and 3 to 7 percent cobbles
Pararock fragments: 10 to 20 percent paragravel

Highoaks Series

Setting

Landscape position: Mountain slopes
Parent material: Colluvium and residuum derived from mudstone and sandstone
Slope: 30 to 50 percent
Elevation: 110 to 3,900 feet (35 to 1,190 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 150 to 250 days
Taxonomic classification: Fine-loamy, mixed, superactive, mesic Xeric Palehumults

Modal Pedon

Highoaks gravelly loam, in an area of Highoaks-Noisy-Mudhorse complex, 9 to 50 percent slopes, on a strongly convex, west-facing slope of 50 percent, under a stand of Oregon white oak, California black oak, annual grasses, and perennial grasses, at an elevation of 3,700 feet (1,100 meters); Humboldt County, California; USGS Board Camp Mountain quadrangle; UTM zone 10, 440988mE, 4509801mN, NAD83.

Oi—0 to 1 inch (0 to 2 centimeters); very dark gray (10YR 3/1) slightly decomposed plant material consisting of needles and leaves of Oregon white oak, black (10YR 2/1) moist; about 100 percent fiber unrubbed, 80 percent rubbed; few very fine roots; many fine irregular pores; slightly acid (pH 6.4); abrupt smooth boundary.
A—1 to 9 inches (2 to 22 centimeters); very dark grayish brown (10YR 3/2) gravelly loam, black (10YR 2/1) moist; moderate fine subangular blocky structure parting to strong very fine granular; soft, very friable, nonsticky and nonplastic; many very fine to medium roots; common very fine and fine tubular pores; 30 percent gravel; slightly acid (pH 6.4); clear smooth boundary.
Bt1—9 to 20 inches (22 to 51 centimeters); yellowish brown (10YR 5/4) silty clay loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; slightly hard, friable, very sticky and very plastic; many very fine and fine and common medium roots; many very fine and common medium tubular pores; few faint clay films on all faces of peds; 10 percent gravel; very strongly acid (pH 4.8); clear smooth boundary.
Bt2—20 to 31 inches (51 to 80 centimeters); dark yellowish brown (10YR 4/4) gravelly silty clay loam, brown (10YR 4/3) moist; strong fine and medium subangular blocky

structure; slightly hard, friable, very sticky and very plastic; many very fine and fine and common medium roots; many very fine and common fine tubular pores; common distinct clay films on all faces of peds; 30 percent gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt3—31 to 42 inches (80 to 107 centimeters); light olive brown (2.5Y 5/4) gravelly silty clay, olive brown (2.5Y 4/3) moist; strong fine subangular blocky structure; slightly hard, friable, very sticky and very plastic; many fine and medium roots; many medium and coarse tubular pores; common distinct clay films on all faces of peds; 20 percent gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt4—42 to 50 inches (107 to 127 centimeters); olive brown (2.5Y 4/4) very paragravelly silty clay loam, dark olive brown (2.5Y 3/3) moist; strong fine subangular blocky structure; slightly hard, friable, very sticky and very plastic; many fine and common medium roots; many fine and medium tubular pores; common distinct clay films on all faces of peds; 50 percent paragravel; very strongly acid (pH 4.8); clear smooth boundary.

BCt—50 to 63 inches (127 to 160 centimeters); olive brown (2.5Y 4/4) extremely paragravelly silty clay loam, dark olive brown (2.5Y 3/3) moist; weak fine subangular blocky structure; slightly hard, friable, very sticky and very plastic; common fine and common medium roots; common coarse tubular pores; few faint clay films on all faces of peds; 90 percent paragravel; very strongly acid (pH 4.8).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 28 to 35 percent clay and 5 to 35 percent gravel

Water table: None noted

Surface fragments: 0 to 5 percent gravel

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 10YR or 2.5Y

Value: 3 to 5 dry, 2 to 4 moist

Chroma: 2 to 4 dry, 1 to 3 moist

Texture of the fine-earth fraction: Loam

Content of clay: 12 to 25 percent

Rock fragments: 20 to 35 percent gravel

Reaction: Neutral to very strongly acid

Upper part of the Bt horizon

Hue: 10YR or 2.5Y

Value: 3 to 5 dry or moist

Chroma: 2 to 4 dry or moist

Texture of the fine-earth fraction: Silty clay loam

Content of clay: 30 to 35 percent

Rock fragments: 0 to 35 percent gravel

Reaction: Moderately acid to very strongly acid

Lower part of the Bt horizon

Hue: 10YR or 2.5Y

Value: 3 to 5 dry or moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Silty clay loam or silty clay
Content of clay: 30 to 40 percent
Rock fragments: 5 to 55 percent gravel
Reaction: Moderately acid to very strongly acid

C horizon (where present)
Hue: 10YR or 2.5Y
Value: 3 to 5 dry or moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Sandy clay loam or sandy clay
Content of clay: 30 to 38 percent
Pararock fragments: 55 to 95 percent paragravel
Reaction: Moderately acid to very strongly acid

Highprairie Series

Setting

Landscape position: Upper hillslopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 15 to 75 percent
Elevation: 0 to 695 feet (0 to 213 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Slow
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 300 to 365 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Pachic Hapludolls

Modal Pedon

Highprairie clay loam, in an area of Flintrock-Highprairie complex, 15 to 75 percent slopes, on a linear, west-facing slope of 45 percent, under coyotebrush, brackenfern, wild cucumber, wild oats, orchardgrass, and velvetgrass, at an elevation of 560 feet (171 meters); in Redwood National Park, Del Norte County, California; USGS Requa quadrangle; UTM zone 10, 409339mE, 4600892mN, NAD83.

A1—0 to 8 inches (0 to 20 centimeters); very dark grayish brown (2.5Y 3/2) clay loam, light olive brown (2.5Y 5/3) dry; moderate fine and weak very fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; many very fine and common fine roots; many very fine tubular and common very fine and fine interstitial and tubular pores; 10 percent gravel; moderately acid (pH 5.8); clear smooth boundary.

A2—8 to 15 inches (20 to 39 centimeters); very dark grayish brown (2.5Y 3/2) clay loam, light olive brown (2.5Y 5/3) dry; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular and common very fine and fine interstitial and tubular pores; 10 percent gravel; moderately acid (pH 6.0); clear smooth boundary.

Bw1—15 to 26 inches (39 to 65 centimeters); very dark grayish brown (2.5Y 3/2) clay loam, light olive brown (2.5Y 5/3) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common

very fine and fine roots; common very fine tubular and common very fine and fine interstitial and tubular pores; 8 percent gravel; moderately acid (pH 5.6); gradual smooth boundary.

Bw2—26 to 37 inches (65 to 93 centimeters); very dark grayish brown (2.5Y 3/2) gravelly clay loam, light yellowish brown (2.5Y 6/3) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular and common very fine and fine interstitial pores; 15 percent gravel; moderately acid (pH 5.6); gradual smooth boundary.

Bw3—37 to 47 inches (93 to 120 centimeters); very dark grayish brown (2.5Y 3/2) clay loam, light brownish gray (2.5Y 6/2) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; moderately few very fine roots; common very fine and fine interstitial and tubular pores; 10 percent gravel; strongly acid (pH 5.6); clear smooth boundary.

Bw4—47 to 55 inches (120 to 140 centimeters); very dark grayish brown (2.5Y 3/2) gravelly clay loam, light brownish gray (2.5Y 6/2) dry; weak fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; moderately few very fine roots; 15 percent gravel; moderately acid (pH 5.6); clear smooth boundary.

BC—55 to 67 inches (140 to 170 centimeters); dark gray (5Y 4/1) gravelly clay loam, gray (5Y 6/1) dry; weak fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; moderately few very fine roots; 20 percent gravel; moderately acid (pH 5.6).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 27 to 35 percent clay and 0 to 35 percent rock fragments

Water table: None noted

Reaction: Moderately acid to slightly acid

A horizon

Hue: 10YR or 2.5Y

Value: 3 to 5 dry, 2 or 3 moist

Chroma: 1 to 3 dry or moist

Texture of the fine-earth fraction: Clay loam

Content of clay: 27 to 32 percent

Rock fragments: 0 to 15 percent gravel

Bw horizon

Hue: 10YR, 2.5Y, or 5Y

Value: 4 to 6 dry, 3 to 5 moist

Chroma: 2 to 4 dry, 1 to 3 moist

Texture of the fine-earth fraction: Clay loam

Content of clay: 27 to 35 percent

Rock fragments: 0 to 35 percent gravel

C horizon (where present)

Hue: 2.5Y or 5Y

Value: 4 to 6 dry, 2 to 4 moist

Chroma: 1 or 2 dry or moist

Texture of the fine-earth fraction: Clay loam

Content of clay: 27 to 40 percent

Rock fragments: 15 to 35 percent gravel

Houda Series

Setting

Landscape position: Stabilized debris slides on hillslopes
Parent material: Debris slide deposits derived from mudstone and sandstone
Slope: 30 to 75 percent
Elevation: 5 to 960 feet (2 to 294 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 70 to 80 inches (1,780 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 325 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, isomesic Oxyaquic Eutrudepts

Modal Pedon

Houda gravelly loam, in an area of Sisterrocks-Sasquatch-Houda complex, 30 to 75 percent slopes, on a linear, northwest-facing slope of 40 percent, under Sitka spruce and red alder, at an elevation of 320 feet (97 meters); in Redwood National Park, Del Norte County, California; USGS Requa quadrangle; UTM zone 10, 408425mE, 4603157mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); fresh and decomposing conifer needles and twigs; 2 percent gravel; common very fine and fine roots; very strongly acid (pH 5.0); abrupt smooth boundary.

A—1 to 8 inches (3 to 21 centimeters); black (10YR 2/1) gravelly loam, very dark grayish brown (10YR 3/2) dry; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine and fine and common medium tubular and many very fine and fine and common coarse irregular pores; 15 percent gravel and 1 percent cobbles; moderately acid (pH 5.8); clear smooth boundary.

BA—8 to 15 inches (21 to 38 centimeters); very dark grayish brown (2.5Y 3/2) gravelly clay loam, grayish brown (2.5Y 5/2) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine, fine, medium, and coarse roots; common very fine, fine, and medium tubular and many very fine and fine and common medium irregular pores; 25 percent gravel and 2 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.

Bw1—15 to 22 inches (38 to 55 centimeters); very dark grayish brown (2.5Y 3/2) very gravelly clay loam, light olive brown (2.5Y 5/3) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; moderately few very fine and fine and common very coarse roots; common fine and medium tubular and common very fine and fine irregular pores; 45 percent gravel and 2 percent cobbles; very moderately acid (pH 5.8); clear wavy boundary.

Bw2—22 to 33 inches (55 to 85 centimeters); very dark gray (2.5Y 3/1) very gravelly clay loam, gray (2.5Y 5/1) dry; weak fine angular blocky and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; moderately few very fine and fine and common medium and coarse roots; common very fine and fine tubular and irregular pores; 45 percent gravel and 3 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.

C1—33 to 43 inches (85 to 110 centimeters); very dark gray (5Y 3/1) very gravelly

clay loam, gray (5Y 5/1) dry; massive; slightly hard, friable, moderately sticky and moderately plastic; moderately few very fine, fine, and medium and common coarse roots; common very fine and fine tubular and irregular pores; 45 percent gravel and 2 percent cobbles; slightly acid (pH 6.5); clear smooth boundary.

C2—43 to 53 inches (110 to 135 centimeters); very dark gray (5Y 3/1) very gravelly clay loam, gray (5Y 5/1) dry; massive; slightly hard, friable, moderately sticky and moderately plastic; very few very fine and fine roots; common very fine and fine tubular and irregular pores; 50 percent gravel and 2 percent cobbles; slightly acid (pH 6.5); clear wavy boundary.

C3—53 to 60 inches (135 to 152 centimeters); very dark gray (5Y 3/1) extremely gravelly clay loam, gray (5Y 5/1) dry; massive; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine irregular pores; 65 percent gravel and 7 percent cobbles; neutral (pH 7.0).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 28 to 35 percent clay, 35 to 55 percent gravel, and 0 to 7 percent cobbles

Water table: At a depth of 24 to 40 inches (60 to 100 centimeters)

O horizon (where present)

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 10YR or 2.5Y

Value: 3 to 5 dry, 2 or 3 moist

Chroma: 2 to 4 dry, 1 to 3 moist

Texture of the fine-earth fraction: Loam

Content of clay: 20 to 27 percent

Rock fragments: 15 to 30 percent gravel and 0 to 7 percent cobbles

Reaction: Slightly acid or moderately acid

Bw horizon

Hue: 10YR, 2.5Y, or 5Y

Value: 5 to 7 dry, 3 to 5 moist

Chroma: 1 to 4 dry or moist

Texture of the fine-earth fraction: Clay loam

Content of clay: 28 to 35 percent

Rock fragments: 35 to 55 percent gravel and 0 to 7 percent cobbles

Reaction: Slightly acid or moderately acid

C horizon

Hue: 10YR, 2.5Y, or 5Y

Value: 4 to 6 dry, 2 to 4 moist

Chroma: 1 to 3 dry or moist

Texture of the fine-earth fraction: Clay loam

Content of clay: 28 to 35 percent

Rock fragments: 35 to 85 percent gravel and 0 to 7 percent cobbles

Reaction: Moderately acid to neutral

Jayel Series

Setting

Landscape position: Mountain slopes
Parent material: Residuum and colluvium derived from serpentinized peridotite
Slope: 9 to 75 percent
Elevation: 180 to 3,010 feet (55 to 918 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low or low
Slowest permeability: Slow or very slow
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 140 to 180 days
Taxonomic classification: Fine, parasesquic, mesic Typic Dystroxerepts

Modal Pedon

Jayel stony clay loam, in an area of Jayel-Walnett-Oragran complex, 9 to 30 percent slopes, extremely stony, on a southeast-facing slope of 10 percent, under Jeffrey pine, knobcone pine, Douglas-fir, pinemat manzanita, Idaho fescue, and California fescue with 10 percent stones on the surface, at an elevation of 2,400 feet (732 meters); in Six Rivers National Forest, Del Norte County, California; USGS High Divide, California, quadrangle; $NE^1/_4NE^1/_4$ sec. 34, T. 18 N., R. 1 E., Humboldt Base Meridian.

Oi—0 to 1 inch (0 to 2 centimeters); fresh and decomposing leaf and needle litter; strongly acid (pH 5.3).

A—1 to 11 inches (2 to 28 centimeters); reddish brown (2.5YR 4/4) stony clay loam, dark brown (7.5YR 4/4) moist; moderate very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, common fine and medium, and few coarse roots; many very fine interstitial pores; 15 percent shot-sized nodules (1 to 2 millimeters) and 15 percent stones; neutral (pH 6.6); clear smooth boundary.

BA—11 to 19 inches (28 to 48 centimeters); yellowish red (5YR 4/6) stony clay, strong brown (7.5YR 5/6) moist; weak very fine subangular blocky structure; soft, very friable, slightly sticky and plastic; few very fine, common fine, and few medium and coarse roots; many very fine interstitial pores; 10 percent gravel, 5 percent cobbles, and 10 percent stones; neutral (pH 6.8); gradual smooth boundary.

Bw—19 to 32 inches (48 to 81 centimeters); yellowish red (5YR 4/6) stony clay, strong brown (7.5YR 5/6) moist; weak very fine subangular blocky structure; soft, very friable, slightly sticky and plastic; few very fine, common fine, and few medium and coarse roots; many very fine interstitial pores; 5 percent gravel and 10 percent stones; neutral (pH 6.6); clear smooth boundary.

R—32 inches (81 centimeters); fractured peridotite; fractures are 25 to 50 centimeters apart.

Range in Characteristics

Depth to hard bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 35 to 45 percent clay and 10 to 30 percent rock fragments
Water table: None noted
Surface fragments: 3 to 15 percent stones

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Content of clay: 0 to 5 percent
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 2.5YR, 5YR, or 7.5YR
Value: 4 or 5 dry, 3 or 4 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Clay loam
Content of clay: 27 to 40 percent
Rock fragments: 0 to 15 percent gravel and 15 to 20 percent stones
Reaction: Neutral to moderately acid

Bw horizon
Hue: 5YR, 7.5YR, or 10YR
Value: 4 or 5 dry or moist
Chroma: 6 to 8 dry, 4 to 6 moist
Texture of the fine-earth fraction: Clay loam, clay, or silty clay
Content of clay: 35 to 45 percent
Rock fragments: 0 to 20 percent gravel, 0 to 10 percent cobbles, and 0 to 15 percent stones
Reaction: Neutral to moderately acid

C horizon (where present)
Hue: 5YR, 7.5YR, or 10YR
Value: 4 or 5 dry or moist
Chroma: 6 to 8 dry, 4 to 6 moist
Texture of the fine-earth fraction: Clay loam or clay
Content of clay: 35 to 45 percent
Rock fragments: 0 to 15 percent gravel and 0 to 20 percent cobbles and stones
Reaction: Neutral to moderately acid

Lackscreek Series

Setting

Landscape position: Strongly convex mountain slopes and narrow ridges
Parent material: Colluvium and residuum derived from sandstone, mudstone, and schist
Slope: 15 to 75 percent
Elevation: 60 to 3,040 feet (19 to 926 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 220 to 300 days
Taxonomic classification: Loamy-skeletal, mixed, active, isomesic Typic Haplohumults

Modal Pedon

Lackscreek very gravelly loam, in an area of Slidecreek-Lackscreek-Coppercreek complex, 50 to 75 percent slopes, on a convex, south-facing slope of 65 percent, under tanoak, Douglas-fir, redwood, red alder, coyotebrush, pampas grass, and yarrow, at an elevation of 850 feet (279 meters); in Redwood National and State Parks,

Del Norte County, California; USGS Childs Hill quadrangle; UTM zone 10, 408144mE, 4618515mN, NAD83.

A—0 to 5 inches (0 to 13 centimeters); brown (10YR 4/3) very gravelly loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and very coarse roots; many very fine and fine irregular and many very fine and fine and common medium tubular pores; 40 percent gravel and 1 percent cobbles; very strongly acid (pH 4.6); clear wavy boundary.

BAt—5 to 17 inches (13 to 42 centimeters); dark yellowish brown (10YR 4/4) very gravelly loam, light yellowish brown (10YR 6/4) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; moderately few very fine and common fine and medium roots; many very fine and fine irregular and common very fine, fine, medium, and very coarse tubular pores; very few faint clay films on faces of peds; 50 percent gravel and 2 percent cobbles; very strongly acid (pH 4.5); clear wavy boundary.

Bt—17 to 28 inches (42 to 70 centimeters); dark yellowish brown (10YR 4/4) extremely gravelly loam, light yellowish brown (10YR 6/4) dry; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine and common moderate and coarse roots; many very fine and fine irregular and common fine, medium, coarse, and very coarse tubular pores; very few faint clay films on faces of peds; 55 percent gravel and 5 percent cobbles; very strongly acid (pH 4.6); clear wavy boundary.

BC—28 to 40 inches (70 to 100 centimeters); yellowish brown (10YR 5/6) extremely gravelly loam, very pale brown (10YR 7/4) dry; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common fine and medium roots; many very fine and fine irregular and common medium, coarse, and very coarse tubular pores; 50 percent gravel, 15 percent cobbles, and 1 percent stones; very strongly acid (pH 4.6); abrupt wavy boundary.

R—40 inches (100 centimeters); strongly cemented, fractured sandstone; fractures are mostly 4 to 18 inches (10 to 45 centimeters) apart.

Range in Characteristics

Depth to hard bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 23 to 35 percent clay, 35 to 65 percent gravel, and 0 to 35 percent cobbles
Water table: None noted
Reaction: Moderately acid to very strongly acid
Surface fragments: 0 to 20 percent gravel and 0 to 10 percent cobbles

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 3 to 6 dry, 2 to 4 moist
Chroma: 3 or 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Loam
Content of clay: 23 to 27 percent
Rock fragments: 20 to 50 percent gravel and 0 to 5 percent cobbles

Bt horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 25 to 35 percent
Rock fragments: 30 to 65 percent gravel and 0 to 35 percent cobbles

C horizon (where present)
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 20 to 35 percent
Rock fragments: 30 to 65 percent gravel, 5 to 35 percent cobbles, and 0 to 1 percent stones

Ladybird Series

Setting

Landscape position: Mountain slopes and ridgetops
Parent material: Colluvium and residuum derived from schist, sandstone, and mudstone
Slope: 15 to 75 percent
Elevation: 15 to 1,920 feet (5 to 586 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 250 to 300 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Typic Haplohumults

Modal Pedon

Ladybird gravelly loam, in an area of Ladybird-Stonehill complex, 30 to 50 percent slopes, on a concave, south-facing slope of 50 percent, under redwood, Sitka spruce, Douglas-fir, tanoak, and swordfern, at an elevation of 520 feet (158.5 meters); in Redwood National Park, Humboldt County, California; USGS Orick quadrangle; UTM zone 10, 413403mE, 4572996mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); fresh and slightly decomposed fern fronds, leaves, and twigs.
A1—1 to 5 inches (3 to 13 centimeters); very dark grayish brown (10YR 3/2) gravelly loam, brown (10YR 5/3) dry; weak very fine and moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and common fine, medium, and coarse roots; many very fine and fine irregular and tubular, common medium tubular, and few coarse tubular pores; 25 percent gravel; very strongly acid (pH 5.0); gradual smooth boundary.
A2—5 to 9 inches (13 to 24 centimeters); very dark grayish brown (10YR 3/2) gravelly clay loam, brown (10YR 5/3) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; many very fine, common fine and medium, and

few coarse tubular pores; 33 percent gravel; very strongly acid (pH 4.9); gradual smooth boundary.

BAt—9 to 24 inches (24 to 61 centimeters); very dark grayish brown (10YR 3/2) very gravelly silty clay loam, brown (10YR 5/3) dry; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine, fine, and medium and few coarse tubular pores; 40 percent gravel; very strongly acid (pH 4.8); gradual smooth boundary.

Bt1—24 to 31 inches (61 to 78 centimeters); brown (10YR 4/3) gravelly silty clay loam, pale brown (10YR 6/3) dry; moderate coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine, common medium, and few coarse roots; common very fine and fine and few medium tubular pores; few faint clay films in pores and on faces of peds; 20 percent gravel; very strongly acid (pH 4.8); gradual wavy boundary.

Bt2—31 to 39 inches (78 to 99 centimeters); brown (10YR 4/3) gravelly clay loam, pale brown (10YR 6/3) dry; weak coarse subangular blocky structure; slightly hard, friable, moderately sticky and slightly plastic; few very fine, fine, medium, and coarse roots; common very fine and fine and few medium tubular pores; few faint clay films in pores and on faces of peds; 17 percent gravel; very strongly acid (pH 4.9); clear wavy boundary.

Bt3—39 to 51 inches (99 to 130 centimeters); light olive brown (2.5Y 5/4) gravelly clay loam, pale yellow (2.5Y 7/4) dry; weak coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and few fine and medium tubular pores; few faint clay films in pores and on faces of peds; 24 percent gravel; very strongly acid (pH 4.9); gradual smooth boundary.

BCt1—51 to 61 inches (130 to 155 centimeters); light olive brown (2.5Y 5/4) gravelly loam, pale yellow (2.5Y 7/4) dry; massive; soft, friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine and fine tubular pores; few faint clay films in pores and coating gravel; 30 percent gravel; very strongly acid (pH 4.9); gradual smooth boundary.

BCt2—61 to 76 inches (155 to 193 centimeters); light olive brown (2.5Y 5/4) very gravelly loam, pale yellow (2.5Y 7/4) dry; massive; soft, friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine and fine tubular pores; very few faint clay films in pores and coating gravel; 34 percent gravel and 7 percent cobbles; very strongly acid (pH 4.9).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 25 to 35 percent clay and 15 to 35 percent gravel

Water table: None noted, except in map unit 532 at a depth of 47 to 60 inches (120 to 150 centimeters) in January and February

Reaction: Moderately acid to very strongly acid

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 10YR or 2.5Y

Value: 4 or 5 dry, 2 or 3 moist

Chroma: 2 to 4 dry, 2 or 3 moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 18 to 28 percent
Rock fragments: 15 to 35 percent gravel and 0 to 5 percent cobbles

Bt horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 3 to 6 dry, 2 to 6 moist
Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam
Content of clay: 25 to 35 percent
Rock fragments: 15 to 35 percent gravel and 0 to 5 percent cobbles

C horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 4 to 6 dry, 3 to 6 moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 18 to 40 percent
Rock fragments: 5 to 55 percent gravel and 0 to 10 percent cobbles

Loleta Series

Setting

Landscape position: Alluvial fans and fan remnants
Parent material: Alluvium derived from mixed sources
Slope: 2 to 5 percent
Elevation: 5 to 160 feet (3 to 50 meters)
Depth class: Very deep
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Fluvaquentic Endoaquolls

Modal Pedon

Loleta loam, in an area of Loleta, 2 to 5 percent slopes, on a slope of 2 percent, under pasture grasses and clover, at an elevation of 20 feet (6 meters); Humboldt County, California; USGS Ferndale quadrangle; UTM zone 10, 387146mE, 4492789mN, NAD83.

Ap1—0 to 4 inches (0 to 10 centimeters); very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; strong fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to medium roots; many very fine and fine tubular pores; 5 percent gravel; slightly acid (pH 6.5); clear wavy boundary.

Ap2—4 to 14 inches (10 to 36 centimeters); very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate coarse subangular blocky structure parting to moderate fine and medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine and medium roots; few medium and common very fine and fine tubular pores; few fine distinct yellowish brown

(10YR 5/6) masses of iron accumulation; strongly acid (pH 5.5); clear wavy boundary.

Bg1—14 to 32 inches (36 to 81 centimeters); dark grayish brown (10YR 4/2) loam, light brownish gray (10YR 6/2) dry; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few medium and common very fine and fine roots; many very fine and fine tubular pores; many medium distinct dark yellowish brown (10YR 4/6) masses of iron accumulation; moderately acid (pH 6.0); gradual wavy boundary.

Bg2—32 to 50 inches (81 to 127 centimeters); dark grayish brown (10YR 4/2) loam, light brownish gray (10YR 6/2) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine and fine tubular pores; many medium distinct dark yellowish brown (10YR 4/6) masses of iron accumulation; neutral (pH 7.0); gradual wavy boundary.

Bg3—50 to 68 inches (127 to 173 centimeters); grayish brown (10YR 5/2) fine sandy loam, light gray (10YR 7/2) dry; massive; slightly hard, very friable, slightly sticky and nonplastic; few very fine roots; few very fine tubular pores; many medium distinct dark yellowish brown (10YR 4/6) masses of iron accumulation; neutral (pH 7.0).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 18 to 27 percent clay and 0 to 3 percent gravel

Water table: At a depth of 4 to 10 inches (10 to 25 centimeters) in December through April, 10 to 40 inches (25 to 100 centimeters) in May, and greater than 72 inches (182 centimeters) in June through November

A or Ap horizon

Hue: 10YR or 2.5Y

Value: 4 or 5 dry, 2 or 3 moist

Chroma: 1 or 2 dry or moist

Texture of the fine-earth fraction: Loam

Content of clay: 15 to 25 percent

Rock fragments: 0 to 5 percent gravel

Reaction: Neutral to strongly acid

Redoximorphic features:

Type—fine and medium iron masses

Quantity—few to many

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—4 to 6

Upper part of the Bg horizon

Hue: 10YR or 2.5Y

Value: 5 to 7 dry, 3 to 6 moist

Chroma: 1 or 2 dry or moist

Texture of the fine-earth fraction: Fine sandy loam, loam, silt loam

Content of clay: 15 to 27 percent

Rock fragments: 0 to 3 percent gravel

Reaction: Neutral to moderately acid

Redoximorphic features:

Type—fine to coarse iron masses

Quantity—common or many

Hue—10YR, 7.5YR, or 5YR

Value—4 or 5

Chroma—4 to 6

Lower part of the Bg horizon
Hue: 10YR, 2.5Y, or 5Y
Value: 5 to 7 dry, 3 to 6 moist
Chroma: 1 or 2 dry or moist
Content of clay: 15 to 35 percent
Texture of the fine-earth fraction: Loam, fine sandy loam, clay loam, silt loam, and silty clay loam
Rock fragments: 0 to 3 percent gravel
Reaction: Neutral to moderately acid
Redoximorphic features:
Type—fine to coarse iron masses
Quantity—common or many
Hue—7.5YR, 10YR, or 5Y
Value—4 or 5
Chroma—4 to 6

Maneze Series

Setting

Landscape position: Convex, upper mountains slopes and spur ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 15 to 50 percent
Elevation: 515 to 3,160 feet (158 to 964 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Moderately slow
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 200 to 260 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Humic Dystroxerepts

Modal Pedon

Maneze loam, in an area of Pasturerock-Coyoterock-Maneze complex, 30 to 50 percent slopes, on a convex, northwest-facing slope of 30 percent, under Oregon white oak, annual grasses, perennial grasses, and forbs, at an elevation of 2,450 feet (747 meters); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 424970mE, 4555792mN, NAD83.

Oi—0 to 1 inch (0 to 1 centimeter); slightly decomposed oak leaves and twigs.
A1—1 to 11 inches (1 to 29 centimeters); very dark brown (10YR 2/2) loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine, medium, and coarse roots; many very fine and fine irregular and many very fine tubular pores; 8 percent gravel; strongly acid (pH 5.5); gradual smooth boundary.
A2—11 to 18 inches (29 to 46 centimeters); dark brown (10YR 3/3) extremely cobbly loam, grayish brown (10YR 5/2) dry; weak medium and coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine tubular and common very fine interstitial pores; 20 percent gravel and 60 percent cobbles; strongly acid (pH 5.5); abrupt wavy boundary.

Bw—18 to 29 inches (46 to 73 centimeters); olive brown (2.5Y 4/4) extremely cobbly clay loam, light yellowish brown (2.5Y 6/4) dry; weak coarse and very coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine, fine, medium, and coarse roots; common very fine tubular and interstitial pores; 20 percent gravel and 50 percent cobbles; strongly acid (pH 5.5); clear wavy boundary.

BC—29 to 45 inches (73 to 113 centimeters); light olive brown (2.5Y 5/4) extremely cobbly clay loam, light yellowish brown (2.5Y 6/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common fine tubular, few medium tubular, and common very fine interstitial pores; 22 percent gravel and 50 percent cobbles; very strongly acid (pH 5.0); clear wavy boundary.

Cg—45 to 63 inches (113 to 161 centimeters); gray (N 6/0) very gravelly silty clay loam, light gray (5Y 7/1) dry; massive; hard, firm, slightly sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium and coarse tubular pores; many fine and medium prominent strong brown (7.5YR 5/8) masses of iron accumulation, strong brown (7.5YR 5/8) moist; 50 percent gravel; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 22 to 32 percent clay, 18 to 45 percent gravel, and 20 to 60 percent cobbles

Water table: None noted within a depth of 40 inches (100 centimeters)

Reaction: Moderately acid or strongly acid

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Neutral to moderately acid

A horizon

Hue: 10YR or 2.5Y

Value: 4 or 5 dry, 2 or 3 moist

Chroma: 1 to 3 dry or moist

Texture of the fine-earth fraction: Loam

Content of clay: 22 to 26 percent

Rock fragments: 0 to 50 percent gravel and 0 to 60 percent cobbles

Bw horizon

Hue: 10YR or 2.5Y

Value: 5 to 7 dry, 3 to 5 moist

Chroma: 2 to 4 dry or moist

Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam

Content of clay: 27 to 32 percent

Rock fragments: 18 to 45 percent gravel and 20 to 60 percent cobbles

Cg horizon

Hue: 2.5Y, 5Y, or neutral

Value: 4 to 7 dry, 4 to 6 moist

Chroma: Neutral to 2 dry or moist

Texture of the fine-earth fraction: Clay loam or silty clay loam

Content of clay: 28 to 35 percent

Rock fragments: 35 to 60 percent gravel and 0 to 60 percent cobbles
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6 dry, 4 or 5 moist
Chroma—2 to 8 dry, 6 to 8 moist

C horizon (where present)
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 to 6 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Clay loam or silty clay loam
Content of clay: 22 to 30 percent
Rock fragments: 20 to 75 percent gravel and 0 to 50 percent cobbles

Mettah Series

Setting

Landscape position: Moderately broad ridges and upper mountain slopes
Parent material: Colluvium and residuum derived from weakly consolidated fluvial, beach, dune, and estuarine deposits (fig. 20)
Slope: 9 to 30 percent
Elevation: 970 to 2,260 feet (296 to 690 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 280 days
Taxonomic classification: Fine, parasesquic, isomesic Andic Palehumults

Modal Pedon

Mettah clay loam, in an area of Surpur-Mettah complex, 9 to 30 percent slopes, on a slightly convex, west-facing slope of 10 percent, under redwood, Douglas-fir, tanoak, western hemlock, California huckleberry, Pacific rhododendron, and salal, at an elevation of 1,755 feet (535 meters); in Redwood National Park, Humboldt County, California; USGS Holter Ridge quadrangle; UTM zone 10, 420495mE, 4575555mN, NAD83.

Oi—0 to 1 inch (0 to 2 centimeters); fresh and slightly decomposed conifer needles, tanoak leaves, and twigs; abrupt smooth boundary.
A—1 to 9 inches (2 to 22 centimeters); dark brown (7.5YR 3/3) clay loam, light brown (7.5YR 6/3) dry; weak fine subangular blocky and weak medium granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine and medium roots; common very fine and fine irregular and many very fine and fine tubular pores; 13 percent well rounded pebbles; moderately acid (pH 5.6); clear smooth boundary.
BAt—9 to 17 inches (22 to 42 centimeters); brown (7.5YR 4/4) silty clay loam, light brown (7.5YR 6/3) dry; weak fine subangular blocky and moderate medium granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine irregular

Figure 20.—A profile of a Mettah soil. These soils are on Holter Ridge. They form in fine sediments of the Prairie Creek Formation. Depth is marked in centimeters.

and common very fine and fine tubular pores; 10 percent well rounded pebbles; moderately acid (pH 5.8); clear smooth boundary.

Bt1—17 to 27 inches (42 to 69 centimeters); reddish brown (5YR 4/4) silty clay, strong brown (7.5YR 4/6) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; few faint distinct clay films on faces of peds; 5 percent well rounded pebbles; strongly acid (pH 5.4); clear smooth boundary.

Bt2—27 to 37 inches (69 to 93 centimeters); yellowish red (5YR 4/6) clay, reddish yellow (7.5YR 6/6) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common distinct clay films in pores and on faces of peds; 3 percent well rounded pebbles; strongly acid (pH 5.4); clear smooth boundary.

Bt3—37 to 48 inches (93 to 123 centimeters); red (2.5YR 4/8) clay, reddish yellow (5YR 6/8) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and very plastic; few very fine and common fine and medium roots; common very fine and fine tubular pores; many distinct clay films in pores and on faces of peds; 1 percent well rounded pebbles; strongly acid (pH 5.2); clear wavy boundary.

Bt4—48 to 52 inches (123 to 131 centimeters); red (2.5YR 4/8) clay, red (2.5YR 5/8) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and very plastic; few very fine and fine and common medium roots; common very fine and fine tubular pores; many distinct clay films in pores and on faces of peds; 1 percent well rounded pebbles; strongly acid (pH 5.2); clear wavy boundary.

Bt5—52 to 58 inches (131 to 148 centimeters); red (2.5YR 5/8) clay, reddish yellow (5YR 6/8) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and very plastic; few fine and medium roots; few very fine and fine tubular pores; many distinct clay films in pores and on faces of peds; 3 percent well rounded pebbles; strongly acid (pH 5.2); gradual wavy boundary.

Bt6—58 to 79 inches (148 to 200 centimeters); red (2.5YR 5/8) clay loam, reddish yellow (5YR 6/8) dry; weak medium and coarse subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; few fine roots; few very fine and fine irregular pores; many distinct clay films in pores and on faces of peds; 3 percent well rounded pebbles; very strongly acid (pH 5.0).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 40 to 60 percent clay and 0 to 15 percent gravel

Water table: None noted

Reaction: Moderately acid or strongly acid

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 5YR, 7.5YR, or 10YR

Value: 4 to 6 dry, 3 or 4 moist

Chroma: 3 to 6 dry or moist
Texture of the fine-earth fraction: Clay loam
Content of clay: 27 to 35 percent
Rock fragments: 0 to 15 percent gravel

Bt horizon (upper part):
Hue: 2.5YR, 5YR, or 7.5YR
Value: 5 or 6 dry, 3 to 6 moist
Chroma: 4 to 8 dry or moist
Texture of the fine-earth fraction: Silty clay or clay
Content of clay: 40 to 60 percent
Rock fragments: 0 to 15 percent gravel

Bt horizon (lower part):
Hue: 2.5YR, 5YR, or 7.5YR
Value: 5 or 6 dry, 3 to 6 moist
Chroma: 4 to 8 dry or moist
Texture of the fine-earth fraction: Clay loam, silty clay loam, or clay
Content of clay: 32 to 45 percent
Rock fragments: 0 to 30 percent gravel and 0 to 5 percent cobbles

Mooncreek Series

Setting

Landscape position: Mountain slopes and ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 9 to 75 percent
Elevation: 45 to 4,985 feet (15 to 1,520 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 150 to 250 days
Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Palexerults

Modal Pedon

Mooncreek gravelly loam, in an area of Mooncreek-Tossup-Noisy complex, 15 to 50 percent slopes, on a linear, northeast-facing slope of 35 percent, under Douglas-fir, tanoak, Pacific madrone, and salal, at an elevation of 3,245 feet (990 meters); Humboldt County, California; USGS Hupa Mountain quadrangle; UTM zone 10, 434516mE, 4543297mN, NAD83.

Oi—0 to 2 inches (0 to 4 centimeters); very dark gray (10YR 3/1) slightly decomposed plant material consisting of needles and leaves of Douglas-fir and tanoak, black (10YR 2/1) moist; about 100 percent fiber unrubbed, 80 percent rubbed; loose, nonsticky and nonplastic; common very fine roots; common fine irregular pores; moderately acid (pH 5.6); abrupt smooth boundary.

A—2 to 3 inches (4 to 8 centimeters); brown (7.5YR 5/4) gravelly loam, dark brown (7.5YR 3/4) moist; moderate fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine to medium roots; many very fine and fine tubular and many medium interstitial pores; 18 percent gravel; very strongly acid (pH 4.7); clear smooth boundary.

ABt—3 to 6 inches (8 to 16 centimeters); brown (7.5YR 5/4) gravelly loam, dark brown (7.5YR 3/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; many very fine to medium roots; many fine and medium and common coarse tubular pores; few faint clay films on all faces of peds; 18 percent gravel; very strongly acid (pH 5.0); clear smooth boundary.

Bt1—6 to 21 inches (16 to 54 centimeters); yellowish brown (10YR 5/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many fine and medium and common coarse roots; many fine and medium and common coarse tubular pores; few distinct clay films on all faces of peds; 18 percent gravel; extremely acid (pH 4.4); clear smooth boundary.

Bt2—21 to 38 inches (54 to 96 centimeters); yellowish brown (10YR 5/4) gravelly silty clay loam, dark yellowish brown (10YR 4/6) moist; moderate fine and medium angular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many fine and medium and common coarse roots; many fine and medium tubular pores; common distinct clay films on all faces of peds; 20 percent gravel; extremely acid (pH 4.4); gradual smooth boundary.

Bt3—38 to 55 inches (96 to 139 centimeters); yellowish brown (10YR 5/4) gravelly silty clay loam, dark yellowish brown (10YR 4/6) moist; moderate fine and medium angular blocky structure; hard, firm, very sticky and very plastic; common medium and coarse roots; common fine and medium tubular pores; common distinct clay films on all faces of peds; common fine very weakly cemented iron-manganese masses, strong brown (7.5YR 5/6) moist; 18 percent gravel; very strongly acid (pH 5.0); gradual smooth boundary.

Bt4—55 to 80 inches (139 to 200 centimeters); light yellowish brown (10YR 6/4) gravelly silty clay loam, yellowish brown (10YR 5/6) moist; moderate medium and moderate fine subangular blocky structure; hard, firm, very sticky and very plastic; common medium and common coarse roots; common medium tubular pores; common distinct clay films on all faces of peds; common fine very weakly cemented iron-manganese masses, strong brown (7.5YR 5/6) moist; 16 percent gravel; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 25 to 35 percent clay, 0 to 25 percent gravel, and 0 to 10 percent cobbles

Water table: None noted

Reaction: Moderately acid to very strongly acid

Surface fragments: 0 to 5 percent gravel and 0 to 2 percent cobbles

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 7.5YR or 10YR

Value: 4 or 5 dry, 3 or 4 moist

Chroma: 3 or 4 dry or moist

Texture of the fine-earth fraction: Loam

Content of clay: 16 to 27 percent

Rock fragments: 15 to 50 percent gravel and 0 to 10 percent cobbles

Upper part of the Bt horizon
Hue: 7.5YR or 10YR
Value: 4 to 6 dry, 4 or 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loam, silty clay loam, or clay loam
Content of clay: 23 to 35 percent
Rock fragments: 0 to 25 percent gravel and 0 to 25 percent cobbles

Lower part of the Bt horizon
Hue: 7.5YR or 10YR
Value: 4 to 6 dry, 4 or 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Silty clay loam or clay loam
Content of clay: 30 to 40 percent
Rock fragments: 0 to 35 percent gravel
Pararock fragments: 0 to 50 percent paragravel and 0 to 10 percent paracobble

Mudhorse Series

Setting

Landscape position: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 30 to 50 percent
Elevation: 110 to 3,900 feet (35 to 1,190 meters)
Depth class: Very deep
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 150 to 250 days
Taxonomic classification: Fine-loamy, mixed, active, mesic Oxyaquic Palehumults

Modal Pedon

Mudhorse gravelly loam, in an area of Highoaks-Noisy-Mudhorse complex, 9 to 50 percent slopes, on strongly concave, west-facing slope of 35 percent, under a stand of Oregon white oak, California black oak, annual grasses, and perennial grasses, at an elevation of 3,500 feet (1,100 meters); Humboldt County, California; USGS Grouse Mountain quadrangle; UTM zone 10, 438084mE, 4520554mN, NAD83.

Oi—0 to 2 inches (0 to 4 centimeters); very dark gray (10YR 3/1) slightly decomposed plant material consisting of needles and leaves of Oregon white oak, black (10YR 2/1) moist; about 100 percent fiber unrubbed, 80 percent rubbed; few very fine roots; many fine irregular pores; moderately acid (pH 5.6); abrupt smooth boundary.

A—2 to 5 inches (4 to 12 centimeters); brown (10YR 4/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate fine granular; soft, very friable, nonsticky and nonplastic; many very fine to medium roots; many very fine and fine tubular pores; 20 percent gravel; moderately acid (pH 5.6); clear smooth boundary.

Bt1—5 to 12 inches (12 to 30 centimeters); dark yellowish brown (10YR 4/4) loam, brown (10YR 4/3) moist; strong fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many fine and medium roots; many very fine to medium tubular pores; common faint clay films on all faces of peds; 5 percent gravel; strongly acid (pH5.4); clear wavy boundary.

Bt2—12 to 20 inches (30 to 51 centimeters); olive brown (2.5Y 4/4) clay loam, olive brown (2.5Y 4/4) moist; strong fine angular blocky structure; hard, firm, very sticky and very plastic; many fine and common medium roots; many very fine and common fine and coarse tubular pores; common faint clay films on all faces of peds; 5 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

Btg1—20 to 32 inches (51 to 82 centimeters); dark grayish brown (2.5Y 4/2) clay, very dark grayish brown (2.5Y 3/2) moist; strong fine and medium angular blocky structure; very hard, very firm, very sticky and very plastic; many fine and medium and common coarse roots; many medium and coarse tubular pores; few distinct clay films on all faces of peds; 40 percent fine very weakly cemented yellowish red (5YR 4/6) iron-manganese masses; 5 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

Btg2—32 to 51 inches (82 to 130 centimeters); very dark gray (2.5Y 3/1) clay, very dark gray (2.5Y 3/1) moist; moderate medium and coarse subangular blocky structure parting to strong very fine angular blocky; very hard, very firm, very sticky and very plastic; many fine and medium tubular pores; few distinct clay films on all faces of peds; 40 percent fine extremely weakly cemented yellowish red (5YR 4/6) iron-manganese masses; 5 percent gravel; strongly acid (pH 5.2); gradual wavy boundary.

Btg3—51 to 79 inches (130 to 200 centimeters); very dark gray (2.5Y 3/1) clay, very dark gray (2.5Y 3/1) moist; moderate medium and coarse subangular blocky structure parting to strong very fine angular blocky; very hard, very firm, very sticky and very plastic; many fine roots; many medium tubular pores; few distinct clay films on all faces of peds; 60 percent fine very weakly cemented yellowish red (5YR 4/6) iron-manganese masses; 5 percent gravel; strongly acid (pH 5.2).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 20 to 35 percent clay and 0 to 15 percent gravel

Water table: At a depth of 20 to 40 inches (50 to 100 centimeters) January through March

Surface fragments: 0 to 5 percent gravel

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 10YR or 2.5Y

Value: 3 or 4 dry or moist

Chroma: 2 or 3 dry or more

Texture of the fine-earth fraction: Loam

Content of clay: 12 to 25 percent

Rock fragments: 15 to 25 percent gravel

Reaction: Moderately acid to very strongly acid

Bt horizon

Hue: 10YR, 2.5Y, or 5Y

Value: 3 to 5 dry or moist

Chroma: 2 to 4 dry or moist

Texture of the fine-earth fraction: Loam or clay loam

Content of clay: 20 to 35 percent
Rock fragments: 0 to 15 percent gravel
Reaction: Moderately acid to very strongly acid

Btg horizon
Hue: 10YR, 2.5Y, or 5Y
Value: 3 to 5 dry or moist
Chroma: 1 or 2 dry or moist
Texture of the fine-earth fraction: Clay
Content of clay: 35 to 50 percent
Rock fragments: 0 to 15 percent gravel
Reaction: Strongly acid or very strongly acid
Redoximorphic features (where present):
Type—fine to coarse weakly cemented iron-manganese masses in the matrix
Quantity—few to many
Hue—7.5YR, 10YR, or 2.5YR
Value—3 to 5 moist
Chroma—3 to 6 moist

Mystery Series

Setting

Landscape position: Alluvial fans, low terraces, and fan remnants
Parent material: Alluvium derived from mixed sources (fig. 21)
Slope: 2 to 9 percent
Elevation: 5 to 670 feet (2 to 205 meters)
Depth class: Very deep
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Flooding: Occasional
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 300 to 320 days
Taxonomic classification: Coarse-loamy, mixed, superactive, isomesic Oxyaquic Eutrudepts

Modal Pedon

Mystery fine sandy loam, in an area of Bigtree-Mystery complex, 2 to 9 percent slopes, on a gentle, north-facing slope of 2 percent, under redwood, tanoak, California huckleberry, cascara, swordfern, and redwood-sorrel, at an elevation of 100 feet (30 meters); in Jedediah Smith Redwoods State Park, Del Norte County, California; USGS Hiouchi quadrangle; UTM zone 10, 410091mE, 4627143mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); black (10YR 2/1) slightly decomposed needles, leaves, and twigs, very dark grayish brown (10YR 3/2) dry; 95 percent fiber unrubbed, 85 percent rubbed; loose, loose, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine and fine interstitial pores; 15 percent wood fragments; very strongly acid (pH 5.0); clear smooth boundary.
A1—1 to 11 inches (3 to 29 centimeters); dark olive gray (5Y 3/2) fine sandy loam, light olive gray (5Y 6/2) dry; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common fine, medium, and coarse roots; common very fine tubular and interstitial pores; strongly acid (5.5 pH); abrupt smooth boundary.

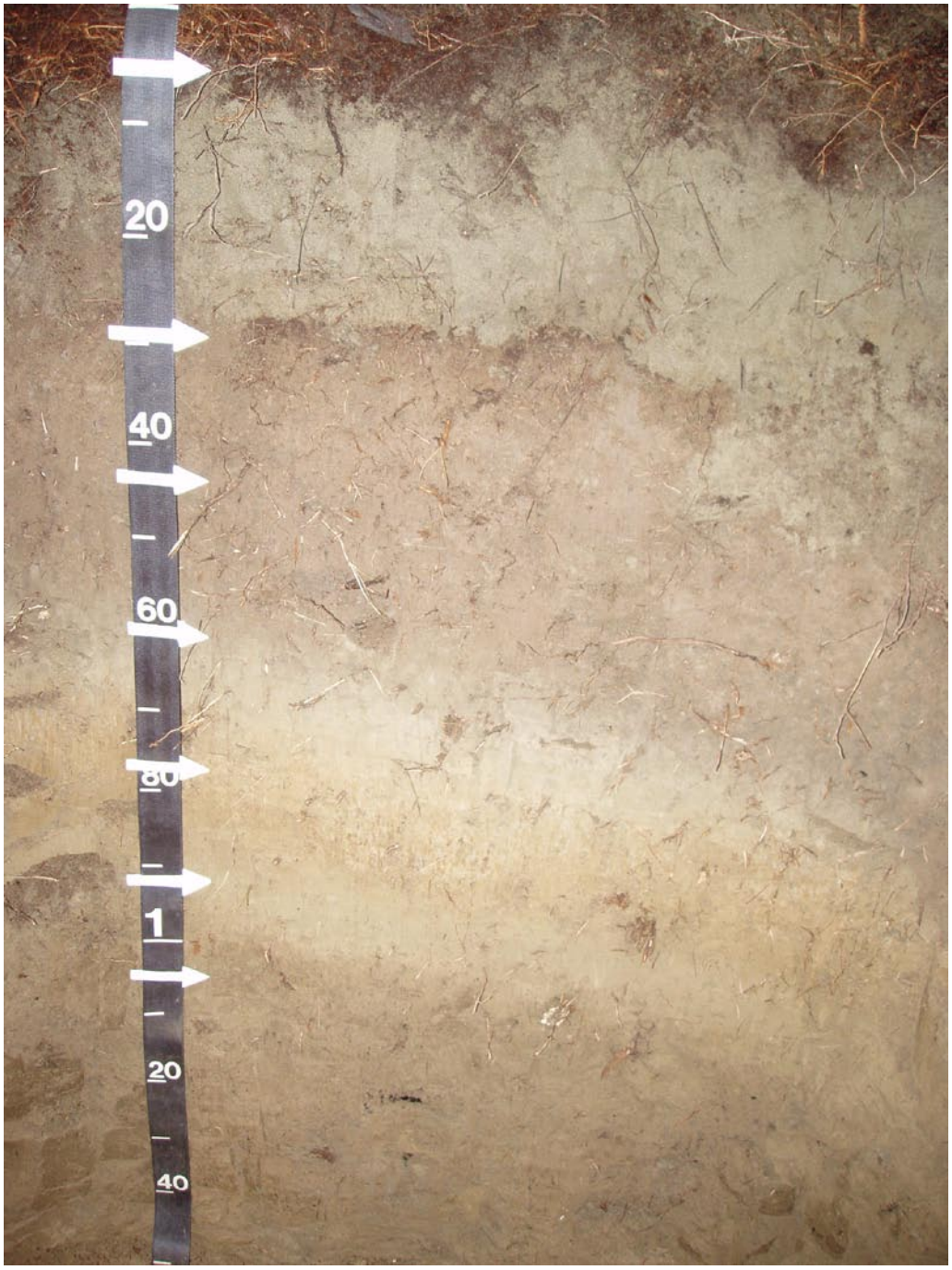

Figure 21.—A profile of a Mystery soil. These soils form in overbank flood deposits. This profile exhibits two features that may be buried surfaces (at depths of about 30 and 100 centimeters). Depth is marked in centimeters.

2A2—11 to 17 inches (29 to 43 centimeters); very dark grayish brown (2.5Y 3/2) very fine sandy loam, grayish brown (2.5Y 5/2) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and common very fine, medium, and coarse roots; common very fine and fine tubular and interstitial pores; strongly acid (5.5 pH); clear smooth boundary.

2A3—17 to 24 inches (43 to 60 centimeters); very dark grayish brown (2.5Y 3/2) very fine sandy loam, grayish brown (2.5Y 5/2) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many medium and common very fine, fine, and coarse roots; common very fine and fine tubular and interstitial pores; moderately acid (6.0 pH); clear wavy boundary.

2C—24 to 30 inches (60 to 77 centimeters); dark grayish brown (2.5Y 4/2) fine sandy loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many medium, common fine and coarse, and moderately few very fine roots; common very fine tubular and interstitial pores; moderately acid (6.0 pH); clear smooth boundary.

3Bwb1—30 to 36 inches (77 to 92 centimeters); olive brown (2.5Y 4/3) very fine sandy loam, light olive brown (2.5Y 5/4) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many medium and common very fine and fine roots; common very fine and fine tubular and interstitial pores; many very fine and fine distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout the matrix; common fine distinct iron depletions throughout matrix, gray (10YR 5/1) moist; moderately acid (6.0 pH); clear smooth boundary.

3Bwb2—36 to 41 inches (92 to 104 centimeters); olive brown (2.5Y 4/3) very fine sandy loam, light olive brown (2.5Y 5/4) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium and moderately few very fine roots; common very fine tubular and interstitial pores; common very fine and fine distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout the matrix; few very fine distinct iron depletions throughout the matrix, gray (10YR 5/1) moist; moderately acid (6.0 pH); clear smooth boundary.

4Ab—41 to 60 inches (104 to 152 centimeters); dark grayish brown (2.5Y 4/2) silt loam, light yellowish brown (2.5Y 6/3) dry; moderate fine and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and moderately few medium roots; common very fine tubular and common very fine and fine interstitial pores; few very fine and fine distinct yellowish brown (10YR 5/6) masses of iron accumulation along root channels; few very fine distinct iron depletions along root channels, gray (10YR 5/1) moist; moderately acid (6.0 pH).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 10 to 16 percent clay, 0 to 15 percent gravel, 0 to 5 percent cobbles, and 0 to 2 percent stones

Water table: At a depth of 30 to 40 inches (77 to 100 centimeters) January through April

O horizon

Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon

Hue: 5Y, 2.5Y, or 10YR
Value: 3 to 6 dry, 2 to 4 moist
Chroma: 1 to 4 dry or moist

Texture of the fine-earth fraction: Very fine sandy loam and fine sandy loam
Content of clay: 10 to 20 percent
Rock fragments: 0 to 15 percent gravel
Reaction: Moderately acid or strongly acid

Bw horizon
Hue: 2.5Y, 10YR, or 7.5YR
Value: 4 to 7 dry, 2 to 5 moist
Chroma: 2 to 6 dry, 2 to 4 moist
Texture of the fine-earth fraction: Coarse sandy loam, fine sandy loam, very fine sandy loam, or sandy loam
Content of clay: 5 to 20 percent
Rock fragments: 0 to 15 percent gravel, 0 to 5 percent cobbles, and 0 to 2 percent stones
Reaction: Moderately acid or strongly acid
Redoximorphic features:
Type—very fine, fine, and medium masses of iron accumulation and iron depletions in the matrix or along root channels
Quantity—many, common, or few
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6 moist
Chroma—1 to 8 moist

C horizon (including buried A horizons):
Hue: 2.5Y or 10YR
Value: 4 to 7 dry, 2 to 6 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Stratified coarse sand through silt loam
Content of clay: 0 to 22 percent
Rock fragments: 0 to 15 percent gravel, 0 to 5 percent cobbles, and 0 to 5 percent stones
Reaction: Moderately acid or strongly acid

Noisy Series

Setting

Landscape position: Mountain slopes and ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 9 to 75 percent
Elevation: 45 to 4,985 feet (15 to 1,520 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 150 to 250 days
Taxonomic classification: Loamy-skeletal, mixed, active, mesic Typic Haploxerults

Modal Pedon

Noisy very gravelly loam, in an area of Mooncreek-Tossup-Noisy complex, 15 to 50 percent slopes, on a convex, east-facing slope of 48 percent, under Douglas-fir, tanoak, Pacific madrone, and salal, at an elevation of 278 feet (850 meters); Humboldt County, California; USGS French Camp Ridge quadrangle; UTM zone 10, 430791mE, 4553476mN, NAD83.

Oi—0 to 2 inches (0 to 4 centimeters); very dark gray (10YR 3/1) slightly decomposed plant material consisting of needles and leaves of Douglas-fir and tanoak, black (10YR 2/1) moist; about 100 percent fiber unrubbed, 80 percent rubbed; loose, nonsticky and nonplastic; many very fine roots; common fine irregular pores; moderately acid (pH 5.6); abrupt smooth boundary.

A—2 to 5 inches (4 to 13 centimeters); brown (10YR 4/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure parting to weak very fine subangular blocky; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine and medium tubular pores; 50 percent gravel; very strongly acid (pH 5.0); clear smooth boundary.

Bt1—5 to 10 inches (13 to 25 centimeters); brownish yellow (10YR 6/6) extremely gravelly loam, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common coarse roots; many very fine and common medium tubular pores; common distinct clay films on all faces of peds; 60 percent gravel; very strongly acid (pH 4.8); clear wavy boundary.

Bt2—10 to 31 inches (25 to 80 centimeters); brownish yellow (10YR 6/6) very gravelly clay loam, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; soft, very friable, moderately sticky and moderately plastic; many very fine and fine and common coarse roots; common fine and medium tubular pores; few distinct clay films on all faces of peds; 40 percent gravel and 20 percent paragravel; very strongly acid (pH 4.8); gradual wavy boundary.

BCt1—31 to 51 inches (80 to 130 centimeters); brownish yellow (10YR 6/6) extremely gravelly sandy clay loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; common fine and medium tubular pores; few distinct clay films on all faces of peds; 70 percent gravel and 10 percent paragravel; very strongly acid (pH 4.6); gradual wavy boundary.

BCt2—51 to 61 inches (130 to 154 centimeters); brownish yellow (10YR 6/6) very gravelly sandy clay loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common medium and coarse roots; common fine and medium tubular pores; few distinct clay films on all faces of peds; 50 percent gravel and 30 percent paragravel; very strongly acid (pH 4.6).

Range in Characteristics

Depth to fractured bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 18 to 35 percent clay, 35 to 75 percent gravel, and 0 to 45 percent cobbles
Water table: None noted
Surface fragments: 0 to 5 percent gravel

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR or 2.5Y
Value: 3 to 6 dry, 3 or 4 moist
Chroma: 3 or 4 dry or moist

Texture of the fine-earth fraction: Loam
Content of clay: 12 to 26 percent
Rock fragments: 15 to 55 percent gravel and 0 to 10 percent cobbles
Reaction: Neutral to very strongly acid

Bt horizon
Hue: 10YR or 2.5Y
Value: 4 to 6 dry, 3 to 5 moist
Chroma: 4 to 6 dry, 3 to 6 moist
Texture of the fine-earth fraction: Sandy clay loam, loam, clay loam, or silty clay loam
Content of clay: 18 to 35 percent
Rock fragments: 35 to 75 percent gravel, 0 to 45 percent cobbles, and 0 to 30 percent paragravel
Reaction: Moderately acid to very strongly acid

C horizon (where present)
Hue: 10YR or 2.5Y
Value: 4 to 6 dry, 3 to 5 moist
Chroma: 4 to 6 dry, 3 to 6 moist
Texture of the fine-earth fraction: Loam or silty clay loam
Content of clay: 20 to 35 percent
Rock fragments: 75 to 85 percent gravel
Reaction: Strongly acid or very strongly acid

Oakside Series

Setting

Landscape position: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Slope: 50 to 100 percent
Elevation: 65 to 4,755 feet (20 to 1,450 meters)
Depth class: Shallow
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 150 to 250 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Lithic Haploxerolls

Modal Pedon

Oakside extremely gravelly loam, in an area of Sidehill-Oakside-Darkwoods complex, 50 to 100 percent slopes, on a linear, east-facing slope of 65 percent, under tree cover of canyon live oak, tanoak, Douglas-fir, and Pacific madrone, at an elevation of 3,600 feet (1,100 meters); Humboldt County, California; USGS Hupa Mountain quadrangle; UTM zone 10, 434946mE, 4541021mN, NAD83.

Oi—0 to 2 inches (0 to 6 centimeters); slightly decomposed tanoak leaves and Douglas-fir cones, very dark brown (10YR 2/2) rubbed and very dark grayish brown (10YR 3/2) dry; 100 percent fibers unrubbed, 10 percent fibers rubbed; abrupt smooth boundary.
A1—2 to 6 inches (6 to 16 centimeters); dark brown (10YR 3/3) extremely gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure parting to moderate very fine granular; soft, very friable, nonsticky and

nonplastic; many very fine and fine roots; many very fine and fine tubular pores; 80 percent gravel and 5 percent cobbles; slightly acid (pH 6.2); clear wavy boundary.
A2—6 to 10 inches (16 to 26 centimeters); dark yellowish brown (10YR 4/4) extremely cobbly loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine to medium roots; many fine and medium tubular pores; 10 percent gravel and 55 percent cobbles; moderately acid (pH 5.6); abrupt irregular boundary.
R—10 to 59 inches (26 to 150 centimeters); indurated sandstone.

Range in Characteristics

Depth to hard bedrock: 10 to 20 inches (25 to 50 centimeters)
Control section (by weighted average): 10 to 18 percent clay, 35 to 65 percent gravel, and 5 to 55 percent cobbles
Water table: None noted
Reaction: Slightly acid or moderately acid
Surface fragments: 25 to 75 percent gravel

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Neutral to moderately acid

A horizon
Hue: 10YR
Value: 3 to 5 dry, 2 to 5 moist
Chroma: 2 to 6 dry, 2 or 3 moist
Texture of the fine-earth fraction: Loam
Content of clay: 10 to 18 percent
Rock fragments: 10 to 80 percent gravel and 5 to 55 percent cobbles

Oragran Series

Setting

Landscape position: Mountain slopes and ridges
Parent material: Residuum and colluvium derived from serpentinized peridotite
Slope: 9 to 75 percent
Elevation: 180 to 3,010 feet (55 to 918 meters)
Depth class: Shallow
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high to moderately low
Slowest permeability: Moderate to slow
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 100 to 180 days
Taxonomic classification: Loamy, magnesic, mesic Lithic Haploxerepts

Modal Pedon

Oragran very stony loam, in an area of Jayel-Walnett-Oragran complex, 9 to 30 percent slopes, extremely stony, on an east-facing slope of 10 percent, under knobcone pine, lodgepole pine, azalea, huckleberry oak, and red huckleberry, at an elevation of 4,060 feet (1,237 meters); in Six Rivers National Forest, Del Norte County,

California; USGS Klamath Glen, California, quadrangle; SW¼NW¼ sec. 13, T. 13 N., R. 2 E., Humboldt Base Meridian.

Oi—0 to 1 inch (0 to 2 centimeters); fresh and decomposing leaf and needle litter; strongly acid (pH 5.3).
A—1 to 3 inches (2 to 8 centimeters); yellowish brown (10YR 5/4) very stony loam, dark brown (10YR 4/3) moist; moderate very fine granular structure; soft, friable, nonsticky and nonplastic; few very fine, common fine, and few medium roots; many very fine interstitial and tubular pores; 15 percent gravel and 30 percent stones; moderately acid (pH 5.8); clear smooth boundary.
Bw—3 to 13 inches (8 to 33 centimeters); brownish yellow (10YR 6/6) stony silt loam, yellowish brown (10YR 5/6) moist; weak very fine subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few very fine, fine, medium, and coarse roots; many very fine interstitial and tubular pores; 15 percent stones; moderately acid (pH 6.0); abrupt irregular boundary.
R—13 inches (33 centimeters); fractured serpentinized peridotite; fractures 8 to 20 inches (20 to 50 centimeters) apart.

Range in Characteristics

Depth to hard bedrock: 10 to 20 inches (25 to 50 centimeters)
Control section (by weighted average): 23 to 35 percent clay and 10 to 35 percent rock fragments
Water table: None noted

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Content of clay: 0 to 5 percent
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 3 to 6 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 20 to 27 percent
Rock fragments: 10 to 20 percent gravel and 25 to 30 percent stones
Reaction: Slightly acid or moderately acid

Bw horizon
Hue: 10YR or 2.5Y
Value: 6 or 7 dry, 5 or 6 moist
Chroma: 3 to 8 dry, 6 moist
Texture of the fine-earth fraction: Loam, silt loam, or clay loam
Content of clay: 15 to 35 percent
Rock fragments: 0 to 25 percent gravel and 15 to 20 percent stones
Reaction: Slightly acid or moderately acid

Ossagon Series

Setting

Landscape position: Hillslopes, mountain slopes, and broad ridges
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources

Slope: 9 to 50 percent
Elevation: 15 to 1,945 feet (6 to 593 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 60 to 90 inches (1,520 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 325 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Typic Haplohumults

Modal Pedon

Ossagon loam, in an area of Ossagon-Squashan complex, 9 to 30 percent slopes, on a slightly convex, northwest-facing slope of 24 percent, under redwood, Sitka spruce, red alder, cascara, western hemlock, California blackberry, salmonberry, salal, California huckleberry, swordfern, and deer fern, at an elevation of 180 feet (55 meters); in Redwood National Park, Humboldt County, California; USGS Orick quadrangle; UTM zone 10, 414728mE, 4577846mN, NAD83.

Oi—0 to 4 inches (0 to 10 centimeters); fresh and slightly decomposed conifer needles, alder leaves and twigs, and mosses and fungus; clear smooth boundary.
A—4 to 12 inches (10 to 31 centimeters); very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common very fine and common fine interstitial and common very fine and fine and few medium tubular pores; moderately acid (pH 6.0); clear wavy boundary.
AB—12 to 16 inches (31 to 41 centimeters); brown (10YR 4/3) clay loam, yellowish brown (10YR 5/4) dry; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine, fine, medium, and coarse roots; common very fine and fine and few medium tubular pores; moderately acid (pH 6.0); clear wavy boundary.
BAt—16 to 29 inches (41 to 73 centimeters); strong brown (7.5YR 4/6) loam, brownish yellow (10YR 6/6) dry; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular pores; common faint clay films on faces of peds; moderately acid (pH 6.0); gradual wavy boundary.
Bt—29 to 48 inches (73 to 121 centimeters); brown (7.5YR 4/4) clay loam, brownish yellow (10YR 6/6) dry; weak coarse and very coarse subangular blocky structure; moderately hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular pores; common distinct clay films on surfaces along root channels and few faint clay films on faces of peds; very strongly acid (pH 5.0); gradual wavy boundary.
BCt1—48 to 52 inches (121 to 131 centimeters); yellowish brown (10YR 5/8) sandy loam, brownish yellow (10YR 6/6) dry; massive; soft, very friable, slightly sticky and slightly plastic; few very fine, fine, medium, and coarse roots; few very fine and fine tubular pores; many faint clay films between sand grains; very strongly acid (pH 4.5); abrupt wavy boundary.
BCt2—52 to 56 inches (131 to 141 centimeters); yellowish brown (10YR 5/8) very gravelly loamy sand, brownish yellow (10YR 6/6) dry; massive; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine tubular

pores; 43 percent rounded pebbles; few distinct clay films on rock fragments; very strongly acid (pH 5.0); clear wavy boundary.
C—52 to 79 inches (141 to 200 centimeters); light brownish gray (2.5Y 6/2) sandy loam, pale yellow (2.5Y 7/4) dry; massive; slightly hard, very friable, nonsticky and slightly plastic; common very fine and few fine and medium roots; common very fine and fine tubular pores; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 32 percent clay and 0 to 13 percent gravel
Water table: None noted
Reaction: Moderately acid to very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 3 to 5 dry, 2 or 3 moist
Chroma: 2 or 3 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 18 to 25 percent
Rock fragments: 0 to 13 percent

Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 4 to 7 dry, 3 to 6 moist
Chroma: 4 to 8 dry or moist
Texture of the fine-earth fraction: Loam, silt loam, clay loam, or silty clay loam
Content of clay: 18 to 32 percent
Rock fragments: 0 to 13 percent gravel

C horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 2 to 8 dry or moist
Texture of the fine-earth fraction: Loamy sand, fine sandy loam, or sandy loam
Content of clay: 0 to 10 percent
Rock fragments: 0 to 45 percent gravel

Panthercreek Series

Setting

Landscape position: Stabilized debris slides on mountain slopes
Parent material: Debris flow colluvium derived from schist
Slope: 30 to 75 percent
Elevation: 45 to 2,480 feet (15 to 757 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high

Slowest permeability: Moderate
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 300 days
Taxonomic classification: Loamy-skeletal, mixed, semiactive, isomesic Typic Eutrudepts

Modal Pedon

Panthercreek gravelly loam, in an area of Panthercreek-Devilscreek-Coppercreek complex, 50 to 75 percent slopes, on an uneven, northeast-facing slope of 72 percent, under redwood, western hemlock, tanoak, Douglas-fir, swordfern, deer fern, and redwood-sorrel, at an elevation of 960 feet (293 meters); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 417485mE, 4554819mN, NAD83.

Oi—0 to 2 inches (0 to 6 centimeters); fresh and slightly decomposed redwood needles and tanoak leaves and twigs.
A—2 to 7 inches (6 to 17 centimeters); very dark grayish brown (10YR 3/2) gravelly loam, grayish brown (10YR 5/2) dry; weak fine and 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 fine interstitial pores; 34 percent gravel; moderately acid (pH 5.8); clear wavy boundary.
Bw—7 to 16 inches (17 to 41 centimeters); brown (10YR 4/3) gravelly loam, pale brown (10YR 6/3) dry; moderate medium and coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine, medium, and coarse roots; many very fine and fine interstitial and few very fine tubular pores; 17 percent gravel and 7 percent cobbles; moderately acid (pH 6.0); gradual wavy boundary.
C1—16 to 34 inches (41 to 86 centimeters); dark gray (5Y 4/1) extremely gravelly loam, gray (5Y 6/1) dry; massive; soft, very friable, nonsticky and slightly plastic; few very fine, fine, medium, and coarse roots; many very fine interstitial pores; 60 percent gravel; slightly acid (pH 6.2); diffuse wavy boundary.
C2—34 to 50 inches (86 to 126 centimeters); dark gray (5Y 4/1) very gravelly loam, gray (5Y 5/1) dry; massive; hard, very friable, nonsticky and slightly plastic; few very fine, fine, medium, and coarse roots; many very fine interstitial pores; 43 percent gravel; slightly acid (pH 6.1); diffuse wavy boundary.
C3—50 to 67 inches (126 to 171 centimeters); dark gray (5Y 4/1) very gravelly loam, gray (5Y 5/1) dry; massive; hard, friable, nonsticky and slightly plastic; few very fine, fine, medium, and coarse roots; many very fine interstitial pores; 40 percent gravel; slightly acid (pH 6.1); gradual smooth boundary.
C4—67 to 89 inches (171 to 226 centimeters); dark gray (N 4/0) very gravelly loam, gray (N 5/0) dry; massive; hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine interstitial pores; 35 percent gravel; neutral (pH 6.6).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 10 to 20 percent clay, 35 to 60 percent gravel, and 0 to 10 percent cobbles
Water table: None noted within a depth of 40 inches (102 centimeters)
Reaction: Moderately acid to very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Neutral to moderately acid

A horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 2 or 3 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 15 to 25 percent
Rock fragments: 20 to 35 percent gravel and 0 to 3 percent cobbles

Bw horizon
Hue: 10YR or 2.5Y
Value: 6 to 8 dry, 4 or 5 moist
Chroma: 2 to 4 dry, 2 or 3 moist
Texture of the fine-earth fraction: Loam
Content of clay: 15 to 25 percent
Rock fragments: 15 to 60 percent gravel and 0 to 10 percent cobbles

C horizon
Hue: 5Y or neutral
Value: 4 to 7 dry, 4 to 6 moist
Chroma: Neutral to 2 dry, neutral to 3 moist
Texture of the fine-earth fraction: Sandy loam or loam
Rock fragments: 35 to 60 percent gravel and 0 to 10 percent cobbles
Content of clay: 8 to 20 percent
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR or 10YR
Value—5 to 7 moist
Chroma—4 to 8 moist

Pasturerock Series

Setting

Landscape position: Mountain slopes
Parent material: Colluvium derived from sandstone and mudstone
Slope: 15 to 50 percent
Elevation: 170 to 3,160 feet (53 to 964 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 200 to 270 days
Taxonomic classification: Fine-loamy, mixed, active, mesic Ultic Haploxeralfs

Modal Pedon

Pasturerock loam, in an area of Pasturerock-Coyoterock-Maneze complex, 30 to 50 percent slopes, on a convex, west-facing slope of 45 percent, under Oregon white

oak, annual grasses, perennial grasses, and forbs, at an elevation of 2,250 feet (686 meters); in Redwood National Park, Humboldt County, California; USGS Ball Hills quadrangle; UTM zone 10, 422118mE, 4559536mN, NAD83.

Oi—0 to 1 inch (0 to 2 centimeters); slightly decomposed oak leaves and herbaceous litter.

A—1 to 5 inches (2 to 12 centimeters); grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; friable, slightly sticky and slightly plastic; many very fine and common fine roots; many fine irregular and common fine and medium tubular pores; about 8 percent small pebbles; slightly acid (pH 6.3); abrupt irregular boundary.

AB—5 to 8 inches (12 to 20 centimeters); grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; firm, moderately sticky and moderately plastic; common very fine, fine, and medium roots; common fine irregular and common fine and medium tubular pores; about 5 percent small pebbles; moderately acid (pH 5.9); clear wavy boundary.

Bt1—8 to 17 inches (20 to 42 centimeters); grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate coarse subangular block structure; firm, moderately sticky and moderately plastic; many fine and medium and common very fine and coarse roots; common fine and medium and few coarse tubular pores; few faint clay films on surfaces along pores and on all faces of peds; about 8 percent gravel; moderately acid (pH 5.7); gradual wavy boundary.

Bt2—17 to 35 inches (42 to 90 centimeters); light brownish gray (10YR 6/2) very cobbly clay loam, dark grayish brown (10YR 4/2) moist; weak coarse subangular blocky structure; firm, moderately sticky and moderately plastic; common fine, medium, and coarse roots; few fine and medium tubular pores; few faint clay films on all faces of peds and on surfaces along pores; 20 percent gravel and 15 percent cobbles; moderately acid (pH 5.7); clear wavy boundary.

BCt—35 to 48 inches (90 to 122 centimeters); pale brown (10YR 6/3) gravelly clay loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; firm, moderately sticky and moderately plastic; few fine, medium, and coarse roots; few fine tubular pores; few faint clay films on all faces of peds and on surfaces; 25 percent gravel; moderately acid (pH 5.7); diffuse smooth boundary.

C—48 to 69 inches (122 to 174 centimeters); pale brown (10YR 6/3) extremely gravelly sandy clay loam, brown (10YR 5/3) moist; massive; firm, moderately sticky and very plastic; few fine, medium, and coarse roots; few fine tubular pores; 75 percent gravel; moderately acid (pH 5.6).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay, 5 to 35 percent gravel, and 0 to 10 percent cobbles
Water table: None noted

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Neutral to moderately acid

A horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist

Chroma: 2 or 3 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 22 to 27 percent
Rock fragments: 3 to 10 percent gravel and 0 to 5 percent cobbles
Reaction: Slightly acid to strongly acid

Bt horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Clay loam or silty clay loam
Content of clay: 27 to 35 percent
Rock fragments: 5 to 35 percent gravel and 0 to 15 percent cobbles
Reaction: Moderately acid or strongly acid

C horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 4 or 5 moist
Chroma: 2 to 4 dry, neutral to 4 moist
Texture of the fine-earth fraction: Sandy clay loam, clay loam, or silty clay loam
Content of clay: 30 to 38 percent
Rock fragments: 15 to 75 percent gravel and 0 to 10 percent cobbles
Reaction: Moderately acid to neutral

Pigpen Series

Setting

Landscape position: Earthflows on lower mountain slopes
Parent material: Earthflow colluvium derived from mudstone and sandstone
Slope: 15 to 50 percent
Elevation: 215 to 3,185 feet (67 to 971 meters)
Depth class: Very deep
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Low
Slowest permeability: Moderately slow
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 250 to 280 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, thermic Aquultic Haploxeralfs

Modal Pedon

Pigpen gravelly loam, in an area of Raingage-Pigpen complex, 15 to 50 percent slopes, on a hummocky, concave, southwest-facing slope of 32 percent, under annual grasses, and perennial grasses, forbs, and rushes with 25 percent gravel on the surface, at an elevation of 640 feet (195 meters); in Redwood National Park, Humboldt County, California; USGS Panther Creek quadrangle; UTM zone 10, 422889mE, 4552825mN, NAD83.

A—0 to 6 inches (0 to 15 centimeters); grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine irregular and many very fine and common fine tubular pores; 30 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

AB—6 to 14 inches (15 to 36 centimeters); grayish brown (10YR 5/2) gravelly silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and few fine tubular pores; 20 percent gravel and 5 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.

Bt—14 to 32 inches (36 to 81 centimeters); variegated light yellowish brown (2.5Y 6/4) and gray (5Y 5/1) very cobbly silty clay loam, olive brown (2.5Y 4/4) and dark olive gray (5Y 3/2) moist; weak coarse and very coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine and fine roots; few very fine tubular pores; common faint clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation, strong brown (7.5YR 5/8) moist; 20 percent gravel and 15 percent cobbles; strongly acid (pH 5.5); abrupt wavy boundary.

Cg—32 to 59 inches (81 to 150 centimeters); gray (N 5/0) very gravelly clay loam, very dark gray (N 3/0) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; few medium distinct light yellowish brown (2.5Y 6/4) masses of iron accumulation, light olive brown (2.5Y 5/4) moist; 40 percent gravel and 10 percent cobbles; slightly alkaline (pH 7.5).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 27 to 35 percent clay, 25 to 40 percent gravel, and 10 to 20 percent cobbles

Water table: At a depth of 12 to 20 inches (30 to 50 centimeters)

Surface fragments: 15 to 30 percent gravel

A horizon

Hue: 10YR or 2.5Y

Value: 4 to 6 dry, 2 to 4 moist

Chroma: 2 or 3 dry, 1 to 3 moist

Texture of the fine-earth fraction: Loam

Content of clay: 20 to 26 percent

Rock fragments: 20 to 30 percent gravel and 0 to 5 percent cobbles

Reaction: Moderately acid or strongly acid

Bt horizon

Hue: 10YR, 2.5Y, or 5Y

Value: 4 to 7 dry, 3 to 6 moist

Chroma: Neutral to 4 dry or moist

Texture of the fine-earth fraction: Clay loam or silty clay loam

Content of clay: 27 to 35 percent

Rock fragments: 20 to 40 percent gravel and 10 to 20 percent cobbles

Reaction: Moderately acid or strongly acid

Redoximorphic features:

Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores

Quantity—common or many

Hue—7.5YR, 10YR, or 2.5Y

Value—5 or 6 dry, 4 to 6 moist

Chroma—4 to 6 dry, 4 to 8 moist

Cg horizon

Hue: 5Y or neutral

Value: 5 or 6 dry, 3 to 5 moist

Chroma: Neutral to 2 dry or moist

Texture of the fine-earth fraction: Clay loam or silty clay loam
Content of clay: 30 to 35 percent
Rock fragments: 30 to 60 percent gravel and 0 to 35 percent cobbles
Reaction: Slightly acid to slightly alkaline
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6 dry, 4 to 6 moist
Chroma—4 to 6 dry, 4 to 8 moist

Pittplace Series

Setting

Landscape position: Broad ridges and upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone, mudstone, and schist
Slope: 9 to 30 percent
Elevation: 990 to 2,780 feet (303 to 848 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 80 to 100 inches (2,030 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 290 days
Taxonomic classification: Fine, mixed, semiactive, isomesic Ustic Palehumults

Modal Pedon

Pittplace clay loam, in an area of Wiregrass-Pittplace-Scaath complex, 9 to 30 percent slopes, on a slightly convex, northeast-facing slope of 20 percent, under tanoak, Douglas-fir, Pacific madrone, Pacific rhododendron, California huckleberry, Cascade barberry, and brackenfern, at an elevation of 1,900 feet (623 meters); in Redwood National and State Parks, Del Norte County, California; USGS Childs Hill quadrangle; UTM zone 10, 414131mE, 4613787mN, NAD83.

A—0 to 7 inches (0 to 17 centimeters); dark brown (7.5YR 3/4) clay loam, brown (7.5YR 5/4) dry; weak and moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine, fine, and medium roots; common very fine and fine irregular and common very fine, fine, medium, and coarse tubular pores; 10 percent gravel; very strongly acid (pH 4.7); clear smooth boundary.

Bt1—7 to 14 inches (17 to 36 centimeters); strong brown (7.5YR 4/6) gravelly clay loam, brown (7.5YR 5/6) dry; moderate fine and medium subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; common very fine, fine, and medium roots; common very fine and fine irregular and common very fine, fine, medium, and coarse tubular pores; few distinct clay films on faces of peds; 20 percent gravel and 10 percent paragravel; very strongly acid (pH 4.5); clear wavy boundary.

Bt2—14 to 24 inches (36 to 60 centimeters); strong brown (7.5YR 4/6) gravelly silty clay loam, strong brown (7.5YR 5/6) dry; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, medium, and coarse roots; common very fine and fine irregular

and common very fine, fine, medium, and coarse tubular pores; few distinct clay films on faces of peds and on rock fragments; 15 percent gravel and 10 percent paragravel; very strongly acid (pH 4.5); clear smooth boundary.

Bt3—24 to 31 inches (60 to 78 centimeters); strong brown (7.5YR 5/6) paragravelly silty clay loam, reddish yellow (7.5YR 7/6) dry; moderate medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common fine and medium roots; moderately few very fine and fine irregular and common fine and medium tubular pores; many distinct clay films on faces of peds and on rock fragments; 5 percent gravel and 20 percent paragravel; very strongly acid (pH 4.5); clear wavy boundary.

Bt4—31 to 43 inches (78 to 109 centimeters); yellowish red (5YR 5/6) paragravelly silty clay loam, reddish yellow (7.5YR 7/6) dry; moderate fine subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common fine and medium roots; common very fine and fine irregular and common fine and medium tubular pores; many distinct clay films on faces of peds and on rock fragments; 5 percent gravel and 25 percent paragravel; very strongly acid (pH 4.5); gradual smooth boundary.

Bt5—43 to 56 inches (109 to 143 centimeters); yellowish red (5YR 5/6) gravelly clay loam, reddish yellow (7.5YR 7/6) dry; moderate fine and medium subangular blocky structure; hard, very firm, moderately sticky and very plastic; common fine and medium roots; common very fine and fine irregular and common fine and medium tubular pores; many distinct clay films on faces of peds and on rock fragments; 20 percent gravel and 20 percent paragravel; very strongly acid (pH 4.5); clear wavy boundary.

Bt6—56 to 63 inches (143 to 160 centimeters); yellowish red (5YR 5/6) very gravelly clay loam, reddish yellow (7.5YR 7/6) dry; weak medium and coarse subangular blocky structure; hard, very firm, moderately sticky and very plastic; very few fine roots; moderately few very fine irregular and common very fine and fine tubular pores; many distinct clay films on faces of peds and on rock fragments; 35 percent gravel, 1 percent cobbles, and 20 percent paragravel; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 35 to 50 percent clay, 0 to 25 percent gravel, and 0 to 20 percent paragravel

Water table: None noted

Reaction: Strongly acid or very strongly acid

O horizon (where present)

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 7.5YR or 10YR

Value: 5 to 7 dry, 3 to 5 moist

Chroma: 3 to 6 dry or moist

Texture of the fine-earth fraction: Clay loam

Content of clay: 27 to 35 percent

Rock fragments: 0 to 13 percent gravel

Upper part of the Bt horizon

Hue: 7.5YR, 10YR, or 2.5Y

Value: 5 to 7 dry, 4 or 5 moist
Chroma: 4 to 6 dry, 4 to 8 moist
Texture of the fine-earth fraction: Clay loam, silty clay loam, silty clay, or clay
Content of clay: 35 to 50 percent
Rock fragments: 0 to 25 percent gravel
Pararock fragments: 0 to 20 percent paragravel

Lower part of the Bt horizon
Hue: 5YR, 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 4 to 6 dry, 4 to 8 moist
Texture of the fine-earth fraction: Clay loam, silty clay loam, silty clay, or clay
Content of clay: 35 to 50 percent
Rock fragments: 5 to 40 percent gravel and 0 to 3 percent cobbles
Pararock fragments: 0 to 25 percent paragravel

Raingage Series

Setting

Landscape position: Earthflows on lower mountain slopes
Parent material: Earthflow colluvium derived from mudstone and sandstone (fig. 22)
Slope: 15 to 50 percent
Elevation: 215 to 3,185 feet (67 to 971 meters)
Depth class: Very deep
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Low
Slowest permeability: Moderately slow
Mean annual precipitation: 70 to 90 inches (1,780 to 2,290 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 250 to 280 days
Taxonomic classification: Fine-loamy, mixed, superactive, thermic Aquultic Haploxeralfs

Modal Pedon

Raingage loam, in an area of Raingage-Pigpen complex, 15 to 50 percent slopes, on a convex, southwest-facing slope of 18 percent, under hairy cat's ear, orchardgrass, and bristly dogstail grass, at an elevation of 970 feet (295 meters); in Redwood National Park, Humboldt County, California; USGS Panther Creek quadrangle; UTM zone 10, 422455mE, 4553550mN, NAD83.

A—0 to 17 inches (0 to 44 centimeters); grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and common fine tubular pores; 9 percent gravel; strongly acid (pH 5.5); abrupt wavy boundary.

BA—17 to 26 inches (44 to 65 centimeters); pale brown (10YR 6/3) very gravelly loam, olive brown (2.5Y 4/3) moist; weak coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine tubular pores; 36 percent gravel; strongly acid (pH 5.5); clear wavy boundary.

Btg—26 to 51 inches (65 to 130 centimeters); light olive gray (5Y 6/2) gravelly silty clay loam, olive gray (5Y 5/2) moist; weak coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; few faint clay films and many prominent silt flows in pores; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation,

Figure 22.—A profile of a Raingage soil. These soils are on lower, unstable mountain slopes under prairie vegetation. Depth is marked in centimeters.

strong brown (7.5YR 5/6) moist; 20 percent gravel; strongly acid (pH 5.5); clear wavy boundary.

Cg1—51 to 55 inches (130 to 140 centimeters); gray (N 5/0) gravelly silty clay loam, dark gray (N 4/0) moist; massive; hard, firm, moderately sticky and slightly plastic; few very fine tubular pores; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation, yellowish brown (10YR 5/6) moist; 16 percent gravel; slightly acid (pH 6.5); clear wavy boundary.

Cg2—55 to 59 inches (140 to 150 centimeters); gray (N 5/0) gravelly silty clay loam, dark gray (N 4/0) moist; massive; hard, firm, moderately sticky and slightly plastic; few very fine tubular pores; 29 percent gravel, rock content increasing irregularly with depth; neutral (pH 7.0).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 30 to 35 percent clay, 10 to 23 percent gravel, and 0 to 20 percent cobbles

Water table: At a depth of 20 to 30 inches (50 to 75 centimeters)

Surface fragments: 3 to 10 percent gravel

A horizon

Hue: 10YR or 2.5Y

Value: 4 to 6 dry, 2 to 4 moist

Chroma: 2 to 4 dry, 1 to 3 moist

Texture of the fine-earth fraction: Loam

Content of clay: 20 to 26 percent

Rock fragments: 5 to 13 percent gravel

Reaction: Moderately acid or strongly acid

Btg horizon

Hue: 10YR, 2.5Y, or 5Y

Value: 5 to 7 dry, 3 to 6 moist

Chroma: Neutral to 3 dry, 1 to 4 moist

Texture of the fine-earth fraction: Clay loam or silty clay loam

Content of clay: 30 to 35 percent

Rock fragments: 10 to 23 percent gravel and 0 to 20 percent cobbles

Reaction: Moderately acid or strongly acid

Redoximorphic features:

Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores

Quantity—common or many

Hue—7.5YR, 10YR, or 2.5Y

Value—5 to 7 dry, 4 to 6 moist

Chroma—4 to 6 dry, 4 to 8 moist

Cg horizon

Hue: 2.5Y, 5Y, or neutral

Value: 5 or 6 dry, 4 to 6 moist

Chroma: Neutral to 2 dry or moist

Texture of the fine-earth fraction: Clay loam or silty clay loam

Content of clay: 33 to 35 percent

Rock fragments: 10 to 35 percent gravel and 0 to 20 percent cobbles

Reaction: Slightly acid to slightly alkaline

Redoximorphic features:

Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores

Quantity—common or many

Hue—7.5YR, 10YR, or 2.5Y
Value—5 to 7 dry, 4 or 5 moist
Chroma—4 to 6 dry, 4 to 8 moist

Rockysaddle Series

Setting

Landscape position: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone, mudstone, and schist
Slope: 30 to 75 percent
Elevation: 275 to 3,185 feet (85 to 972 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low to moderately high
Slowest permeability: Slow or moderately slow
Mean annual precipitation: 75 to 100 inches (1,900 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 290 days
Taxonomic classification: Loamy-skeletal, mixed, semiactive, isomesic Ustic Palehumults

Modal Pedon

Rockysaddle extremely gravelly loam, in an area of Wiregrass-Rockysaddle-Scaath complex, 30 to 50 percent slopes, on a uniform, west-facing slope of 36 percent, under tanoak, madrone, and Douglas-fir, at an elevation of 2,400 feet (732 meters); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 424029mE, 4555178mN, NAD83.

Oi—0 to 2 inches (0 to 6 centimeters); fresh and slightly decomposed tanoak and madrone leaves, twigs, and bark; fungal mycelia at interface with mineral soil.
A—2 to 6 inches (6 to 14 centimeters); dark brown (7.5YR 3/3) extremely gravelly loam, brown (10YR 5/3) dry; moderate fine and medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine irregular and common medium and coarse tubular pores; 85 percent gravel; moderately acid (pH 5.7); abrupt smooth boundary.
AB—6 to 14 inches (14 to 35 centimeters); dark yellowish brown (7.5YR 3/4) very gravelly loam, light yellowish brown (10YR 6/4) dry; weak fine and medium subangular blocky and moderate fine and medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine and fine irregular and common medium and coarse tubular pores; 58 percent gravel; moderately acid (pH 5.6); gradual wavy boundary.
BAt1—14 to 21 inches (35 to 54 centimeters); dark yellowish brown (10YR 4/4) extremely gravelly clay loam, light yellowish brown (10YR 6/4) dry; moderate fine granular and moderate medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine and fine interstitial and common medium and coarse tubular pores; 67 percent gravel; strongly acid (pH 5.3); clear smooth boundary.
BAt2—21 to 27 inches (54 to 69 centimeters); yellowish brown (10YR 5/4) very gravelly clay loam, very pale brown (10YR 7/4) dry; moderate medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine and fine

interstitial and common medium and few coarse tubular pores; 52 percent gravel; strongly acid (pH 5.4); clear smooth boundary.

Bt1—27 to 37 inches (69 to 95 centimeters); yellowish brown (10YR 5/6) very gravelly silty clay loam, very pale brown (10YR 7/4) dry; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine interstitial and common medium and coarse tubular pores; few faint clay films lining pores and coating gravel; 50 percent gravel; strongly acid (pH 5.3); clear smooth boundary.

Bt2—37 to 45 inches (95 to 113 centimeters); yellowish brown (10YR 5/4) very gravelly silty clay loam, very pale brown (10YR 7/3) dry; moderate coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine and fine interstitial and common medium and few coarse tubular pores; few distinct clay films lining pores and on faces of peds; 36 percent gravel; strongly acid (pH 5.4); gradual smooth boundary.

BCt—45 to 61 inches (113 to 156 centimeters); yellowish brown (10YR 5/4) extremely gravelly silty clay loam, very pale brown (10YR 7/3) dry; massive; hard, friable, moderately sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine interstitial and common medium and few coarse tubular pores; few faint clay films lining pores; 73 percent gravel; strongly acid (pH 5.4).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 25 to 35 percent clay, 35 to 80 percent gravel, 0 to 40 percent cobbles, and 0 to 10 percent stones

Water table: None noted

Reaction: Moderately acid to very strongly acid

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 7.5YR or 10YR

Value: 5 or 6 dry, 3 or 4 moist

Chroma: 2 to 4 dry or moist

Texture of the fine-earth fraction: Loam

Content of clay: 20 to 27 percent

Rock fragments: 15 to 85 percent gravel and 0 to 5 percent cobbles

Bt horizon

Hue: 10YR or 2.5Y

Value: 6 to 8 dry, 4 or 5 moist

Chroma: 2 to 4 dry, 3 to 6 moist

Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam

Content of clay: 25 to 40 percent

Rock fragments: 35 to 80 percent gravel, 0 to 40 percent cobbles, and 0 to 10 percent stones

C horizon

Hue: 10YR or 2.5Y

Value: 6 to 8 dry, 4 or 5 moist

Chroma: 2 to 4 dry, 3 to 6 moist
Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam
Content of clay: 25 to 40 percent
Rock fragments: 20 to 85 percent gravel, 0 to 50 percent cobbles, and 0 to 15 percent stones

Rodgerpeak Series

Setting

Landscape position: Gently convex to planar areas on ridges
Parent material: Residuum derived from quartz-mica schist
Slope: 0 to 15 percent
Elevation: 2,675 to 2,780 feet (816 to 848 meters)
Depth class: Shallow
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Mean annual precipitation: 90 to 100 inches (2,290 to 2,550 millimeters)
Mean annual temperature: 46 to 55 degrees F (8 to 13 degrees C)
Frost-free season: 220 to 250 days
Taxonomic classification: Loamy, mixed, active, isomesic Lithic Dystrustepts

Modal Pedon

Rodgerpeak gravelly loam, in an area of Rodgerpeak-Wiregrass complex, 0 to 15 percent slopes, on a uniform, east-facing slope of 1 percent, under second growth Douglas-fir, redwood, tanoak, Pacific madrone, salal, and hairy manzanita, at an elevation of 2,740 feet (835 meters); in Redwood National Park, Humboldt County, California; USGS Rodger’s Peak quadrangle; UTM zone 10, 414171mE, 4556801mN, NAD83.

Oi—0 to 0.5 inch (0 to 1 centimeter); fresh and slightly decomposed redwood needles, salal leaves, salal twigs, and humus; angular pebbles (50 percent gravel pavement).

A—0.5 to 7 inches (1 to 19 centimeters); dark brown (7.5YR 3/4) gravelly loam, brown (7.5YR 5/4) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and slightly plastic; many very fine, fine, and medium and common coarse roots; few very fine irregular and common very fine and fine tubular pores; 29 percent gravel; strongly acid (pH 5.5); gradual wavy boundary.

BA—7 to 12 inches (19 to 30 centimeters); strong brown (7.5YR 4/6) loam, strong brown (7.5YR 5/6) dry; weak medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine, fine, and medium and common coarse roots; common very fine and fine and few medium tubular pores; 13 percent gravel; strongly acid (pH 5.5); gradual wavy boundary.

Bw—12 to 18 inches (30 to 45 centimeters); dark yellowish brown (10YR 4/6) gravelly loam, brownish yellow (10YR 6/6) dry; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine, medium, and coarse roots; few very fine and fine tubular pores; 15- by 30-centimeter krotovina filled with reddish yellow (5YR 6/6) clay loam, yellowish red (5YR 5/6) moist; 30 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

R—18 inches (45 centimeters); hard quartz-mica schist; pieces can only be chipped out with hand tools; depth to rock in the pit ranges from 14 to 20 inches.

Range in Characteristics

Depth to hard bedrock: 10 to 20 inches (25 to 50 centimeters)
Control section (by weighted average): 15 to 30 percent clay, 15 to 30 percent gravel, and 0 to 5 percent cobbles
Water table: None noted
Reaction: Moderately acid or strongly acid
Surface fragments: 10 to 70 percent gravel

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 5 dry, 3 to 5 moist
Chroma: 3 to 5 dry, 3 or 4 moist
Texture of the fine-earth fraction: Loam
Content of clay: 15 to 27 percent
Rock fragments: 15 to 30 percent gravel and 0 to 5 percent cobbles

Bw horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 4 to 6 dry, 4 to 8 moist
Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam
Content of clay: 20 to 30 percent
Rock fragments: 15 to 30 percent gravel and 0 to 5 percent cobbles

Russ Series

Setting

Landscape position: Lower alluvial flats and on flood plains
Parent material: Alluvium derived from mixed sources
Slope: 2 to 5 percent
Elevation: 35 to 145 feet (11 to 45 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Flooding: Occasional
Mean annual precipitation: 60 to 75 inches (1,520 to 1,900 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 300 to 330 days
Taxonomic classification: Coarse-loamy, mixed, superactive, nonacid, mesic Typic Udifluvents

Modal Pedon

Russ loam, in an area of Russ, 0 to 2 percent slopes, on a slope of 1 percent, under pasture, at an elevation of 20 feet (6 meters); Humboldt County, California; USGS Fortuna quadrangle; UTM zone 10, 397831mE, 446332mN, NAD83.

Ap—0 to 12 inches (0 to 30 centimeters); very dark grayish brown (2.5Y 3/2) loam, light brownish gray (2.5Y 6/2) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots throughout; many very fine and fine irregular pores; few fine faint dark yellowish brown (10YR 3/6) iron-manganese masses in the matrix; slightly acid (pH 6.4); diffuse wavy boundary.

C1—12 to 14 inches (30 to 36 centimeters); very dark grayish brown (2.5Y 3/2) fine sandy loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots throughout; many very fine and fine irregular pores; slightly acid (pH 6.4); diffuse wavy boundary.

C2—14 to 20 inches (36 to 52 centimeters); dark grayish brown (2.5Y 4/2) fine sandy loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and nonplastic; common very fine and fine roots throughout; many very fine to coarse dendritic tubular pores; neutral (pH 6.6); abrupt wavy boundary.

C3—20 to 50 inches (52 to 127 centimeters); dark grayish brown (2.5Y 4/2) fine sandy loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and nonplastic; few very fine and fine roots throughout; common very fine and fine dendritic tubular pores; neutral (pH 6.6); abrupt wavy boundary.

C4—50 to 60 inches (127 to 153 centimeters); dark grayish brown (2.5Y 4/2) stratified loamy fine sand to fine sandy loam, light brownish gray (2.5Y 6/2) dry; massive, single grain; soft, very friable, nonsticky and nonplastic; few very fine roots throughout; common very fine and fine dendritic tubular pores; common fine distinct dark yellowish brown (10YR 3/6) iron-manganese masses in the matrix; common medium distinct dark gray (2.5Y 4/1) iron depletions in the matrix; neutral (pH 6.8).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 10 to 18 percent clay
Water table: At a depth of 40 to 60 inches (100 to 150 centimeters) in January and February and greater than 72 inches (183 centimeters) March through December
Surface fragments: 0 to 5 percent gravel

A or Ap horizon
Hue: 10YR or 2.5Y
Value: 3 to 6 dry or moist
Chroma: 1 to 3 dry, 1 or 2 moist
Texture of the fine-earth fraction: Loam
Content of clay: 10 to 24 percent
Rock fragments: 0 to 3 percent gravel
Reaction: Neutral or slightly acid

Upper part of the C horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist
Chroma: Neutral to 3 dry, neutral to 2 moist
Texture of the fine-earth fraction: Loamy coarse sand, fine sandy loam, or loam
Content of clay: 10 to 20 percent
Reaction: Neutral or slightly acid

Lower part of the C horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist
Chroma: Neutral to 3 dry, neutral to 2 moist

Texture of the fine-earth fraction: Loamy coarse sand, loamy fine sand, fine sandy loam, loam, or silt loam
Content of clay: 5 to 20 percent
Reaction: Neutral to moderately acid
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—few or common
Hue—7.5YR or 10YR
Value—3 or 4 moist
Chroma—4 to 6 moist

Samoa Series

Setting

Landscape position: Recently stabilized dunes
Parent material: Eolian and marine sand derived from mixed sources
Slope: 2 to 50 percent
Elevation: 0 to 65 feet (0 to 20 meters)
Depth class: Very deep
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: Very high
Slowest permeability: Rapid
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual temperature: 54 to 59 degrees F (12 to 15 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Mixed, mesic Typic Udipsamments

Modal Pedon

Samoa sand, in an area of Samoa-Clambeach-Dune land complex, 0 to 50 percent slopes, on a northeast-facing 50 percent slope under California polypody, coyotebrush, yellow bush lupine, Brewer's rush, and ripgut brome, at an elevation of 20 feet (6 meters); about 3 miles west of the town of Arcata; Humboldt County, California; USGS Eureka quadrangle; UTM zone 10, 402112mE, 4524410mN, NAD83.

Oi—0 to 1 inch (0 to 1 centimeter); slightly decomposed moss, grass, and forb litter, very dark brown (10YR 2/2) rubbed; 95 percent fibers unrubbed, 5 percent rubbed; moderately acid (pH 5.6).
A1—1 to 2 inches (1 to 4 centimeters); very dark brown (10YR 2/2) sand, dark brown (10YR 3/3) dry; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots throughout; many very fine irregular pores; moderately acid (pH 6.0); clear wavy boundary.
A2—2 to 6 inches (4 to 14 centimeters); very dark grayish brown (2.5Y 3/2) sand, grayish brown (2.5Y 5/2) dry; 30 percent weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; 70 percent single grain; loose, loose, nonsticky and nonplastic; many very fine, common fine and medium, and few coarse roots throughout; few very fine tubular pores; 5 percent fine distinct dark yellowish brown (10YR 4/4) iron-manganese masses along root channels; moderately acid (pH 6.0); gradual wavy boundary.
AC—6 to 18 inches (14 to 45 centimeters); very dark grayish brown (2.5Y 3/2) sand, grayish brown (2.5Y 5/2) dry; single grain; loose, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots throughout; many very fine and fine interstitial pores; 1 percent fine distinct dark yellowish brown (10YR 4/4) iron-manganese masses along root channels; moderately acid (pH 6.0); gradual wavy boundary.

C—18 to 63 inches (45 to 160 centimeters); dark olive gray (5Y 3/2) sand, olive gray (5Y 5/2) dry; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots throughout; many very fine and fine interstitial pores; slightly acid (pH 6.4).

Range in Characteristics

Control section (by weighted average): 0 to 1 percent clay and 0 to 30 percent rock fragments
Water table: None noted
Surface fragments: 0 to 5 percent gravel
Other: The A horizon is not present in areas where the dunes have sparse dune-mat vegetation or have been recently stabilized by European beachgrass.

O horizon (where present)
Hue: 10YR
Value: 2 to 4 dry or moist
Chroma: 2 dry or moist
Kind of organic material: Slightly decomposed
Reaction: Neutral

A horizon
Hue: 10YR, 2.5Y, or 5Y
Value: 3 to 6 dry, 2 or 3 moist
Chroma: 1 to 3 dry or moist
Texture of the fine-earth fraction: Fine sand and sand
Content of clay: 0 to 2 percent
Rock fragments: 0 to 5 percent gravel
Reaction: Moderately acid
Redoximorphic features (where present):
Type—fine iron-manganese masses along root channels
Quantity—few
Hue—10YR or 2.5Y
Value—4 or 5 moist
Chroma—3 or 4 moist

C horizon
Hue: 2.5Y or 5Y
Value: 5 dry, 3 or 4 moist
Chroma: 1 to 3 dry or moist
Texture of the fine-earth fraction: Fine sand and sand
Content of clay: 0 to 1 percent
Rock fragments: 0 to 30 percent gravel
Reaction: Slightly acid or neutral

Sasquatch Series

Setting

Landscape position: Mountain slopes, hillslopes, and broad ridges
Parent material: Colluvium and residuum derived from sandstone and mudstone (fig. 23)
Slope: 5 to 75 percent
Elevation: 15 to 1,850 feet (5 to 565 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low to moderately high

Figure 23.—A profile of a Sasquatch soil. These soils form in colluvium and residuum derived from sandstone and mudstone. The thick, dark surface is the dominant feature of soils that form under a thick cover of swordfern. Depth is marked in centimeters.

Slowest permeability: Slow or moderately slow
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 250 to 325 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Typic Palehumults

Modal Pedon

Sasquatch loam, in an area of Sasquatch-Sisterrocks-Ladybird complex, 30 to 50 percent slopes, on a uniform, southwest-facing slope of 40 percent, under redwood, Douglas-fir, western hemlock, thimbleberry, salmonberry, California huckleberry, salal, Pacific rhododendron, redwood-sorrel, and swordfern, at an elevation of 290 meters (951 feet); in Del Norte Coastal Redwoods State Park, Del Norte County, California; USGS Childs Hill quadrangle; UTM zone 10, 406871mE, 4611952mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); very dark brown (10YR 2/2) slightly decomposed needles, leaves, and twigs, brown (10YR 5/3) dry; common very fine and fine roots; many very fine and fine and common interstitial pores; 20 percent wood fragments; strongly acid (pH 5.2); abrupt smooth boundary.

A1—1 to 4 inches (3 to 11 centimeters); very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; moderate very fine and fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and medium and few fine roots; common very fine and fine tubular and interstitial pores; 8 percent gravel; strongly acid (pH 5.2); clear wavy boundary.

A2—4 to 17 inches (11 to 43 centimeters); very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; weak very fine and moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine, fine, medium, and coarse roots; common very fine and fine tubular and common fine interstitial pores; strongly acid (pH 5.2); 5 percent gravel; clear wavy boundary.

BAt—17 to 26 inches (43 to 67 centimeters); dark brown (7.5YR 3/4) clay loam, yellowish brown (10YR 5/4) dry; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine, fine, and medium roots; common very fine and fine tubular and interstitial and few medium tubular pores; 8 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

Bt1—26 to 46 inches (67 to 117 centimeters); strong brown (7.5YR 5/6) cobbly clay loam, yellow (10YR 7/6) dry; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine tubular and interstitial and few medium tubular pores; 15 percent gravel and 7 percent cobbles; very strongly acid (pH 5.0); clear wavy boundary.

Bt2—46 to 56 inches (117 to 141 centimeters); strong brown (7.5YR 5/6) clay loam, reddish yellow (7.5YR 7/6) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few very fine and common fine, medium, and coarse roots; moderately few very fine, common fine, and few medium tubular pores; common distinct clay films on faces of peds; 10 percent gravel; very strongly acid (pH 4.8); clear wavy boundary.

Bt3—56 to 70 inches (141 to 179 centimeters); light yellowish brown (2.5Y 6/4) gravelly clay loam, yellow (2.5Y 7/6) dry; moderate medium and weak coarse subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few very fine, fine, and medium roots; moderately few fine tubular pores; common distinct clay films on faces of peds; 20 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

BCt—70 to 79 inches (179 to 200 centimeters); light olive brown (2.5Y 5/6) gravelly clay loam, yellow (2.5Y 7/6) dry; weak medium and coarse subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common fine and medium and few coarse and very coarse roots; moderately few fine tubular and interstitial pores; 15 percent gravel; very strongly acid (pH 4.8).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay, 0 to 35 percent gravel, 0 to 7 percent cobbles, and 0 to 20 percent paragravel
Water table: None noted
Reaction: Moderately acid to very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Content of clay: 0 to 5 percent
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 4 or 5 dry, 2 or 3 moist
Chroma: 2 to 4 dry, 1 to 4 moist
Texture of the fine-earth fraction: Loam
Content of clay: 20 to 27 percent
Rock fragments: 0 to 35 percent gravel and 0 to 5 percent cobbles

Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 4 to 7 dry, 3 to 6 moist
Chroma: 4 to 6 dry, 3 to 6 moist
Texture of the fine-earth fraction: Clay loam or silty clay loam
Content of clay: 27 to 40 percent
Rock fragments: 0 to 35 percent gravel and 0 to 7 percent cobbles
Pararock fragments: 0 to 20 percent paragravel

Scaath Series

Setting

Landscape position: Strongly convex mountain slopes and narrow ridges
Parent material: Colluvium and residuum derived from sandstone, mudstone, and schist
Slope: 15 to 75 percent
Elevation: 445 to 3,185 feet (137 to 972 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 75 to 100 inches (1,900 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 220 to 290 days
Taxonomic classification: Loamy-skeletal, mixed, active, isomesic Ustic Haplohumults

Modal Pedon

Scaath gravelly loam, in an area of Scaath-Rockysaddle-Wiregrass complex, dry, 50 to 75 percent slopes, on a uniform, south-facing slope of 56 percent, under tanoak, Douglas-fir, Pacific madrone, and sparse California huckleberry, at an elevation of 2,000 feet (610 meters); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 417636mE, 4564161mN, NAD83.

Oi—0 to 1 inch (0 to 4 centimeters); slightly decomposed Douglas-fir needles, twigs, cones, and tanoak leaves.

Oe—1 to 2 inches (4 to 5 centimeters); moderately decomposed leaves, humus, and fungal mycelia.

A—2 to 11 inches (5 to 29 centimeters); dark brown (10YR 3/3) gravelly loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium and few coarse roots; common very fine and fine irregular and common very fine and fine tubular pores; 15 percent fine and 5 percent coarse pebbles; strongly acid (pH 5.1); clear wavy boundary.

ABt—11 to 18 inches (29 to 45 centimeters); dark yellowish brown (10YR 3/4) gravelly clay loam, yellowish brown (10YR 5/4) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common fine, medium, and coarse roots; common very fine irregular and common very fine, fine, and medium tubular pores; 15 percent fine and 8 percent coarse pebbles; strongly acid (pH 5.4); abrupt wavy boundary.

2BAt—18 to 24 inches (45 to 61 centimeters); brown (7.5YR 4/4) very cobbly clay loam, light brown (7.5YR 6/4) dry; weak fine subangular blocky structure; hard, firm, moderately sticky and slightly plastic; few very fine and fine, common medium, and few coarse roots; few very fine irregular and few very fine and fine tubular pores; 25 percent fine pebbles, 10 percent coarse pebbles, and 20 percent cobbles; strongly acid (pH 5.4); clear wavy boundary.

2Bt1—24 to 33 inches (61 to 83 centimeters); yellowish brown (10YR 5/6) extremely cobbly clay loam, very pale brown (10YR 7/5) dry; weak fine subangular blocky structure; slightly hard, firm, moderately sticky and moderately plastic; few very fine, fine, and coarse and common medium roots; few very fine tubular pores; common faint clay films on faces of peds; 20 percent coarse pebbles, 15 percent fine pebbles, and 50 percent cobbles; strongly acid (pH 5.4); clear broken boundary.

2Bt2—33 to 37 inches (83 to 94 centimeters); dark yellowish brown (10YR 4/4) extremely gravelly clay loam, light yellowish brown (10YR 6/4) dry; weak coarse subangular blocky structure; slightly hard, firm, moderately sticky and moderately plastic; few fine and medium roots; few very fine tubular pores; common distinct clay films on faces of peds; 50 percent fine pebbles and 25 percent coarse pebbles; strongly acid (pH 5.5); abrupt irregular boundary.

2R—37 inches (94 centimeters); fractured shale; fractures mostly less than 1 millimeter across and greater than 10 centimeters apart; about 1 percent soil material in fractures and pockets; few medium and fine roots; few very fine interstitial pores; common prominent clay films on fracture faces; strongly acid (pH 5.5).

Range in Characteristics

Depth to hard bedrock: 20 to 40 inches (50 to 100 centimeters)

Control section (by weighted average): 25 to 35 percent clay, 35 to 75 percent gravel, and 0 to 50 percent cobbles

Water table: None noted

Reaction: Moderately acid to very strongly acid

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly or moderately decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 3 to 5 dry, 2 to 4 moist
Chroma: 3 or 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Loam
Content of clay: 23 to 27 percent
Rock fragments: 15 to 30 percent gravel and 0 to 5 percent cobbles

2Bt horizon (not all pedons have a lithologic discontinuity)
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 25 to 35 percent
Rock fragments: 30 to 75 percent gravel and 0 to 50 percent cobbles

C horizon (where present)
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 20 to 30 percent
Rock fragments: 35 to 55 percent gravel and 0 to 15 percent cobbles

Sidehill Series

Setting

Landscape position: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone
Slope: 30 to 100 percent
Elevation: 45 to 4,755 feet (15 to 1,450 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 150 to 250 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Humic Dystroxerepts

Modal Pedon

Sidehill extremely gravelly sandy loam, in an area of Mooncreek-Noisy-Sidehill complex, 30 to 75 percent slopes, on a linear, east-facing slope of 48 percent, under a stand of Douglas-fir, tanoak, Pacific madrone, and salal, at an elevation of 2,100 feet (645 meters); Humboldt County, California; USGS Hupa Mountain quadrangle; UTM zone 10, 434323mE, 4541699mN, NAD83.

Oi—0 to 2 inches (0 to 4 centimeters); very dark gray (10YR 3/1) slightly decomposed plant material consisting of needles and leaves of Douglas-fir and tanoak, black (10YR 2/1) moist; about 100 percent fiber unrubbed, 80 percent rubbed; loose,

nonsticky and nonplastic; few very fine roots; common fine irregular pores; moderately acid (pH 5.6); abrupt smooth boundary.

Oe—2 to 6 inches (4 to 15 centimeters); very dark gray (10YR 3/1) moderately decomposed plant material consisting of needles and leaves of Douglas-fir and tanoak, black (10YR 2/1) moist; about 100 percent fiber unrubbed, 30 percent rubbed; loose, nonsticky and nonplastic; few very fine roots; common fine irregular pores; moderately acid (pH 5.6); abrupt smooth boundary.

A1—6 to 10 inches (15 to 25 centimeters); dark grayish brown (10YR 4/2) extremely gravelly sandy loam, black (10YR 2/1) moist; moderate very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine to very coarse roots; many very fine and fine tubular and irregular pores; 65 percent gravel and 5 percent cobbles; strongly acid (pH 5.4); clear wavy boundary.

A2—10 to 18 inches (25 to 45 centimeters); dark grayish brown (10YR 4/2) extremely gravelly sandy loam, black (10YR 2/1) moist; strong very fine and fine subangular blocky structure parting to strong very fine granular; slightly hard, very friable, nonsticky and nonplastic; many very fine to very coarse roots; many very fine and fine tubular pores; 55 percent gravel and 5 percent cobbles; strongly acid (pH 5.2); clear wavy boundary.

Bw—18 to 33 inches (45 to 85 centimeters); brown (10YR 4/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine to very coarse roots; many very fine interstitial and many fine tubular pores; 40 percent gravel and 5 percent cobbles; very strongly acid (pH 4.8); abrupt irregular boundary.

2R—34 inches (85 centimeters); indurated sandstone with fractures 15 to 25 centimeters apart.

Range in Characteristics

Depth to hard bedrock: 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 18 to 25 percent clay, 35 to 55 percent gravel, and 5 to 30 percent cobbles
Water table: None noted
Reaction: Moderately acid to very strongly acid
Surface fragments: 15 to 55 percent gravel and 5 to 25 percent cobbles

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly or moderately decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR or 2.5Y
Value: 3 to 5 dry, 2 or 3 moist
Chroma: 2 to 4 dry, 1 to 3 moist
Texture of the fine-earth fraction: Sandy loam or loam
Content of clay: 10 to 25 percent
Rock fragments: 15 to 75 percent gravel and 0 to 35 percent cobbles

Bw horizon
Hue: 10YR or 2.5Y
Value: 3 to 6 dry or moist
Chroma: 1 to 6 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 10 to 25 percent
Rock fragments: 35 to 55 percent gravel and 5 to 30 percent cobbles

Sisterrocks Series

Setting

Landscape position: Mountain slopes and hillslopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 15 to 75 percent
Elevation: 5 to 1,850 feet (2 to 565 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 250 to 325 days
Taxonomic classification: Loamy-skeletal, mixed, superactive, isomesic Typic Palehumults

Modal Pedon

Sisterrocks loam, in an area Sasquatch-Sisterrocks-Ladybird complex, 30 to 50 percent slopes, on a uniform southeast-facing slope of 40 percent, under redwood, Douglas-fir, western hemlock, California huckleberry, and swordfern, at an elevation of 880 feet (268 meters); in Del Norte Redwoods State Park, Del Norte County, California; USGS Childs Hill quadrangle; UTM zone 10, 407137mE, 4613395mN, NAD83.

A1—0 to 9 inches (0 to 22 centimeters); very dark brown (10YR 2/2) loam, brown (10YR 5/3) dry; moderate very fine subangular blocky and moderate fine granular structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine and fine interstitial and tubular pores; 5 percent gravel; strongly acid (pH 5.2); clear smooth boundary.

A2—9 to 16 inches (22 to 40 centimeters); dark brown (10YR 3/3) gravelly clay loam, yellowish brown (10YR 5/4) dry; moderate very fine and fine subangular blocky structure; slightly hard, firm, slightly sticky and moderately plastic; common very fine, fine, medium, and coarse roots; many very fine and fine interstitial and many very fine, fine, and medium tubular pores; 25 percent gravel; very strongly acid (pH 4.9); clear smooth boundary.

Bt1—16 to 24 inches (40 to 61 centimeters); dark yellowish brown (10YR 4/4) very gravelly clay loam, light yellowish brown (10YR 6/4) dry; moderate very fine and fine subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; few distinct clay films on faces of peds; common very fine, fine, medium, and coarse roots; common very fine and fine interstitial and common very fine, fine, and medium tubular pores; 35 percent gravel; very strongly acid (pH 4.7); clear smooth boundary.

Bt2—24 to 31 inches (61 to 79 centimeters); strong brown (7.5YR 5/6) very gravelly clay loam, brownish yellow (10YR 6/6) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; few distinct clay films on faces of peds and rock fragments; moderately few very fine and common fine and medium roots; common very fine and fine interstitial and common very fine, fine, and medium tubular pores; 35 percent gravel; very strongly acid (pH 4.5); clear smooth boundary.

Bt3—31 to 41 inches (79 to 105 centimeters); strong brown (7.5YR 4/6) very gravelly clay loam, brownish yellow (10YR 6/6) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; few distinct clay films on faces of peds and rock fragments; moderately few very

fine and fine roots; common very fine and fine interstitial and tubular pores; 40 percent gravel; very strongly acid (pH 4.5); clear smooth boundary.

Bt4—41 to 55 inches (105 to 140 centimeters); strong brown (7.5YR 4/6) very gravelly silty clay loam, brownish yellow (10YR 6/6) dry; moderate medium and weak coarse subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; few distinct clay films on faces of peds and rock fragments; moderately few very fine and fine roots; common very fine and fine interstitial and tubular pores; 40 percent gravel; very strongly acid (pH 4.5); clear wavy boundary.

Bt5—55 to 67 inches (140 to 170 centimeters); strong brown (7.5YR 4/6) very gravelly silty clay loam, brownish yellow (10YR 6/6) dry; moderate medium and weak coarse subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; few distinct clay films on faces of peds and rock fragments; very few very fine roots; common very fine and fine interstitial and moderately few very fine and fine tubular pores; 45 percent gravel, 5 percent cobbles, and 5 percent paragravel; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay, 35 to 75 percent gravel, 0 to 15 percent cobbles, and 0 to 5 percent paragravel
Water table: None noted
Reaction: Moderately acid to very strongly acid

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR
Value: 4 or 5 dry, 2 or 3 moist
Chroma: 2 to 4 dry, 1 to 3 moist
Texture of the fine-earth fraction: Loam and clay loam
Content of clay: 20 to 27 percent
Rock fragments: 5 to 30 percent gravel and 0 to 5 percent cobbles

Bt horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Sandy clay loam, loam, clay loam, or silty clay loam
Content of clay: 23 to 35 percent
Rock fragments: 35 to 75 percent gravel and 0 to 15 percent cobbles
Pararock fragments: 0 to 5 percent paragravel

C horizon (where present)
Hue: 7.5YR, 10YR, or 2.5Y
Value: 6 to 8 dry, 4 to 6 moist
Chroma: 3 to 5 dry, 5 to 7 moist
Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam
Content of clay: 23 to 35 percent
Rock fragments: 40 to 70 percent gravel and 5 to 25 percent cobbles
Pararock fragments: 0 to 20 percent paragravel and 0 to 7 percent paracobbles

Slidecreek Series

Setting

Landscape position: Mountain slopes
Parent material: Colluvium and residuum derived from sandstone, mudstone, and siltstone
Slope: 9 to 75 percent
Elevation: 80 to 2,520 feet (24 to 768 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 290 days
Taxonomic classification: Loamy-skeletal, mixed, semiactive, isomesic Typic Palehumults

Modal Pedon

Slidecreek gravelly loam, in an area of Coppercreek-Slidecreek-Tectah complex, 30 to 50 percent slopes, on a convex, northeast-facing slope of 30 percent, under Douglas-fir, redwood, tanoak, red alder, Pacific rhododendron, California huckleberry, red huckleberry, salal, and swordfern, at an elevation of 600 feet (183 meters); in Redwood National and State Parks, Del Norte County, California; USGS Childs Hill quadrangle; UTM zone 10, 407283mE, 4619811mN, NAD83.

A—0 to 7 inches (0 to 18 centimeters); very dark grayish brown (10YR 3/2) gravelly loam, brown (10YR 5/3) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine and fine irregular and common very fine, fine, and medium tubular pores; 30 percent gravel; strongly acid (pH 5.3); clear wavy boundary.

BAt—7 to 14 inches (18 to 36 centimeters); dark yellowish brown (10YR 4/4) very gravelly loam, pale brown (10YR 6/3) dry; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine and fine irregular and common very fine, fine, and medium tubular pores; few distinct clay films on faces of peds and on rock fragments; 45 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

Bt1—14 to 24 inches (36 to 61 centimeters); brown (10YR 4/3) very gravelly clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many very fine and fine, common medium and coarse, and few very coarse roots; many very fine and fine irregular and common very fine, fine, coarse, and very coarse tubular pores; few distinct clay films on faces of peds and on rock fragments; 45 percent gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt2—24 to 37 inches (61 to 93 centimeters); dark yellowish brown (10YR 4/4) very gravelly clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine, fine, medium, and coarse roots; many very fine and fine irregular and common very fine, fine, and medium tubular pores; few distinct clay films on faces of peds and on rock fragments; 50 percent gravel; very strongly acid (pH 4.6); clear smooth boundary.

Bt3—37 to 50 inches (93 to 127 centimeters); dark yellowish brown (10YR 4/4) very gravelly clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and weak

medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine, fine, medium, coarse, and very coarse roots; many very fine and fine irregular and common very fine, fine, and medium tubular pores; few distinct clay films on faces of peds and on rock fragments; 50 percent gravel; very strongly acid (pH 4.5); clear smooth boundary.

Bt4—50 to 61 inches (127 to 155 centimeters); dark yellowish brown (10YR 4/4) very gravelly clay loam, light yellowish brown (10YR 6/4) dry; weak fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few fine and common medium and coarse roots; common very fine and fine irregular and tubular pores; few distinct clay films on faces of peds and on rock fragments; 45 percent gravel and 3 percent cobbles; very strongly acid (pH 4.5); clear smooth boundary.

BCt—61 to 79 inches (155 to 200 centimeters); dark yellowish brown (10YR 4/4) extremely gravelly clay loam, light yellowish brown (10YR 6/4) dry; weak fine and medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; moderately few very fine and common fine roots; common very fine and fine irregular and common fine tubular pores; few distinct clay films on faces of peds and on rock fragments; 50 percent gravel and 10 percent cobbles; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 25 to 35 percent clay, 35 to 80 percent gravel, 0 to 40 percent cobbles, and 0 to 20 percent stones

Water table: None noted

Reaction: Moderately acid to very strongly acid

O horizon (where present)

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 7.5YR or 10YR

Value: 5 or 6 dry, 3 or 4 moist

Chroma: 2 to 4 dry or moist

Texture of the fine-earth fraction: Loam

Content of clay: 20 to 27 percent

Rock fragments: 15 to 90 percent gravel and 0 to 10 percent cobbles

Bt horizon

Hue: 10YR or 2.5Y

Value: 6 to 8 dry, 4 or 5 moist

Chroma: 2 to 4 dry, 3 to 6 moist

Texture of the fine-earth fraction: Clay loam or silty clay loam

Content of clay: 27 to 35 percent

Rock fragments: 35 to 65 percent gravel, 0 to 10 percent cobbles, and 0 to 20 percent stones

C horizon (where present)

Hue: 10YR or 2.5Y

Value: 6 to 8 dry, 4 or 5 moist

Chroma: 2 to 4 dry, 3 to 6 moist

Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 20 to 40 percent
Rock fragments: 40 to 80 percent gravel, 5 to 40 percent cobbles, and 0 to 10 percent stones

Squashan Series

Setting

Landscape position: Mountain slopes, hillslopes, and narrow ridges
Parent material: Colluvium and residuum from weakly consolidated fluvial and beach deposits derived from mixed sources
Slope: 9 to 50 percent
Elevation: 15 to 1,945 feet (6 to 593 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 60 to 90 inches (1,520 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 325 days
Taxonomic classification: Loamy-skeletal, isotic, isomesic Typic Haplohumults

Modal Pedon

Squashan loam, in an area of Ossagon-Goldbluffs-Squashan complex, 9 to 30 percent slopes, on a convex, southwest-facing slope of 12 percent, under redwood, Douglas-fir, tanoak, California huckleberry, Pacific rhododendron, California huckleberry, salmonberry, salal, swordfern, and redwood-sorrel, at an elevation of 360 feet (110 meters); in Prairie Creek Redwoods State Park, Humboldt County, California; USGS Fern Canyon quadrangle; UTM zone 10, 415889mE, 4580993mN, NAD83.

Oi—0 to 2 inches (0 to 5 centimeters); very dark brown (10YR 2/2) fresh and slightly decomposed conifer needles, tanoak leaves, and twigs, brown (10YR 5/3) dry; common fine and few medium roots.
A1—2 to 9 inches (5 to 22 centimeters); very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; moderate medium granular and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular and interstitial pores; 10 percent well rounded pebbles; moderately acid (pH 5.8); clear smooth boundary.
A2—9 to 17 inches (22 to 43 centimeters); dark brown (10YR 3/3) gravelly loam, brown (10YR 5/3) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse and very coarse roots; common very fine and fine tubular and interstitial and few medium tubular pores; 20 percent well rounded pebbles and 5 percent well rounded cobbles; moderately acid (pH 5.8); clear wavy boundary.
Bt1—17 to 33 inches (43 to 83 centimeters); brown (7.5YR 4/4) very gravelly clay loam, strong brown (7.5YR 5/6) dry; weak fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, and very coarse and few medium and coarse roots; common very fine and fine tubular and interstitial pores; few distinct clay films on faces of peds and rock faces; 45 percent well rounded pebbles and 10 percent well rounded cobbles; strongly acid (pH 5.4); clear wavy boundary.
Bt2—33 to 47 inches (83 to 120 centimeters); brown (7.5YR 4/4) very gravelly clay

loam, strong brown (7.5YR 5/6) dry; moderate fine subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium, coarse, and very coarse roots; common very fine and fine tubular and interstitial pores; few distinct clay films on faces of peds and rock faces; 40 percent well rounded pebbles and 10 percent well rounded cobbles; strongly acid (pH 5.4); clear wavy boundary.

Bt3—47 to 65 inches (120 to 165 centimeters); strong brown (7.5YR 5/8) extremely gravelly sandy loam, brownish yellow (10YR 6/6) dry; moderate fine subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few fine roots; common very fine and fine tubular and interstitial pores; common distinct clay films on faces of peds and few distinct clay films on rock faces; 55 percent well rounded pebbles and 5 percent well rounded cobbles; strongly acid (pH 5.4); clear wavy boundary.

BCt—65 to 79 inches (165 to 200 centimeters); yellowish brown (10YR 5/6) extremely gravelly sandy loam, yellow (10YR 7/6) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common very fine and fine interstitial pores; few distinct clay films on faces of peds and rock faces; 60 percent well rounded pebbles, 5 percent well rounded cobbles, and 10 percent paragravel; moderately acid (pH 5.6).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 18 to 30 percent clay, 35 to 70 percent gravel, and 0 to 10 percent cobbles
Water table: None noted
Reaction: Moderately acid or strongly acid
Surface fragments: 0 to 30 percent gravel and 0 to 30 percent cobbles

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 3 to 5 dry, 3 or 4 moist
Chroma: 2 or 3 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 15 to 25 percent
Rock fragments: 10 to 35 percent gravel and 0 to 5 percent cobbles

Bt horizon
Hue: 7.5YR or 10YR
Value: 4 to 6 dry, 4 to 7 moist
Chroma: 4 to 8 dry or moist
Texture of the fine-earth fraction: Sandy loam, loam, sandy clay loam, or clay loam
Content of clay: 18 to 30 percent
Rock fragments: 35 to 70 percent gravel and 0 to 10 percent cobbles

C horizon (where present)
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 3 to 6 dry or moist

Texture of the fine-earth fraction: Sand, loamy sand, or sandy loam
Content of clay: 0 to 10 percent
Rock fragments: 35 to 70 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones
Pararock fragments: 0 to 20 percent paragravel

Stonehill Series

Setting

Landscape position: Ridges and convex mountain slopes
Parent material: Colluvium and residuum derived from schist
Slope: 30 to 50 percent
Elevation: 15 to 1,770 feet (5 to 541 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow or moderate
Mean annual precipitation: 70 to 85 inches (1,780 to 2,160 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 250 to 300 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Typic Haplohumults

Modal Pedon

Stonehill cobbly silt loam, in an area of Ladybird-Stonehill complex, 30 to 50 percent slopes, on a convex, northeast-facing slope of 42 percent, under Sitka spruce, red alder, redwood, and salmonberry, at an elevation of 700 feet (213 meters); in Redwood National Park, Humboldt County, California; USGS Orick quadrangle; UTM zone 10, 409443mE, 4569446mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); fresh and slightly decomposed red alder leaves, Sitka spruce needles, cones, and twigs.

Oa—1 to 5 inches (3 to 13 centimeters); mostly decomposed fine organic matter and humus; many very fine, common fine, and few medium roots; abrupt wavy boundary.

A1—5 to 13 inches (13 to 32 centimeters); very dark brown (10YR 2/2) cobbly silt loam, dark brown (10YR 3/3) dry; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine irregular and common very fine and fine and few medium tubular pores; 11 percent gravel and 10 percent cobbles; very strongly acid (pH 4.6); gradual smooth boundary.

A2—13 to 20 inches (32 to 52 centimeters); dark brown (7.5YR 3/2) cobbly silt loam, brown (10YR 4/3) dry; weak fine and medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; many very fine and common fine, medium, and coarse roots; common very fine irregular and common very fine, fine, and medium tubular pores; 17 percent gravel and 15 percent cobbles; very strongly acid (pH 4.8); clear wavy boundary.

BAt—20 to 25 inches (52 to 64 centimeters); dark brown (7.5YR 3/4) cobbly silty clay loam, yellowish brown (10YR 5/4) dry; weak medium and coarse subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular pores; 11 percent gravel and 10 percent cobbles; very strongly acid (pH 5.0); clear irregular boundary.

Bt—25 to 32 inches (64 to 82 centimeters); dark yellowish brown (10YR 4/4) gravelly

silty clay loam, light yellowish brown (10YR 6/4) dry; weak medium and coarse subangular blocky structure; slightly hard, friable, moderately sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and few fine tubular pores; few faint clay films on faces of peds and coating gravel in lower part; 25 percent gravel; very strongly acid (pH 4.9); clear wavy boundary.

R—32 inches (82 centimeters); weathered schist, fragments removable with a knife or spade and becoming harder with depth; fingers of soil in joints in the upper part; joint spacing of 2 to 4 inches (5 to 10 centimeters); few very fine and fine roots in joints; depth to upper boundary ranges from 29 to 38 inches (73 to 97 centimeters) within the pit.

Range in Characteristics

Bedrock: At a depth of 20 to 40 inches (50 to 100 centimeters)
Control section (by weighted average): 25 to 35 percent clay, 15 to 30 percent gravel, and 0 to 10 percent cobbles
Water table: None noted
Reaction: Very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly to highly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 3 or 4 dry, 2 or 3 moist
Chroma: 3 or 4 dry, 2 or 3 moist
Texture of the fine-earth fraction: Silt loam
Content of clay: 12 to 20 percent
Rock fragments: 5 to 20 percent gravel and 0 to 15 percent cobbles

Bt horizon
Hue: 7.5YR or 10YR
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 4 dry or moist
Texture of the fine-earth fraction: Silt loam, clay loam, or silty clay loam
Content of clay: 25 to 35 percent
Rock fragments: 15 to 30 percent gravel and 0 to 10 percent cobbles
Pararock fragments: 0 to 20 percent paragravel

Surpur Series

Setting

Landscape position: Ridges and upper mountain slopes
Parent material: Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits
Slope: 2 to 30 percent
Elevation: 760 to 2,260 feet (233 to 690 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high

Slowest permeability: Moderately slow
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 280 days
Taxonomic classification: Fine-loamy, mixed, semiactive, isomesic Typic Haplohumults

Modal Pedon

Surpur gravelly loam, in an area of Surpur-Mettah complex, 9 to 30 percent slopes, on a slightly convex, east-facing slope of 10 percent, under redwood, Douglas-fir, tanoak, Cailifornia huckleberry, Pacific rhododendron, and salal, at an elevation of 1,770 feet (540 meters); in Redwood National Park, Humboldt County, California; USGS Holter Ridge quadrangle; UTM zone 10, 420205mE, 4573981mN, NAD83.

Oi—0 to 4 inches (0 to 10 centimeters); dark brown (10YR 3/3) fresh and slightly decomposed conifer needles, tanoak leaves, and twigs, yellowish brown (10YR 5/4) dry; many very fine and fine and few medium roots; many very fine and fine interstitial pores; strongly acid (pH 5.0); abrupt smooth boundary.

A—4 to 12 inches (10 to 31 centimeters); dark brown (10YR 3/3) gravelly loam, yellowish brown (10YR 5/4) dry; weak medium granular and very fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; 20 percent well rounded pebbles; slightly acid (pH 6.2); abrupt wavy boundary.

Bt1—12 to 19 inches (31 to 47 centimeters); strong brown (7.5YR 4/6) gravelly clay loam, strong brown (7.5YR 5/6) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine and fine irregular and common very fine and fine tubular pores; few faint clay films on faces of peds; 20 percent well rounded pebbles; slightly acid (pH 6.2); clear smooth boundary.

Bt2—19 to 28 inches (47 to 72 centimeters); strong brown (7.5YR 4/6) clay loam, strong brown (7.5YR 5/6) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium tubular pores; few faint clay films on faces of peds; 10 percent well rounded pebbles; moderately acid (pH 5.6); gradual wavy boundary.

Bt3—28 to 41 inches (72 to 103 centimeters); strong brown (7.5YR 5/6) clay loam, reddish yellow (7.5YR 6/8) dry; moderate medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium tubular pores; few faint clay films on surfaces of peds and on rock fragments; 10 percent well rounded pebbles; moderately acid (pH 5.6); clear smooth boundary.

Bt4—41 to 51 inches (103 to 130 centimeters); strong brown (7.5YR 5/6) fine sandy loam, reddish yellow (7.5YR 6/8) dry; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine and few medium tubular pores; common distinct clay films between sand grains and few faint clay films on faces of peds; 10 percent well rounded pebbles; moderately acid (pH 5.6); gradual wavy boundary.

BCt—51 to 63 inches (130 to 159 centimeters); strong brown (7.5YR 5/6) fine sandy loam, reddish yellow (7.5YR 6/8) dry; weak medium and coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine and common medium roots; common very fine and fine tubular pores; few distinct clay films bridging sand grains; 2 percent well rounded pebbles; few fine bands of reddish brown (2.5YR 4/4) lamellae, 5 to 15 millimeters thick; strongly acid (pH 5.4); clear wavy boundary.

C—63 to 79 inches (159 to 200 centimeters); yellowish brown (10YR 5/8) loamy sand, brownish yellow (10YR 6/8) dry; massive; loose, nonsticky and nonplastic; few very fine and fine and common medium and coarse roots; common very fine and fine interstitial pores; 2 percent well rounded pebbles; few fine bands of yellowish red (5YR 5/8) lamellae, 1 to 4 millimeters thick; strongly acid (pH 5.4).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 32 percent clay and 0 to 15 percent gravel
Water table: None noted
Reaction: Moderately acid to very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 4 to 6 dry, 3 or 4 moist
Chroma: 3 to 6 dry or moist
Texture of the fine-earth fraction: Loam
Content of clay: 12 to 25 percent
Rock fragments: 0 to 25 percent gravel

Bt horizon
Hue: 7.5YR or 10YR
Value: 5 or 6 dry, 3 to 6 moist
Chroma: 4 to 8 dry or moist
Texture of the fine-earth fraction: Fine sandy loam, loam, clay loam, or silty clay loam
Content of clay: 15 to 35 percent
Rock fragments: 0 to 30 percent gravel

C horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 4 to 8 dry or moist
Texture of the fine-earth fraction: Loamy sand or fine sandy loam
Content of clay: 0 to 18 percent
Rock fragments: 0 to 20 percent gravel and 0 to 25 percent paragravel

The Surpur soils in map unit 588 are taxadjuncts to the series. These soils have an ustic soil moisture regime. This difference, however, does not affect use and management.

Swainslough Series

Setting

Landscape position: Backswamps, depressions, low flood-plain steps, and reclaimed salt marshes
Parent material: Alluvium derived from mixed sources
Slope: 0 to 2 percent

Elevation: 0 to 160 feet (0 to 50 meters)
Depth class: Very deep
Drainage class: Very poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Flooding: Occasional
Ponding: Frequent
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Fine, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts

Modal Pedon

Swainslough peat, in an area of Swainslough, 0 to 2 percent slopes, on a slope of less than 1 percent, under silverweed cinquefoil, spike bentgrass, and pasture grasses, at an elevation of 7 feet (2 meters); Humboldt County, California; USGS Ferndale quadrangle; UTM zone 10, 388940mE, 4494827mN, NAD83.

Oi—0 to 3 inches (0 to 8 centimeters); very dark grayish brown (10YR 3/2) peat, dark grayish brown (2.5Y 4/2) dry and dark yellowish brown (10YR 3/4) rubbed; 80 percent fibers unrubbed, 40 percent rubbed; neutral (pH 6.8); abrupt wavy boundary.

A—3 to 12 inches (8 to 30 centimeters); dark grayish brown (2.5Y 4/2) silty clay loam, light brownish gray (2.5Y 6/2) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to coarse roots; many very fine tubular pores; common fine prominent dark yellowish brown (10YR 4/4) iron-manganese masses in the matrix; neutral (pH 7.0); gradual wavy boundary.

Bg1—12 to 20 inches (30 to 51 centimeters); dark grayish brown (2.5Y 4/2) silty clay loam, light brownish gray (2.5Y 6/2) dry; moderate very fine and fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; many very fine to medium roots; common very fine tubular pores; common fine prominent dark yellowish brown (10YR 4/4) iron-manganese masses in the matrix; neutral (pH 7.0); gradual wavy boundary.

Bg2—20 to 29 inches (51 to 74 centimeters); dark grayish brown (2.5Y 4/2) silty clay loam, light brownish gray (2.5Y 6/2) dry; weak very fine and fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine to medium roots; common very fine tubular pores; many fine distinct gray (5Y 5/1) iron depletions and prominent dark yellowish brown (10YR 4/4) iron-manganese masses in the matrix; very few prominent strong brown (7.5YR 4/6) iron stains lining root channels and/or pores; neutral (pH 7.0); abrupt wavy boundary.

Bg3—29 to 38 inches (74 to 97 centimeters); dark grayish brown (2.5Y 4/2) silty clay loam, light brownish gray (2.5Y 6/2) dry; massive; hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine tubular pores; many fine distinct gray (5Y 5/1) iron depletions and prominent dark yellowish brown (10YR 4/4) iron-manganese masses in the matrix; very few prominent strong brown (7.5YR 4/6) iron stains lining root channels and/or pores; slightly acid (pH 6.5); abrupt wavy boundary.

Bg4—38 to 65 inches (97 to 165 centimeters); dark gray (N 4/0) silty clay loam, gray (10YR 5/1) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine tubular pores; very few medium prominent strong brown (7.5YR 4/6) iron stains lining root channels and/or pores; moderately acid (pH 6.0).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 35 to 45 percent clay
Water table: At a depth of 0 to 4 inches (0 to 10 centimeters) January through March, 6 to 24 inches (15 to 60 centimeters) in April, 12 to 35 inches (30 to 90 centimeters) May through June, 35 to greater than 72 inches (90 to greater than 183 centimeters) July through November, and 4 to 24 inches (10 to 60 centimeters) in December

O horizon
Hue: 10YR
Value: 3 or 4 dry or moist
Chroma: 2 to 4 dry or moist
Kind of organic material: Peat
Reaction: Neutral

A horizon
Hue: 10YR, 2.5Y, or 5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Silty clay loam
Content of clay: 27 to 37 percent
Reaction: Moderately acid to neutral
Redoximorphic features:
Type—fine and medium masses of iron accumulation
Quantity—few or common
Hue—7.5YR or 10YR
Value—4 to 6 moist
Chroma—4 to 8 moist

Upper part of the Bg horizon
Hue: 10YR, 2.5Y, 5Y, or neutral
Value: 4 to 7 dry, 4 or 5 moist
Chroma: Neutral or 2 dry or moist
Texture of the fine-earth fraction: Silty clay loam or silty clay
Content of clay: 30 to 45 percent
Reaction: Moderately acid to slightly alkaline
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—few or common
Hue—10YR or 7.5YR
Value—4 to 6 moist
Chroma—4 to 8 moist
Type—medium iron depletions
Quantity—common or many
Hue—2.5Y or 5Y
Value—4 or 5 moist
Chroma—1 or 2 moist

Lower part of the Bg horizon
Hue: 10YR, 2.5Y, 5Y, or neutral
Value: 5 to 7 dry, 4 or 5 moist
Chroma: Neutral to 2 dry or moist
Texture of the fine-earth fraction: Silty clay loam or silty clay
Content of clay: 30 to 45 percent

Reaction: Moderately acid to slightly alkaline
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix and iron stains lining root channels and/or pores
Quantity—few or common
Hue—7.5YR or 10YR
Value—4 to 6 moist
Chroma—4 to 6 moist
Type—medium iron depletions
Quantity—common or many
Hue—2.5Y or 5Y
Value—4 or 5 moist
Chroma—neutral to 2 moist

Talawa Series

Setting

Landscape position: Dissected marine terrace remnants
Parent material: Fluviomarine deposits derived from mixed sources
Slope: 0 to 2 percent
Elevation: 55 to 80 feet (18 to 25 meters)
Depth class: Very deep
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderate
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Coarse-loamy, mixed, superactive, isomesic Oxyaquic Dystrudepts

Modal Pedon

Talawa fine sandy loam, in an area of Talawa, 0 to 2 percent slopes, on a uniform, northeast-facing slope of 2 percent, under sweet vernalgrass, velvetgrass, scattered Himalayan blackberry, California huckleberry, young Sitka spruce, and cascara, at an elevation of 69 feet (21 meters); in Jedediah Smith Redwoods State Park, Del Norte County, California; USGS Crescent City quadrangle; UTM zone 10, 404236mE, 4624827mN, NAD83.

Ap1—0 to 7 inches (0 to 18 centimeters); very dark brown (10YR 2/2) fine sandy loam, dark grayish brown (10YR 4/2) dry; moderate very fine and weak fine subangular blocky and moderate very fine granular structure; very friable, soft, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and fine tubular pores; strongly acid (pH 5.2); clear smooth boundary.
Ap2—7 to 12 inches (18 to 31 centimeters); very dark brown (10YR 2/2) fine sandy loam, brown (10YR 4/3) dry; moderate fine and medium subangular blocky and moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine tubular pores; 3 percent gravel and 1 percent cobbles; very strongly acid (pH 5.0); clear smooth boundary.
AB—12 to 17 inches (31 to 43 centimeters); 70 percent very dark grayish brown (10YR 3/2) and 30 percent dark yellowish brown (10YR 4/6) fine sandy loam, brown (10YR 4/3) and yellowish brown (10YR 5/6) dry; moderate fine and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic;

common very fine and fine roots; common very fine tubular and common very fine and fine irregular pores; 3 percent gravel; very strongly acid (pH 5.0); clear smooth boundary.

Bw1—17 to 27 inches (43 to 68 centimeters); dark yellowish brown (10YR 4/6) sandy loam, yellowish brown (10YR 5/6) dry; moderate fine and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular and common very fine and fine irregular pores; few fine distinct strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; few fine prominent black (N 2.5/0) masses of manganese accumulations in the matrix; few fine distinct brown (10YR 5/3) iron depletions in the matrix; 2 percent gravel and 1 percent paragravel; strongly acid (pH 5.2); clear smooth boundary.

Bw2—27 to 39 inches (68 to 100 centimeters); dark yellowish brown (10YR 4/6) sandy loam, yellowish brown (10YR 5/6) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; moderately few very fine roots; many very fine irregular pores; few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine distinct brown (10YR 5/3) iron depletions in the matrix; 2 percent gravel and 2 percent paragravel; strongly acid (pH 5.2); clear smooth boundary.

C1—39 to 53 inches (100 to 135 centimeters); yellowish brown (10YR 5/6) loamy sand, yellow (10YR 7/6) dry; massive; very friable, soft, nonsticky and slightly plastic; moderately few very fine roots; many very fine interstitial pores; common fine and medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; common fine and medium prominent black (N 2.5/0) masses of manganese accumulation in the matrix; many medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; 1 percent gravel and 2 percent paragravel; strongly acid (pH 5.4); clear wavy boundary.

C2—53 to 63 inches (135 to 160 centimeters); yellowish brown (10YR 5/4) loamy sand, very pale brown (10YR 7/4) dry; massive; very friable, soft, nonsticky and slightly plastic; many very fine interstitial pores; common fine and medium distinct strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; many fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid (pH 5.6).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 10 to 18 percent clay and 0 to 7 percent gravel
Water table: At a depth of 43 to 100 centimeters (17 to 39 inches)

A or Ap horizon
Hue: 10YR or 2.5Y
Value: 3 to 5 dry, 2 or 3 moist
Chroma: 1 to 3 dry or moist
Texture of the fine-earth fraction: Fine sandy loam
Rock fragments: 0 to 7 percent gravel and 0 to 2 percent cobbles
Content of clay: 15 to 20 percent
Reaction: Strongly acid or very strongly acid

Bw horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Sandy loam or fine sandy loam
Rock fragments: 0 to 7 percent gravel
Pararock fragments: 0 to 2 percent

Content of clay: 10 to 18 percent
Reaction: Moderately acid or strongly acid
Redoximorphic features:
Type—masses of iron and manganese; iron depletions
Quantity—few or common
Hue—7.5YR, 10YR, 2.5Y, or neutral
Value—2.5 to 5 moist
Chroma—neutral to 8 moist

C horizon
Hue: 10YR or 2.5Y
Value: 5 to 7 dry, 4 to 6 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Loamy sand or sandy loam
Rock fragments: 0 to 1 percent gravel
Pararock fragments: 0 to 2 percent
Content of clay: 0 to 10 percent
Reaction: Moderately acid or strongly acid
Redoximorphic features:
Type—masses of iron and manganese; iron depletions
Quantity—few to many
Hue—7.5YR, 10YR, 2.5Y, or neutral
Value—2.5 to 5 moist
Chroma—neutral to 8 moist

Tarquin Series

Setting

Landscape position: Dissected fan remnants
Parent material: Colluvium and residuum derived from weakly consolidated siltstone and conglomerate
Slope: 9 to 30 percent
Elevation: 160 to 645 feet (50 to 198 meters)
Depth class: Very deep
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 75 to 90 inches (1,900 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 325 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Oxyaquic Palehumults

Modal Pedon

Tarquin loam, in an area of Tarquin, 9 to 30 percent slopes, on a gentle, northeast-facing slope of 15 percent, under redwood, western hemlock, California huckleberry, red huckleberry, salal, salmonberry, Pacific rhododendron, swordfern, and redwood-sorrel, at an elevation of 420 feet (128 meters); in Jedediah Smith Redwoods State Park, Del Norte County, California; USGS Hiouchi quadrangle; UTM zone 10, 407020mE, 4625080mN, NAD83.

Oi—0 to 3 inches (0 to 8 centimeters); black (10YR 2/1) slightly decomposed needles, leaves, and twigs, dark brown (10YR 3/3) dry; loose, nonsticky and nonplastic; common very fine, fine, and medium roots; many very fine and fine interstitial

pores; 35 percent wood fragments; very strongly acid (pH 4.5); clear smooth boundary.

A1—3 to 8 inches (8 to 21 centimeters); dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; moderate very fine and weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common very fine and fine tubular and many very fine and fine interstitial pores; 7 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

A2—8 to 20 inches (21 to 51 centimeters); dark brown (10YR 3/3) loam, yellowish brown (10YR 5/4) dry; moderate very fine and weak fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine, fine, medium, and coarse roots; common very fine and fine tubular and interstitial pores; 7 percent gravel and 3 percent paragravel; strongly acid (pH 5.2); clear wavy boundary.

BA—20 to 24 inches (51 to 62 centimeters); dark yellowish brown (10YR 4/4) clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and weak medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, medium, coarse, and very coarse roots; common very fine and fine tubular and interstitial pores; 3 percent gravel; strongly acid (pH 5.1); clear smooth boundary.

Bt1—24 to 30 inches (62 to 77 centimeters); dark yellowish brown (10YR 4/4) clay loam, brownish yellow (10YR 6/6) dry; moderate fine subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common fine, medium, coarse, and very coarse roots; common very fine and fine tubular and interstitial pores; 7 percent gravel and 3 percent paragravel; few distinct clay films on faces of peds and rock fragments; very strongly acid (pH 4.6); clear wavy boundary.

Bt2—30 to 37 inches (77 to 93 centimeters); dark yellowish brown (10YR 4/4) silty clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and weak medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common very fine, fine, medium, coarse, and very coarse roots; common fine tubular and common very fine and fine interstitial pores; 3 percent gravel and 5 percent paragravel; few distinct clay films on faces of peds, rock fragments, and surfaces along root channels; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation throughout the matrix; common fine distinct gray (2.5Y 5/1) iron depletions throughout the matrix; very strongly acid (pH 4.5); clear smooth boundary.

Bt3—37 to 50 inches (93 to 128 centimeters); yellowish brown (10YR 5/4) silty clay loam, very pale brown (10YR 7/4) dry; moderate medium and weak coarse subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; common fine, medium, coarse, and very coarse roots; moderately few very fine tubular and common very fine and fine interstitial pores; 3 percent gravel and 7 percent paragravel; few distinct clay films on faces of peds, rock fragments, and surfaces along root channels; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation throughout the matrix; common fine distinct grayish brown (2.5Y 5/2) iron depletions throughout matrix; very strongly acid (pH 4.5); clear smooth boundary.

CBt—50 to 60 inches (128 to 152 centimeters); light olive brown (2.5Y 5/3) very paragravelly silty clay loam, pale yellow (2.5Y 7/4) dry; weak coarse subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; common fine, medium, and coarse roots; moderately few very fine interstitial pores; 5 percent gravel and 40 percent paragravel; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation throughout the matrix;

common fine distinct grayish brown (2.5Y 5/2) iron depletions throughout the matrix; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay and 0 to 10 percent gravel
Water table: At a depth of 24 to 30 inches (60 to 80 centimeters)

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR or 2.5Y
Value: 4 or 5 dry, 3 or 4 moist
Chroma: 3 or 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Loam
Content of clay: 20 to 27 percent
Rock fragments: 0 to 10 percent gravel and 0 to 5 percent paragravel
Reaction: Strongly acid or very strongly acid

Upper part of the Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 6 or 7 dry, 4 or 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Silty clay loam or clay loam
Content of clay: 27 to 35 percent
Rock fragments: 0 to 10 percent gravel and 0 to 5 percent paragravel
Reaction: Very strongly acid

Lower part of the Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 6 or 7 dry, 4 or 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Silty clay loam or clay loam
Content of clay: 35 to 40 percent
Rock fragments: 0 to 25 percent gravel and 0 to 10 percent paragravel
Reaction: Very strongly acid
Redoximorphic features:
Type—fine and medium masses of iron accumulation and iron depletions in the matrix
Quantity—common
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6 moist
Chroma—1 to 8 moist

C horizon
Hue: 10YR or 2.5Y
Value: 6 or 7 dry, 4 or 5 moist
Chroma: 3 or 4 dry or moist
Texture of the fine-earth fraction: Silty clay loam
Content of clay: 30 to 40 percent

Rock fragments: 0 to 15 percent gravel and 0 to 40 percent paragravel
Reaction: Very strongly acid
Redoximorphic features:
Type—fine and medium masses of iron accumulation and iron depletions in the matrix
Quantity—common
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6 moist
Chroma—1 to 8 moist

Tectah Series

Setting

Landscape position: Broad ridges and mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 0 to 50 percent
Elevation: 75 to 2,300 feet (24 to 702 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low or low
Slowest permeability: Slow
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 280 days
Taxonomic classification: Fine, mixed, semiactive, isomesic Typic Palehumults

Modal Pedon

Tectah silty clay loam, in an area of Coppercreek-Tectah-Lackscreek complex, 30 to 50 percent slopes, on a slightly convex, south-facing slope of 35 percent, under redwood, western hemlock, Douglas-fir, tanoak, Pacific rhododendron, California huckleberry, and salal, at an elevation of 366 meters (1,200 feet); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 416908mE, 4565198mN, NAD83.

Oi—0 to 2 inches (0 to 5 centimeters); fresh and slightly decomposed leaves, twigs, and cones from redwood, Douglas-fir, tanoak, and hemlock.
A—2 to 12 inches (5 to 30 centimeters); dark yellowish brown (10YR 4/4) silty clay loam, yellowish brown (10YR 6/4) dry; strong medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine irregular pores; 7 percent gravel; very strongly acid (pH 5.6); gradual smooth boundary.
BAt—12 to 21 inches (30 to 54 centimeters); strong brown (7.5YR 4/6) silty clay loam, reddish yellow (7.5YR 7/5) dry; strong medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine tubular and irregular pores; few distinct clay films in pores and on faces of peds; 4 percent gravel; very strongly acid (pH 5.6); gradual smooth boundary.
Bt1—21 to 31 inches (54 to 79 centimeters); yellowish brown (10YR 5/6) silty clay, reddish yellow (7.5YR 7/6) dry; strong coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; common very fine tubular and irregular pores; many distinct clay films on faces of peds and in pores; 9 percent gravel; very strongly acid (pH 5.2); diffuse smooth boundary.
Bt2—31 to 45 inches (79 to 115 centimeters); yellowish brown (10YR 5/8) silty clay,

yellow (10YR 7/6) dry; moderate coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine tubular and few fine irregular pores; common distinct clay films on faces of peds and in pores; 7 percent gravel; very strongly acid (pH 5.1); diffuse smooth boundary.

Bt3—45 to 61 inches (115 to 155 centimeters); yellowish brown (10YR 5/8) silty clay loam, yellow (10YR 7/6) dry; moderate coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine tubular and irregular pores; common distinct clay films on faces of peds and in pores; 6 percent gravel; very strongly acid (pH 5.2); diffuse smooth boundary.

Bt4—61 to 73 inches (155 to 185 centimeters); yellowish brown (10YR 5/8) silty clay loam, yellow (10YR 7/6) dry; moderate coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine tubular and irregular pores; common faint clay films on faces of peds and in pores; 8 percent gravel; very strongly acid (pH 5.1).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 35 to 50 percent clay, 0 to 30 percent gravel, and 0 to 3 percent cobbles
Water table: None noted
Reaction: Moderately acid to very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 3 to 6 dry or moist
Texture of the fine-earth fraction: Loam, silt loam, clay loam, or silty clay loam
Content of clay: 22 to 35 percent
Rock fragments: 0 to 13 percent gravel

Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 4 to 6 dry, 4 to 8 moist
Texture of the fine-earth fraction: Clay loam, silty clay loam, silty clay, or clay
Content of clay: 35 to 50 percent
Rock fragments: 0 to 30 percent gravel and 0 to 3 percent cobbles
Pararock fragments: 0 to 7 percent paragravel

Tossup Series

Setting

Landscape position: Broad ridges and upper mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 9 to 50 percent

Elevation: 45 to 4,985 feet (15 to 1,520 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 49 to 80 inches (1,250 to 2,030 millimeters)
Mean annual temperature: 50 to 59 degrees F (10 to 15 degrees C)
Frost-free season: 150 to 250 days
Taxonomic classification: Fine, mixed, semiactive, mesic Typic Palexerults

Modal Pedon

Tossup very gravelly loam, in an area of Mooncreek-Noisy-Tossup complex, 9 to 30 percent slopes, on a concave, east-facing slope of 10 percent, under Douglas-fir and tanoak, at an elevation of 3,785 feet (1,155 meters); on Kinsey Ridge, Humboldt County, California; USGS Board Camp Mountain quadrangle; UTM zone 10, 443035mE, 4509231mN, NAD83.

Oi—0 to 1 inch (0 to 2 centimeters); very dark gray (10YR 3/1) slightly decomposed plant material consisting of needles and leaves of Douglas-fir and tanoak, black (10YR 2/1) moist; about 100 percent fiber unrubbed, 80 percent rubbed; few very fine roots; many fine irregular pores; moderately acid (pH 5.6); abrupt smooth boundary.

A—1 to 8 inches (2 to 20 centimeters); yellowish brown (10YR 5/4) very gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure parting to moderate fine subangular blocky; soft, very friable, nonsticky and nonplastic; many very fine to medium and common coarse roots; many fine and medium and common coarse tubular pores; 50 percent gravel; very strongly acid (pH 4.6); clear smooth boundary.

Bt1—8 to 21 inches (20 to 53 centimeters); light yellowish brown (10YR 6/4) gravelly clay, yellowish brown (10YR 5/4) moist; strong fine and medium subangular blocky structure; hard, firm, very sticky and very plastic; many very fine and fine and common medium and coarse roots; many fine to coarse tubular pores; common faint clay films on all faces of peds; 25 percent gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt2—21 to 37 inches (53 to 95 centimeters); brownish yellow (10YR 6/6) gravelly clay, yellowish brown (10YR 5/6) moist; strong fine angular blocky structure; hard, very firm, very sticky and very plastic; many very fine to medium and common coarse roots; many fine and medium and common coarse tubular pores; many distinct clay films on all faces of peds; 20 percent gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt3—37 to 48 inches (95 to 123 centimeters); brownish yellow (10YR 6/6) silty clay, yellowish brown (10YR 5/6) moist; strong very fine angular blocky structure; hard, very firm, very sticky and very plastic; many fine and medium and common coarse roots; common medium tubular pores; many distinct clay films on all faces of peds; 10 percent gravel; very strongly acid (pH 5.0); clear smooth boundary.

BCt—48 to 79 inches (123 to 200 centimeters); brownish yellow (10YR 6/6) very gravelly clay, yellowish brown (10YR 5/6) moist; strong very fine angular blocky structure; hard, firm, very sticky and very plastic; common medium roots; common medium tubular pores; many distinct clay films on all faces of peds; 5 percent fine iron-manganese stains; 40 percent gravel and 40 percent paragravel; very strongly acid (pH 4.8).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 35 to 50 percent clay and 0 to 35 percent gravel

Water table: None noted
Reaction: Moderately acid to very strongly acid
Surface fragments: 0 to 10 percent gravel

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 4 or 5 dry, 2 to 4 moist
Chroma: 3 or 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 16 to 28 percent
Rock fragments: 0 to 55 percent gravel

Bt horizon
Hue: 7.5YR or 10YR
Value: 4 to 6 dry, 3 to 5
Chroma: 3 to 6 dry or moist
Texture of the fine-earth fraction: Clay loam, silty clay, or clay
Content of clay: 35 to 55 percent
Rock fragments: 0 to 35 percent gravel

Trailhead Series

Setting

Landscape position: Broad ridges and upper mountain slopes
Parent material: Residuum and colluvium from schist and sandstone (fig. 24)
Slope: 0 to 50 percent
Elevation: 50 to 2,640 feet (15 to 805 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low or low
Slowest permeability: Moderately slow or slow
Mean annual precipitation: 70 to 100 inches (1,780 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 240 to 290 days
Taxonomic classification: Fine, parasesquic, isomesic Typic Palehumults

Modal Pedon

Trailhead clay loam, in an area of Trailhead-Fortyfour complex, 30 to 50 percent slopes, on a convex, south-facing slope of 25 percent, under redwood, Douglas-fir, tanoak, western hemlock, California huckleberry, Pacific rhododendron, and Cascade barberry, at an elevation of 900 feet (274 meters); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 414809mE, 4562447mN, NAD83.

Oi—0 to 1 inch (0 to 2 centimeters); fresh and decomposed conifer needles and tanoak leaves and twigs; about 25 percent cover of surface gravel.

Figure 24.—A profile of a Trailhead soil. These very deep soils have distinctive strong red subsurface layers. They are on stable ridges and upper mountain slopes. Depth is marked in centimeters.

A—1 to 5 inches (2 to 13 centimeters); dark brown (7.5YR 3/3) clay loam, brown (7.5YR 4/4) dry; moderate medium subangular blocky structure parting to moderate fine subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine, many fine, and common medium roots; common very fine irregular and common very fine and fine tubular pores; common fine rounded yellowish red (5YR 5/6) iron-manganese nodules; about 3 percent rounded to subangular pebbles; moderately acid (pH 6.0); clear wavy boundary.

AB—5 to 12 inches (13 to 30 centimeters); reddish brown (5YR 4/4) clay loam, reddish brown (5YR 5/4) dry; moderate medium subangular blocky structure parting to moderate fine subangular blocky; hard, friable, slightly sticky and moderately plastic; common fine and medium and few coarse roots; common very fine irregular and common very fine and fine tubular pores; common fine rounded yellowish red (5YR 5/6) iron-manganese nodules; about 2 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.

BAt—12 to 27 inches (30 to 68 centimeters); yellowish red (5YR 4/6) clay loam, yellowish red (5YR 5/6) dry; weak coarse subangular blocky structure parting to weak medium subangular blocky; slightly hard, firm, moderately sticky and moderately plastic; common fine, medium, and coarse roots; few very fine, fine, and medium tubular pores; few faint to distinct clay films in pores and on faces of peds; less than 2 percent gravel; moderately acid (pH 5.6); diffuse smooth boundary.

Bt1—27 to 36 inches (68 to 92 centimeters); yellowish red (5YR 4/6) clay, yellowish red (5YR 5/6) dry; weak very coarse subangular blocky structure parting to weak medium subangular blocky; hard, firm, moderately sticky and very plastic; common fine, medium, and coarse roots; few very fine and fine tubular pores; few distinct clay films in pores and on faces of peds; less than 2 percent gravel; moderately acid (pH 5.7); diffuse smooth boundary.

Bt2—36 to 66 inches (92 to 167 centimeters); red (2.5YR 4/6) clay, yellowish red (5YR 5/6) dry; weak very coarse subangular blocky structure; hard, firm, moderately sticky and very plastic; common fine and medium and few coarse roots; few very fine and fine tubular pores; common distinct clay films in pores and few distinct clay films on faces of peds; less than 2 percent gravel; moderately acid (pH 5.7); diffuse smooth boundary.

Bt3—66 to 80 inches (167 to 202 centimeters); red (2.5YR 4/6) clay, yellowish red (5YR 5/6) dry; weak very coarse subangular blocky structure; hard, firm, moderately sticky and very plastic; few fine and medium roots; few very fine and fine tubular pores; common distinct clay films in pores and on faces of peds; about 10 percent gravel; moderately acid (pH 5.6).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 40 to 60 percent clay and 0 to 15 percent gravel

Water table: None noted

Reaction: Strongly acid or very strongly acid

Surface fragments: 0 to 5 percent gravel

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon
Hue: 5YR or 7.5YR
Value: 4 to 6 dry, 3 to 6 moist
Chroma: 3 or 4 dry, 2 to 4 moist
Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam
Content of clay: 20 to 35 percent
Rock fragments: 0 to 25 percent gravel

Bt horizon
Hue: 2.5YR or 5YR
Value: 3 to 6 dry, 4 to 8 moist
Chroma: 3 to 8 dry, 6 to 8 moist
Texture of the fine-earth fraction: Silty clay loam, silty clay, or clay
Content of clay: 35 to 60 percent
Rock fragments: 0 to 30 percent gravel and 0 to 5 percent cobbles
Pararock fragments: 0 to 15 percent paragravel

C horizon (where present)
Hue: 2.5YR or 5YR
Value: 3 to 6 dry, 4 to 8 moist
Chroma: 3 to 8 dry, 6 to 8 moist
Texture of the fine-earth fraction: Silty clay loam, silty clay, or clay
Content of clay: 35 to 60 percent
Rock fragments: 35 to 50 percent gravel and 35 to 50 percent cobbles
Pararock fragments: 0 to 15 percent paragravel

The Trailhead soils in map units 561, 563, 583, and 586 are taxadjuncts to the series. These soils have an ustic soil moisture regime. This difference, however, does not affect use and management.

Tsunami Series

Setting

Landscape position: Fan terraces and fan remnants
Parent material: Alluvium derived from mixed sources
Slope: 2 to 9 percent
Elevation: 10 to 120 feet (4 to 38 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 60 to 80 inches (1,520 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 300 to 365 days
Taxonomic classification: Fine-loamy, mixed, superactive, isomesic Fluventic Humic Dystrudepts

Modal Pedon

Tsunami gravelly loam, in an area of Tsunami, 2 to 9 percent slopes, on a linear, west-facing slope of 2 percent, under sweet vernalgrass, ripgut brome, soft brome, fescue, velvetgrass, coyotebrush, and Himalayan blackberry, at an elevation of 55 feet (17 meters); Del Norte County, California; USGS Sisterrocks quadrangle; UTM zone 10, 404824mE, 4618761mN, NAD83.

A1—0 to 4 inches (0 to 11 centimeters); black (10YR 2/1) gravelly loam, very dark grayish brown (10YR 3/2) dry; weak very fine and fine subangular blocky and

weak medium granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular and tubular pores; 20 percent gravel; strongly acid (pH 5.2); clear wavy boundary.

A2—4 to 13 inches (11 to 32 centimeters); black (10YR 2/1) loam, very dark brown (10YR 2/2) dry; moderate very fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine roots; common very fine and fine irregular and tubular pores; 5 percent gravel; strongly acid (pH 5.2); clear wavy boundary.

A3—13 to 18 inches (32 to 46 centimeters); very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak fine and moderate very fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine irregular and common very fine, fine, and medium tubular pores; 5 percent gravel; strongly acid (pH 5.2); clear smooth boundary.

Bw1—18 to 26 inches (46 to 66 centimeters); dark brown (10YR 3/3) loam, yellowish brown (10YR 5/4) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; moderately few very fine and fine roots; common very fine and fine irregular and tubular pores; 10 percent gravel and 1 percent cobbles; strongly acid (pH 5.2); clear smooth boundary.

Bw2—26 to 38 inches (66 to 97 centimeters); brown (10YR 4/3) gravelly loam, light yellowish brown (2.5Y 6/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; very few very fine roots; common very fine and fine irregular and common very fine tubular pores; 25 percent gravel and 3 percent cobbles; strongly acid (pH 5.2); clear smooth boundary.

BC—38 to 60 inches (97 to 152 centimeters); dark yellowish brown (10Y 4/4) very cobbly loam, light yellowish brown (2.5Y 6/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine irregular pores; 35 percent gravel and 20 percent cobbles; strongly acid (pH 5.2).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 18 to 25 percent clay, 10 to 30 percent gravel, and 0 to 5 percent cobbles

Water table: None noted

Reaction: Strongly acid

A horizon

Hue: 10YR or 2.5Y

Value: 2 to 4 dry or moist

Chroma: 2 dry, 1 or 2 moist

Texture of the fine-earth fraction: Loam

Content of clay: 18 to 27 percent

Rock fragments: 0 to 20 percent gravel

Bw horizon

Hue: 10YR or 2.5Y

Value: 4 to 7 dry, 3 or 4 moist

Chroma: 2 to 4 dry or moist

Texture of the fine-earth fraction: Sandy loam, clay loam, or loam

Content of clay: 18 to 28 percent

Rock fragments: 10 to 30 percent gravel and 0 to 5 percent cobbles

C horizon (where present)

Hue: 10YR or 2.5Y

Value: 6 or 7 dry, 3 or 4 moist

Chroma: 3 or 4 dry or moist

Texture of the fine-earth fraction: Sandy loam, sandy clay loam, loam, or clay
Content of clay: 18 to 40 percent
Rock fragments: 0 to 70 percent gravel and 10 to 30 percent cobbles

Ustic Palehumults

Setting

Landscape position: Mountain slopes
Parent material: Colluvium and residuum derived from dacite
Slope: 15 to 50 percent
Elevation: 1,530 to 2,025 feet (467 to 618 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Moderately slow
Mean annual precipitation: 75 to 95 inches (1,900 to 2,410 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 250 to 260 days
Taxonomic classification: Loamy-skeletal, mixed, semiactive, isomesic Ustic Palehumults

Modal Pedon

Ustic Palehumults very gravelly loam, in an area of Ustic Palehumults, 15 to 50 percent slopes, on a uniform, northwest-facing slope of 31 percent with 55 percent gravel, 30 percent cobbles, and 5 percent stones on the surface, at an elevation of 2,000 feet (610 meters), under redwood, tanoak, Pacific madrone, and Douglas-fir; in Redwood National Park, Humboldt County, California; USGS Panthercreek Creek quadrangle; UTM zone 10, 419943mE, 4554884mN, NAD83.

Oi—0 to 3 inches (0 to 7 centimeters); fresh and slightly decomposed tanoak and madrone leaves, twigs, and bark; fungal mycelia at the mineral soil interface; gravel and cobble erosional pavement.

A—3 to 8 inches (7 to 19 centimeters); dark yellowish brown (10YR 3/4) very gravelly loam, brown (10YR 5/3) dry; moderate fine and medium granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine roots and few medium and coarse roots; many very fine and fine irregular and tubular pores; 40 percent gravel, 10 percent cobbles, and 5 percent stones; moderately acid (pH 6.0); abrupt wavy boundary.

AB—8 to 13 inches (19 to 33 centimeters); dark yellowish brown (10YR 4/4 gravelly loam, yellowish brown (10YR 5/4) dry; weak fine and medium granular and weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine and few medium and coarse tubular pores; 18 percent gravel, 10 percent cobbles, and 5 percent stones; moderately acid (pH 6.0); clear wavy boundary.

BA—13 to 20 inches (33 to 51 centimeters); yellowish brown (10YR 5/6) extremely gravelly silt loam, light yellowish brown (10YR 6/4) dry; weak medium and coarse subangular blocky structure; moderately hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine and fine and few medium tubular pores; 30 percent gravel, 20 percent cobbles, and 10 percent stones; moderately acid (pH 6.0); clear wavy boundary.

Bt—20 to 42 inches (51 to 106 centimeters); yellowish brown (10YR 5/6) very cobbly silty clay loam, very pale brown (10YR 7/4) dry; moderate coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine

and few fine, medium, and coarse roots; common very fine, fine, and medium and few coarse tubular pores; few faint clay films on faces of peds; 17 percent gravel, 25 percent cobbles, and 10 percent stones; slightly acid (pH 6.0); gradual wavy boundary.

BCt—42 to 57 inches (106 to 145 centimeters); yellowish brown (10YR 5/6) very cobbly silty clay loam, brownish yellow (10YR 6/6) dry; weak medium and coarse subangular blocky structure; hard, friable, moderately sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and fine interstitial and few very fine and fine tubular pores; few faint clay films on faces of peds; 30 percent gravel, 30 percent cobbles, and 20 percent stones; slightly acid (pH 6.2); diffuse wavy boundary.

C—57 to 91 inches (145 to 232 centimeters); brownish yellow (10YR 6/6) extremely stony loam, very pale brown (10YR 7/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; many very fine and fine interstitial pores; 25 percent gravel, 30 percent cobbles, and 25 percent stones; slightly acid (pH 6.2).

Range in Characteristics

Bedrock: None observed

Control section (by weighted average): 27 to 35 percent clay, 35 to 60 percent gravel, 15 to 30 percent cobbles, and 0 to 10 percent stones

Water table: None noted

Reaction: Slightly acid to very strongly acid

Surface fragments: 30 to 85 percent gravel, 10 to 40 percent cobbles, and 0 to 10 percent stones

O horizon

Hue: 10YR

Value: 2 to 6 dry or moist

Chroma: 1 to 4 dry or moist

Kind of organic material: Slightly decomposed

Wood fragments: 0 to 35 percent

Reaction: Moderately acid to very strongly acid

A horizon

Hue: 7.5YR or 10YR

Value: 5 or 6 dry, 3 or 4 moist

Chroma: 2 to 4 dry or moist

Texture of the fine-earth fraction: Loam

Content of clay: 20 to 27 percent

Rock fragments: 35 to 45 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones

Bt horizon

Hue: 10YR or 2.5Y

Value: 6 to 8 dry, 4 or 5 moist

Chroma: 2 to 4 dry, 3 to 6 moist

Texture of the fine-earth fraction: Clay loam or silty clay loam

Content of clay: 27 to 35 percent

Rock fragments: 15 to 60 percent gravel, 15 to 30 percent cobbles, and 0 to 10 percent stones

C horizon

Hue: 10YR or 2.5Y

Value: 6 to 8 dry, 4 to 6 moist

Chroma: 2 to 4 dry, 3 to 6 moist

Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam
Content of clay: 25 to 35 percent
Rock fragments: 20 to 30 percent gravel, 10 to 40 percent cobbles, and 10 to 25 percent stones

Walnett Series

Setting

Landscape position: Mountain slopes and broad ridges
Parent material: Residuum and colluvium derived from serpentinized peridotite
Slope: 9 to 70 percent
Elevation: 180 to 3,010 feet (55 to 918 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high to moderately low
Slowest permeability: Moderate to slow
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 100 to 180 days
Taxonomic classification: Loamy-skeletal, parasesquic, mesic Ultic Haploxeralfs

Modal Pedon

Walnett very stony loam, in an area of Jayel-Walnett-Oragran complex, 30 to 75 percent slopes, extremely stony, on a northeast-facing slope of 40 percent, under knobcone pine, huckleberry oak, California laurel, and tanoak with 10 percent stones on the surface, at an elevation of 2,940 feet (896 meters); in Six Rivers National Forest, Del Norte County, California; USGS High Plateau Mountain, California-Oregon quadrangle; $SE^1/_4NW^1/_4$ sec. 19, T. 18 N., R. 3 E., Humboldt Base Meridian.

Oi—0 to 1 inch (0 to 2 centimeters); fresh and decomposing leaf and needle litter; strongly acid (pH 5.3).
A—1 to 5 inches (2 to 13 centimeters); strong brown (7.5YR 5/6) very stony loam, brown (7.5YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; few very fine, fine, and coarse roots; many very fine interstitial pores; 20 percent gravel and 15 percent stones; moderately acid (pH 5.9); clear smooth boundary.
Bt1—5 to 23 inches (13 to 58 centimeters); strong brown (7.5YR 5/6) very gravelly clay loam, brown (7.5YR 4/4) moist; strong fine subangular blocky structure; hard, friable, sticky and plastic; few very fine, common fine, and few coarse roots; many very fine interstitial pores; common moderately thick clay films on peds and in pores; 35 percent gravel and 5 percent cobbles; slightly acid (pH 6.1); gradual wavy boundary.
Bt2—23 to 43 inches (58 to 109 centimeters); brownish yellow (10YR 6/6) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate very fine subangular blocky structure; hard, friable, sticky and plastic; few fine roots; common very fine interstitial pores; few moderately thick clay films on peds and in pores; 35 percent gravel and 10 percent cobbles and stones; slightly acid (pH 6.1); gradual smooth boundary.
C—43 to 61 inches (109 to 155 centimeters); yellow (10YR 7/6) very gravelly loam, yellowish brown (10YR 5/6) moist; weak very fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common very fine interstitial pores; 50 percent gravel and 5 percent cobbles and stones; slightly acid (pH 6.2).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay and 35 to 60 percent rock fragments
Water table: None noted
Surface fragments: 3 to 15 percent stones

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 3 to 8 dry, 3 to 6 moist
Texture of the fine-earth fraction: Loam
Content of clay: 22 to 28 percent
Rock fragments: 20 to 35 percent gravel and 15 to 20 percent stones
Reaction: Slightly acid or moderately acid

Bt horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 3 to 8 dry, 4 to 8 moist
Texture of the fine-earth fraction: Clay loam or silty clay loam
Content of clay: 27 to 35 percent
Rock fragments: 20 to 55 percent gravel and 5 to 20 percent cobbles or stones
Reaction: Slightly acid or moderately acid

C horizon
Hue: 7.5YR or 10YR
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 6 to 8 dry or moist
Texture of the fine-earth fraction: Loam, clay loam, or silty clay loam
Content of clay: 25 to 35 percent
Rock fragments: 20 to 50 percent gravel and 5 to 20 percent cobbles or stones
Reaction: Neutral or slightly acid

Weitchpec Series

Setting

Landscape position: Mountain slopes
Parent material: Residuum and colluvium derived from serpentinite (fig. 25)
Slope: 30 to 50 percent
Elevation: 845 to 2,135 feet (259 to 652 meters)
Depth class: Moderately deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high to moderately low
Slowest permeability: Moderate to slow
Mean annual precipitation: 90 to 120 inches (2,290 to 3,050 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)

Figure 25.—A profile of a Weitchpec soil. These soils form in colluvium and residuum derived from serpentinite. They are 50 to 100 centimeters deep to bedrock. Depth is marked in centimeters.

Frost-free season: 100 to 150 days
Taxonomic classification: Loamy-skeletal, magnesic, mesic Typic Haploxerepts

Modal Pedon

Weitchpec gravelly silt loam, in an area of Oragran-Weitchpec complex, 30 to 50 percent slopes, on an east-facing slope of 20 percent, at an elevation of 3,650 feet (1,112 meters); in Six Rivers National Forest, Del Norte County, California; USGS Hurdygurdy Butte, California, quadrangle; SW$^1/_4$SE$^1/_4$ sec. 25, T. 17 N., R. 3 E., Humboldt Base Meridian.

A—0 to 8 inches (0 to 20 centimeters); pale brown (10YR 6/3) gravelly silt loam, brown (10YR 4/3) moist; weak very fine and fine granular structure; slightly hard, firm, nonsticky and nonplastic; common fine, many medium, and few coarse roots; 25 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.
Bw1—8 to 30 inches (20 to 76 centimeters); very pale brown (10YR 7/4) extremely gravelly sandy loam, yellowish brown (10YR 5/4) moist; moderate very fine subangular blocky structure; slightly hard, firm, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; 60 percent gravel; moderately acid (pH 5.9); gradual wavy boundary.
Bw2—30 to 35 inches (76 to 89 centimeters); brownish yellow (10YR 6/6) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak very fine subangular blocky structure; slightly hard, firm, nonsticky and nonplastic; few fine and medium roots; 35 percent gravel and 10 percent cobbles and stones; moderately acid (pH 5.9).
R—35 inches (89 centimeters); fractured serpentine; fractures 2 to 4 inches (5 to 10 centimeters) apart.

Range in Characteristics

Depth to hard bedrock: 20 to 40 inches (51 to 102 centimeters)
Control section (by weighted average): 18 to 30 percent clay and 35 to 60 percent rock fragments
Water table: None noted

O horizon (where present)
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Texture of the fine-earth fraction: Slightly decomposed organic material
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 10YR
Value: 5 to 7 dry, 3 to 6 moist
Chroma: 3 or 4 dry, 2 or 3 moist
Texture of the fine-earth fraction: Loam, silt loam, or clay loam
Content of clay: 15 to 20 percent
Rock fragments: 15 to 30 percent gravel and 0 to 5 percent cobbles
Reaction: Slightly acid or moderately acid

Bw horizon
Hue: 10YR or 2.5Y
Value: 5 to 8 dry, 4 or 5 moist
Chroma: 4 to 6 dry or moist
Texture of the fine-earth fraction: Sandy loam, clay loam, or sandy clay loam
Content of clay: 15 to 35 percent
Rock fragments: 35 to 60 percent gravel and 0 to 20 percent cobbles or stones
Reaction: Slightly acid or moderately acid

C horizon (where present)
Hue: 10YR
Value: 5 to 7 dry, 4 or 5 moist
Chroma: 2 to 8 dry, 4 to 8 moist
Texture of the fine-earth fraction: Sandy clay loam, loam, or clay loam
Content of clay: 23 to 35 percent
Rock fragments: 35 to 60 percent gravel, 0 to 20 percent cobbles, and 0 to 20 percent stones
Reaction: Slightly acid or moderately acid

Weott Series

Setting

Landscape position: Depressions and backswamps on low flood-plain steps
Parent material: Alluvium derived from mixed sources
Slope: 0 to 2 percent
Elevation: 0 to 65 feet (0 to 20 meters)
Depth class: Very deep
Drainage class: Very poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Moderately slow
Flooding: Occasional
Ponding: Frequent
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Fine-silty, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts

Modal Pedon

Weott silt loam, in an area of Weott, 0 to 2 percent slopes, on a slope of 1 percent, under cinquefoil, pasture grasses, curly dock, and rushes, at an elevation of 5 feet (1.5 meters); Humboldt County, California; USGS Ferndale quadrangle; UTM zone 10, 373761mE, 4499845mN, NAD83.

Ap—0 to 12 inches (0 to 31 centimeters); dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (2.5Y 6/2) dry; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to medium roots; many fine and very fine tubular pores; few fine distinct olive brown (2.5Y 4/4) iron-manganese masses; slightly acid (pH 6.5); clear wavy boundary.

Bg1—12 to 26 inches (31 to 66 centimeters); dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (2.5Y 6/2) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine tubular pores; many fine prominent dark yellowish brown (10YR 4/6) iron-manganese masses; slightly alkaline (pH 7.5); gradual wavy boundary.

Bg2—26 to 60 inches (66 to 152 centimeters); dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; common fine prominent dark yellowish brown (10YR 4/6) iron-manganese masses; few fine prominent dark gray (N 4/0) iron depletions; moderately alkaline (pH 8.0).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 18 to 33 percent clay
Water table: At a depth of 0 to 4 inches (0 to 10 centimeters) from about January through March, 6 to 24 inches (15 and 60 centimeters) in April, 12 to 35 inches (30 to 90 centimeters) May through June, 35 to greater than 72 inches (90 to greater than 182 centimeters) July through November, and 6 to 24 inches (15 and 60 centimeters) in December

A or Ap horizon
Hue: 10YR or 2.5Y
Value: 1 to 6 dry or moist
Chroma: 2 or 3 dry or moist
Texture of the fine-earth fraction: Silt loam
Content of clay: 18 to 27 percent
Reaction: Neutral or slightly acid
Redoximorphic features:
Type—fine and medium masses of iron accumulation
Quantity—few to many
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5 moist
Chroma—4 to 6 moist

Upper part of the Bg horizon
Hue: 10YR, 2.5Y, or 5Y
Value: 4 to 6 dry or moist
Chroma: 2 dry or moist
Texture of the fine-earth fraction: Silt loam or silty clay loam
Content of clay: 18 to 33 percent
Reaction: Slightly acid to slightly alkaline
Redoximorphic features:
Type—fine and medium masses of iron accumulation
Quantity—few to many
Hue—10YR or 7.5YR
Value—4 to 6 moist
Chroma—4 to 6 moist

Lower part of the Bg horizon
Hue: 2.5Y or 5Y
Value: 4 to 6 dry or moist
Chroma: Neutral, 1, or 2 dry or moist
Texture of the fine-earth fraction: Fine sandy loam, loam, silt loam, or silty clay loam
Content of clay: 15 to 35 percent
Reaction: Neutral to moderately alkaline
Redoximorphic features:
Type—fine and medium masses of iron accumulation
Quantity—few to many
Hue—7.5YR or 10YR
Value—4 to 6 moist
Chroma—4 to 6 moist
Type—fine and medium masses of iron depletions
Quantity—few to many
Hue—2.5Y, 5Y, or neutral
Value—2.5 to 4 moist
Chroma—neutral or 1 moist

Wiregrass Series

Setting

Landscape position: Mountain slopes and broad ridgetops
Parent material: Colluvium and residuum from schist, sandstone, and mudstone
Slope: 0 to 75 percent
Elevation: 155 to 3,185 feet (48 to 972 meters)
Depth class: Very deep
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low to moderately high
Slowest permeability: Slow or moderately slow
Mean annual precipitation: 75 to 100 inches (1,900 to 2,550 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 220 to 290 days
Taxonomic classification: Fine-loamy, mixed, semiactive, isomesic Ustic Palehumults

Modal Pedon

Wiregrass very gravelly silt loam, in an area of Wiregrass-Rockysaddle complex, 30 to 50 percent slopes, on a uniform, northwest-facing slope of 39 percent, under tanoak, redwood, Douglas-fir, Pacific madrone, and California huckleberry, at an elevation of 940 feet (287 meters); in Redwood National Park, Humboldt County, California; USGS Bald Hills quadrangle; UTM zone 10, 421413mE, 4557610mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); slightly decomposed needles, leaves, and twigs; abrupt smooth boundary.

A—1 to 5 inches (3 to 12 centimeters); dark yellowish brown (10YR 3/4) very gravelly silt loam, pale brown (10YR 6/3) dry; weak fine granular and subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine irregular and common very fine and fine tubular pores; 36 percent gravel; strongly acid (pH 5.3); clear smooth boundary.

AB—5 to 11 inches (12 to 29 centimeters); dark yellowish brown (10YR 3/4) gravelly silty clay loam, light yellowish brown (10YR 6/4) dry; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; 20 percent gravel and 5 percent cobbles; very strongly acid (pH 5.0); gradual smooth boundary.

BAt—11 to 17 inches (29 to 44 centimeters); dark yellowish brown (10YR 4/4) gravelly silty clay loam, very pale brown (10YR 7/4) dry; weak fine and medium subangular blocky structure; slightly hard, very friable, moderately sticky and slightly plastic; few very fine and fine and common medium and coarse roots; common very fine and fine tubular pores; 14 percent gravel and 10 percent cobbles; very strongly acid (pH 5.0); gradual wavy boundary.

Bt1—17 to 31 inches (44 to 78 centimeters); yellowish brown (10YR 5/4) very gravelly clay loam, pale yellow (2.5Y 7/3) dry; weak medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; few very fine and fine tubular pores; 38 percent gravel and 5 percent cobbles; strongly acid (pH 5.2); gradual wavy boundary.

Bt2—31 to 41 inches (78 to 103 centimeters); light olive brown (2.5Y 5/4) very gravelly clay loam, pale yellow (2.5Y 8/2) dry; weak coarse subangular blocky structure; slightly hard, firm, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; few very fine and fine tubular pores; few faint clay films on faces of peds; 38 percent gravel and 5 percent cobbles; very strongly acid (pH 4.8); gradual smooth boundary.

Bt3—41 to 67 inches (103 to 170 centimeters); light olive brown (2.5Y 5/4) very gravelly clay loam, light gray (2.5Y 7/2) dry; weak coarse subangular blocky structure; slightly hard, firm, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; few very fine tubular pores; common faint clay films on faces of peds; 43 percent gravel and 5 percent cobbles; strongly acid (pH 5.3).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 27 to 35 percent clay, 0 to 35 percent gravel, and 0 to 15 percent cobbles
Water table: None noted
Reaction: Slightly acid to very strongly acid
Surface fragments: 0 to 75 percent gravel

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 4 to 7 dry, 3 or 4 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Silt loam or loam
Content of clay: 20 to 30 percent
Rock fragments: 0 to 45 percent gravel and 0 to 5 percent cobbles

Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 4 to 8 dry, 2 to 6 moist
Chroma: 2 to 6 dry, 3 to 8 moist
Texture of the fine-earth fraction: Loam, silty clay loam, or clay loam
Content of clay: 25 to 40 percent
Rock fragments: 0 to 45 percent gravel and 0 to 15 percent cobbles

C horizon (where present)
Hue: 10YR, 2.5Y, or 5Y
Value: 6 to 8 dry, 4 to 6 moist
Chroma: 2 to 4 dry, 2 to 8 moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 20 to 40 percent
Rock fragments: 0 to 50 percent gravel, 0 to 15 percent cobbles, and 0 to 10 percent stones

Worswick Series

Setting

Landscape position: Backswamps and low flood-plain steps
Parent material: Alluvium derived from mixed sources
Slope: 0 to 2 percent
Elevation: 0 to 160 feet (0 to 50 meters)
Depth class: Very deep

Drainage class: Very poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slowest permeability: Moderately slow
Flooding: Occasional
Ponding: Occasional
Mean annual precipitation: 35 to 80 inches (890 to 2,030 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 275 to 330 days
Taxonomic classification: Coarse-silty, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts

Modal Pedon

Worswick loam, in an area of Worswick, 0 to 2 percent slopes, on a slope of 1 percent, under pasture grasses and clover with scattered curly dock, at an elevation of 16 feet (5 meters); Humboldt County, California; USGS Ferndale quadrangle (7.5 minutes series); UTM zone 10, 391489mE, 4493864mN, NAD83.

Ap—0 to 9 inches (0 to 23 centimeters); dark grayish brown (2.5Y 4/2) loam, light brownish gray (2.5Y 6/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few medium and common very fine and fine roots; few very fine tubular pores; common fine prominent dark yellowish brown (10YR 4/4) masses of iron accumulation and common fine faint dark gray (2.5Y 4/1) iron depletions in the matrix; slightly acid (pH 6.5); gradual wavy boundary.

Bg1—9 to 30 inches (23 to 76 centimeters); dark grayish brown (2.5Y 4/2) fine sandy loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine and common very fine roots; few very fine tubular pores; common medium prominent dark yellowish brown (10YR 4/4) masses of iron accumulation and common medium faint dark gray (2.5Y 4/1) iron depletions in the matrix; slightly acid (pH 6.5); gradual wavy boundary.

Bg2—30 to 60 inches (76 to 152 centimeters); dark grayish brown (2.5Y 4/2) loam, light brownish gray (2.5Y 6/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; common medium prominent dark yellowish brown (10YR 4/6) masses of iron accumulation and many coarse faint dark gray (2.5Y 4/1) iron depletions in the matrix; neutral (pH 7.0).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 10 to 18 percent clay
Water table: At a depth of 0 to 4 inches (0 to 10 centimeters) from about January through March, 4 to 24 inches (10 to 60 centimeters) in April, 12 to 35 inches (30 and 90 centimeters) May through June, 35 to greater than 72 inches (90 to greater than 182 centimeters) July through November, and 6 to 24 inches (15 and 60 centimeters) in December

A or Ap horizon
Hue: 10YR or 2.5Y
Value: 5 or 6 dry, 3 or 4 moist
Chroma: 1 or 2 dry or moist
Texture of the fine-earth fraction: Loam or silt loam
Content of clay: 15 to 25 percent
Reaction: Slightly acid or neutral
Redoximorphic features:
Type—fine and medium iron-manganese masses in the matrix; iron stains lining root channels and/or pores

Quantity—few to many
Hue—7.5YR, 10YR, or 2.5Y
Value—3 to 5 moist
Chroma—4 to 6 moist

Upper part of the Bg horizon
Hue: 10YR, 2.5Y, or 5Y
Value: 5 or 6 dry, 3 to 5 moist
Chroma: 1 or 2 dry or moist
Texture of the fine-earth fraction: Very fine sandy loam, fine sandy loam, or loam
Content of clay: 10 to 18 percent
Reaction: Slightly acid to slightly alkaline
Redoximorphic features:
Type—medium and coarse iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR, 10YR, or 2.5Y
Value—3 to 5 moist
Chroma—3 to 6 moist
Type—medium and coarse iron depletions in the matrix
Quantity—few to many
Hue—2.5Y, 5Y, or neutral
Value—2.5 to 6 moist
Chroma—neutral to 2 moist

Lower part of the Bg horizon
Hue: 10YR, 2.5Y, or 5Y
Value: 5 to 6 dry, 3 to 5 moist
Chroma: 1 or 2 dry or moist
Texture of the fine-earth fraction: Loamy sand, very fine sandy loam, fine sandy loam, loam, silt loam, or silty clay loam
Content of clay: 5 to 30 percent
Rock fragments: 0 to 25 percent gravel
Reaction: Slightly acid to slightly alkaline
Redoximorphic features:
Type—medium and coarse iron-manganese masses in the matrix; iron stains lining root channels and/or pores
Quantity—common or many
Hue—7.5YR, 10YR, or 2.5Y
Value—3 to 5 moist
Chroma—3 to 6 moist
Type—medium and coarse iron depletions in the matrix
Quantity—few to many
Hue—2.5Y, 5Y, or neutral
Value—2.5 to 6 moist
Chroma—neutral to 2 moist

Yeti Series

Setting

Landscape position: Broad ridges and upper hillslopes and mountain slopes
Parent material: Colluvium and residuum derived from sandstone and mudstone
Slope: 5 to 30 percent
Elevation: 5 to 1,295 feet (3 to 395 meters)
Depth class: Very deep

Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Slowest permeability: Slow
Mean annual precipitation: 65 to 90 inches (1,650 to 2,290 millimeters)
Mean annual temperature: 50 to 55 degrees F (10 to 13 degrees C)
Frost-free season: 250 to 300 days
Taxonomic classification: Fine, mixed, superactive, isomesic Typic Palehumults

Modal Pedon

Yeti clay loam, in an area of Sasquatch-Yeti-Sisterrocks complex, 15 to 30 percent slopes, on a linear, southwest-facing slope of 15 percent, under Sitka spruce, red alder, salmonberry, and swordfern, at an elevation of 90 feet (27 meters); in Redwood National Park, Del Norte County, California; USGS Requa quadrangle; UTM zone 10, 408251mE, 4605028mN, NAD83.

Oi—0 to 1 inch (0 to 3 centimeters); black (10YR 2/1) slightly decomposed plant material, dark brown (10YR 3/3) dry; 95 percent fiber unrubbed, 80 percent rubbed; fiber identifiable as fresh and decomposing salmonberry and alder leaves, Sitka spruce needles and twigs, and swordfern fronds; very strongly acid (pH 4.8); clear smooth boundary.

A—1 to 11 inches (3 to 27 centimeters); very dark brown (10YR 2/2) clay loam, dark grayish brown (10YR 4/2) dry; moderate very fine and fine subangular blocky structure; moderately hard, firm, slightly sticky and moderately plastic; common very fine, fine, medium, and coarse roots; common very fine and fine tubular and many very fine and fine irregular pores; 10 percent gravel; very strongly acid (pH 4.8); clear smooth boundary.

AB—11 to 16 inches (27 to 40 centimeters); very dark brown (10YR 2/2) clay loam, brown (10YR 4/3) dry; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine, fine, and medium roots; common very fine, fine, medium, and very coarse tubular and common very fine and fine irregular pores; 5 percent gravel; very strongly acid (pH 4.8); clear wavy boundary.

Bt1—16 to 23 inches (40 to 59 centimeters); dark yellowish brown (10YR 4/4) clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and very plastic; few distinct clay films on faces of peds; common fine, medium, and coarse roots; common very fine, fine, medium, and very coarse tubular and common very fine and fine irregular pores; 10 percent gravel; very strongly acid (pH 4.7); clear wavy boundary.

Bt2—23 to 32 inches (59 to 82 centimeters); yellowish brown (10YR 5/6) clay loam, brownish yellow (10YR 6/6) dry; moderate fine and medium subangular blocky structure; moderately hard, firm, very sticky and very plastic; few distinct clay films on faces of peds; moderately few fine and common medium roots; common very fine, fine, and very coarse tubular and common very and fine irregular pores; 3 percent gravel and 5 percent paragravel; very strongly acid (pH 4.5); clear smooth boundary.

Bt3—32 to 43 inches (82 to 109 centimeters); yellowish brown (10YR 5/6) clay loam, yellow (10YR 7/6) dry; weak fine and medium subangular blocky structure; moderately hard, firm, very sticky and very plastic; few distinct clay films on faces of peds and rock fragments; moderately few fine and common medium roots; common very fine, fine, and very coarse tubular and moderately few very fine and fine irregular pores; 5 percent gravel, 5 percent paragravel, and 2 percent paracobbles; very strongly acid (pH 4.5); gradual smooth boundary.

Bt4—43 to 52 inches (109 to 132 centimeters); yellowish brown (10YR 5/6) paragravelly clay loam, yellow (10YR 7/6) dry; weak medium subangular blocky

structure; moderately hard, firm, moderately sticky and moderately plastic; common clay films of rock fragments and few distinct clay films on faces of peds; very few fine roots; moderately few very fine and fine irregular pores; 5 percent gravel, 10 percent paragravel, and 2 percent paracobbles; very strongly acid (pH 4.5); clear wavy boundary.

Bt5—52 to 67 inches (132 to 170 centimeters); yellowish brown (10YR 5/6) paragravelly clay loam, yellow (10YR 7/6) dry; weak medium subangular blocky structure; moderately hard, firm, moderately sticky and moderately plastic; few distinct clay films on faces of peds and on rock fragments; very few fine roots; very few very fine and fine irregular pores; 10 percent gravel, 20 percent paragravel, and 7 percent paracobbles; very strongly acid (pH 4.5).

Range in Characteristics

Bedrock: None observed
Control section (by weighted average): 35 to 50 percent clay, 0 to 13 percent gravel, and 0 to 7 percent paragravel
Water table: None noted
Reaction: Strongly acid or very strongly acid

O horizon
Hue: 10YR
Value: 2 to 6 dry or moist
Chroma: 1 to 4 dry or moist
Kind of organic material: Slightly decomposed
Wood fragments: 0 to 35 percent
Reaction: Moderately acid to very strongly acid

A horizon
Hue: 7.5YR or 10YR
Value: 4 or 5 dry, 2 or 3 moist
Chroma: 2 to 4 dry or moist
Texture of the fine-earth fraction: Loam or clay loam
Content of clay: 25 to 33 percent
Rock fragments: 0 to 13 percent gravel

Upper part of the Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 3 to 6 dry or moist
Texture of the fine-earth fraction: Clay loam or clay
Content of clay: 35 to 50 percent
Rock fragments: 0 to 13 percent gravel
Pararock fragments: 0 to 7 percent paragravel

Lower part of the Bt horizon
Hue: 7.5YR, 10YR, or 2.5Y
Value: 5 to 7 dry, 3 to 5 moist
Chroma: 3 to 6 dry or moist
Texture of the fine-earth fraction: Clay loam or clay
Content of clay: 30 to 50 percent
Rock fragments: 0 to 30 percent gravel
Pararock fragments: 0 to 20 percent paragravel and 0 to 7 percent paracobble

C horizon (where present)
Hue: 7.5YR, 10YR, or 2.5Y
Value: 6 or 7 dry, 4 to 6 moist
Chroma: 4 to 6 dry or moist

Texture of the fine-earth fraction: Clay loam or clay
Content of clay: 35 to 50 percent
Rock fragments: 0 to 30 percent gravel
Pararock fragments: 0 to 25 percent paragravel

Formation of the Soils

Soils are classified, mapped, and interpreted on the basis of variations in the kinds and arrangement of soil horizons. The degree and expression of the horizons are a reflection of the extent of the interaction between soil-forming factors and soil forming processes. The factors include climate, time, relief, parent material, and living organisms. The processes include additions, removals, transfers, and transformations.

Important diagnostic surface horizons in this survey area include ochric and umbric epipedons. Significant diagnostic subsurface horizons include cambic and argillic horizons. These diagnostic horizons are defined in the Glossary.

To the soil mapper, a rationale describing the formation and behavior of the soils helps account for soil patterns and facilitates the mapping process. Such a rationale can be used as a basis for predicting soil behavior and the effects of land management. For the soil survey user, the rationale can make it easier to understand, use, and critique the soil survey and to apply the survey more intelligently in situations requiring judgement.

Soil mappers cannot completely understand the formation of the soils in an area, even if the mapper has worked in the area for years. Soils are mapped primarily by observation and hypothesis testing. Inferences are drawn, whenever possible, about repeating patterns on the landscape. Commonly, more than one hypothesis can account for a particular pattern.

McLaughlin and Harradine (1965) state “Soil is the product of the action of climate and living organisms upon the parent material, as conditioned by time and relief. The interrelationships among the factors of soil formation are complex, and the effect of any one factor cannot be isolated and identified with certainty.”

Geologically speaking, northwestern California has been a region of tectonic uplift for at least 2 million years (Kelsey and Cashman, 1983). Regionally, the effect of uplift has been to rejuvenate the landscape, building mountains and exposing fresh geologic parent materials to surficial processes, including processes of soil formation. A near-surface environment is unfavorable to persistence of freshly exposed geologic materials in three important respects.

First, gravity, running water, wind, and organisms break down and transport near-surface earth materials, continually acting upon exposed geologic materials.

Second, geologic materials are released from confining pressure as they near the earth’s surface; rock minerals cease to be thermodynamically stable. Temperatures near the surface are not constant, but vary with seasons, diurnally, and due to shadow effects, freezing, thawing, and fire. Most rocks slowly disintegrate due to the temperature fluctuations and the gradual loss of strength in the absence of confining pressure. This disintegration is termed physical weathering.

Third, the near-surface environment is chemically inimical to most rocks. It is primarily an oxidizing, rather than a reducing, environment. It is also a leaching environment where there is an abundance of fresh, moving water capable of removing soluble constituents. Leaching is enhanced by soil organisms, which produce carbon dioxide (an acidifier) and organic compounds, some of which are acids or chelates. Some organisms actively break down and exploit minerals for the elements the organisms need to grow. Over time, rock minerals break down and soil minerals

form. This dissolution and transformation constitutes chemical weathering. Rates of chemical weathering processes vary. Some processes require thousands of years to complete.

All weathering involves processes that break down parent material. The presence of living organisms promotes weathering, but plants and animals are also responsible for processes that conserve or increase certain elements in soils relative to the geologic parent material. Calcium and potassium ions are essential to plants. The ions are actively accumulated and cycled by plants. Green plants accumulate carbon during photosynthesis, and some plants have associations with nitrogen-fixing microbes. Plants and animals contribute organic matter to soil. The organic matter increases the content of elemental carbon and nitrogen in the soil and greatly affects soil properties. Together, all of the chemical processes, abiotic and biotic, are “pedogenic,” or soil forming.

The most important process in chemical weathering is hydrolysis. Birkland (1984) presents chemical equations depicting the hydrolysis of orthoclase feldspar into clays, aqueous silicate, and potassium ions. The clays are weathering products, whereas the silicate and potassium ions may be leached or taken up by vegetation. Another important process in chemical weathering is oxidation. In an oxidizing environment, the ferrous (divalent) iron in rock minerals is oxidized to insoluble hydrated ferric (trivalent) oxides. These hydrated iron oxides persist and are responsible for yellowish and reddish colors in soils. Because physical disintegration, hydrolysis, leaching, and oxidation occur concurrently, the proportion of material that consists of rock fragments and weatherable minerals becomes smaller as a soil forms and the proportion that consists of clay and iron oxides becomes larger. The proportions of rock fragments and clay are easily assessed in the field, and relative amounts of iron oxide are also easily judged from the intensity of yellow to red colors. Taken together, these soil characteristics provide a rough index of the relative age or development of a soil.

Soils do not have uniform depth or position on the landscape. They develop three-dimensionally. Each soil has a vertical profile consisting of several layers, termed horizons, that are roughly parallel to the surface of the ground. The major horizons of mineral soils are the A horizon, B horizon, and C horizon. The A horizon is at the surface and is distinguished primarily by an accumulation of organic matter. The B horizon is distinguished by a maximal degree of weathering and alteration of the parent material by soil forming processes. The C horizon may be weathered but otherwise lacks alteration by soil forming processes.

The buildup of organic matter in the A horizon is due to the concentration of biological activity, especially that of plant roots, in the upper part of the soil. Organic matter generally makes soil darker in color than its mineral constituents would be alone. Organic matter increases the soil’s capacity to store water and plant-essential elements, and it tends to bind individual mineral particles into larger, natural aggregates, called peds. The A horizon tends to have many stable, granular peds with considerable pore space between them. Because of the low specific gravity of organic matter and the abundant pore space, the A horizon tends to be light and fluffy compared to deeper horizons. Its porosity facilitates passage of water and gases, as reflected in gross physical measurements of permeability or saturated hydraulic conductivity.

In any profile, the B horizon is generally the horizon that is most leached and has the lowest content of rock fragments, the highest content of clay, and the brightest, reddest colors. It also tends to have the largest peds. Peds in the B horizon tend to be subangular blocks that fit together rather closely. The B horizon, therefore, has considerably less pore space than the A horizon. Leaching, weathering, loss of rock fragments, accumulation of clay, brighter and redder colors, and large peds are all products and signs of soil formation. These products of soil formation might be expected to be more prevalent in the A horizon than the B horizon because the soil-

forming processes are more active in the A horizon and have operated longer. The A horizon, however, has unique processes that tend to disrupt the accumulation of these products. These processes include intense biological activity, wetting and drying, and other events in the immediate vicinity of the ground surface.

One process that is particularly active in the A horizon is eluviation (removal) of clay. At the surface, cycles of wetting and drying, movements of animals, and uprooting of plants by animals and wind often disrupt peds and the detached rocks that are carried by gravity. When rain occurs, clay from broken peds is carried in suspension and translocated downward. Some of this clay is re-deposited in pores and on surfaces of peds in the B horizon. Clay eluviation accounts in large part for most A horizons having less clay than underlying B horizons. B horizons that have films of clay lining pores and peds are labeled Bt horizons. Most of the B horizons in the survey area are Bt horizons.

Jenny (1941) and McLaughlin and Harradine (1965) identify five factors of soil formation: climate, time, relief, parent material, and living organisms. People can be considered as an additional factor. In places, cultural practices have played a significant role in shaping patterns of soils. Variations in the factors influence the relative intensity of soil forming processes and therefore the distribution of soils regionally and at finer scales. Because the interrelationships among the factors of soil formation are complex, it is usually most productive to consider them one or two at a time.

Climate

Climate exerts an influence on soil formation at regional, local, and micro scales. Regionally, cool, wet winters and nearly rainless summers characterize the climate of northwestern California. Locally, summer conditions range from mild with fog drip on ocean-facing slopes to warm and dry farther inland. Throughout the region, the climate supplies excess water to the soil in the winter and partially or entirely removes water in the summer. The supply and demand for soil water is almost exactly out of phase (Major, 1988). Because of the excess winter precipitation, the soils tend to be strongly leached. The consequences of intense leaching include low base saturation and the presence of kaolinitic clay, iron oxides, and aluminum oxides as the products of long-term weathering. Base saturation in the B horizon of the well drained soils is typically about 10 to 35 percent.

Locally within the survey area, soil patterns are attributable either to gradients in precipitation and air temperature or to differences in vegetation, which, in turn, are attributable to influences of climate. There are some distinctive effects of the maritime climate. The level of exchangeable sodium in well drained, forested soils on ocean-facing slopes is about twice that of well drained, forested soils that formed in similar parent material farther inland. The elevated content of sodium can be attributed directly to salt-laden aerosols derived from ocean spray.

Time

Soils take time to form. Birkland (1984) estimates that A horizons are fully formed within a thousand years, but that the subsurface reddening and in-place clay formation in B horizons typically requires thousands or tens of thousands of years. Given these time frames, soils can be useful in approximating the ages of geomorphic surfaces. An example of an area with a very young surface would be map unit 100, Riverwash, which follows the channel of Redwood Creek. The particles that comprise the streambed vary in size from silt to boulders and are little weathered. The surface is flooded and reworked every time there is a storm. There is not enough time for the development of an A horizon, let alone a Bt horizon.

An example of an area with a slightly older surface is map unit 172, Bigriver, 2 to 5 percent slopes. This unit is on alluvial flats, including the Tall Trees Grove. The

particles that comprise this soil are silt- to sand-sized and are deposited by overbank flooding. Flooding every few years just barely tops the alluvial flats and does not add much sediment. Large floods every hundred years or so, however, build new surfaces. Within a century, an A horizon has begun to form in the new surface. In any given profile of the soil, buried A horizons of varying ages exist. The buried A horizons are slightly darker and browner than the surrounding layers and tend to have many roots and incipient soil structure. In general, Bigriver soils are in depositional areas where sediments tend to accumulate over time.

Considered above are soils or soil horizons whose ages might be dated to a specific time when water most recently deposited fresh sediment. Elsewhere, for example in the mountains, soils form in regolith weathered from rock. In such areas, the age of the soil is much harder to define. The weathering is a continuous process. The regolith is continually displaced downslope in response to gravity. There is no single age of sediment at any given place to define the age of the soil.

Despite the complications, Zinke and Colwell (1965) describe a broad, general pattern of soils in the mountains. The main variable is the degree of development of the B horizon. Soils that are at least a thousand years old have fully developed A horizons, which have more-or-less reached a steady state. A transect across a mountain landscape underlain by one rock type commonly shows variations in properties that can be arranged in a sequence of degree of development. Soils on very steep, lower slopes (for example, Panthercreek soils), have a B horizon that is thin and weakly developed. The increase in content of clay compared to the A horizon is slight, the hue is yellowish brown (10YR), and the texture is loamy and includes a high content of rock fragments. On less steep, middle slopes, the B horizon is thicker and exhibits greater development. The increase in content of clay compared to the A horizon is moderate, the hue is slightly redder (for example, 7.5YR in Coppercreek soils), and the texture is clayier and has a lower content of rock fragments. This trend continues upslope until, on broad ridgetops, the soils have very thick, strongly developed B horizons (for example, the Trailhead soils). The increase in content of clay compared to the A horizon is great, the hue is red (5YR or 2.5YR), and the texture is clay with few rock fragments. The most developed soils are commonly on plateau-like ridgetops and always on apparently old surfaces.

Marron (1985) studied colluvium in bedrock hollows along the C-10 Road. Although the colluvium in the hollows varied widely in texture and degree of weathering, most deposits tended to be intermediate in the range. Contrasting layers within the deposits were interpreted to reflect either episodic partial evacuation or episodic infilling of material from varying positions on upslope surfaces. Radiocarbon ages of charcoal in one hollow ranged from 9,600 to 9,900 years in the deepest layer and were 7,280 years in the layer above it. The present surface expression of most bedrock hollows is subtle, and upper soil horizons tend to blend with the horizons of the shallower soils around the hollows. This suggests gradual transport of upper layers into the hollows by creep. Whether delivered episodically or continuously by creep, most of the colluvium in hollows is similar in development to the soils directly upslope. This similarity is because much of the colluvium that refills hollows is already preweathered to the state of the surroundings. Thus, in the mountains, geomorphic surfaces can be much younger than the degree of soil development may suggest.

Relief

In the mountains, rates of weathering and geomorphic processes vary and may or may not be in balance at any given point in space or time. In an active landscape, such as the forested lower Redwood Creek basin, relief has a particularly relevant influence on rates of geomorphic processes. The shape and steepness of landforms are the principal factors influencing geomorphic process thresholds and rates. The major processes of mass movement in the mountains include creep, block sliding, and debris

flows. The colluvium transported over mountains by mass movement is eventually carried to streams. Transport by surface water is ultimately the most active erosional process.

Marron and Popenoe (1986) attributed major soil patterns in the Bond Creek subbasin to the interaction of erosional and soil-forming processes, with rates of erosional processes generally being the more variable over the landscape. They argued that, as a consequence of the locations at which erosional processes are most active, soil development generally increases from steeper to gentler slopes and from high- to low-order stream valleys.

Marron and Popenoe (1986) observed greater soil development on north-facing than south-facing slopes in the Bond Creek subbasin. Birkland (1984) cites studies that conclude soils form more rapidly on north-facing than south-facing aspects. Marron and Popenoe (1986) used geomorphic evidence to weigh this hypothesis against the alternative that south-facing slopes mainly experience more active soil stripping. The contrast in soil development coincided with a contrast in slope forms. South-facing slopes exhibited slope forms reflective of fluvial erosion and rapid, shallow landsliding, which are processes that remove soil and expose less-weathered parent material. North-facing slopes exhibited dominance of creep and deep-seated block sliding, which are less vigorous processes that may operate concurrently with soil formation.

Soils in the mountains include material in a range of weathering states. Even in highly developed Bt horizons in Trailhead soils, there are some fresh angular schist fragments in what is otherwise red clay. Colluvium may be preweathered or weather as it moves down a slope but, in moving, it may gain some fresh material. Over thousands of years, trees fall and pull up rock fragments, and mass movements pluck off the weakened edges of protruding bedrock. These fragments becomes mixed into and rejuvenate the more weathered soil mass. Thus, the B horizons of soils on active mountain slopes in the survey area seem to reflect an average age of the colluvium determined by rates of weathering and soil movement.

The boundaries between soils can be gradual or abrupt. Abrupt soil boundaries tend to coincide with abrupt topographic and process boundaries. For example, in the upper parts of the Devil's Creek and Bridge Creek subbasins, red, clayey Trailhead soils (map unit 561) typify broad divides. Yellowish-brown, loamy Coppercreek soils (map unit 536) are below sharp slope breaks on steep slopes surrounding small drainages. In the Fortyfour Creek subbasin, the transition is commonly more gradual, both in terms of relief and soils, with an intermediate Tectah soil on the intermediate slope gradient. The coincidence of abrupt soil and topographic boundaries is probably a reflection of incidents of fluvial downcutting and mass movement that stripped away soil and exposed less-weathered surfaces. The gradual boundaries are more likely a reflection of changing rates of continuous, concurrent weathering and soil movement.

Parent material

Birkland (1984) identifies texture, elemental composition, and mineral stability as properties that influence soil formation. In the lower Redwood Creek basin, variations in these properties influence soil formation at several scales. At the mapping scale, the soil survey depicts separate soil map units in areas of Franciscan sedimentary and Redwood Creek schist, although the variations among rocks within these geologic units is probably of at least equal importance to soil formation and geomorphic activity. Contrasting sedimentary rocks are mapped separately as the coherent sandstone unit of Lacks Creek (KJFl) and the incoherent mudstone unit of Coyote Creek (KJFc) (Harden and others, 1982). The Redwood Creek schist also varies in mineralogy, texture, lithology, and structure. It consists of metamorphosed mudstone, sandstone, and volcanic rocks.

In the survey area, Devilscreek and Panthercreek soils in wet, unstable areas within the Redwood Creek schist and Atwell soils in wet, unstable areas within the Franciscan sedimentary stand out clearly and appear associated with the parent material. Each of these soils tends to be in areas with fine-textured, incoherent, apparently sheared rocks. The Atwell soils formed from mudstone and shale. The type of schist in which the Devilscreek and Panthercreek soils form bears a close resemblance to shale and is probably metamorphosed from shale. On adjacent slopes underlain by relatively competent and coarse textured rocks, there are yellowish brown, well drained, moderately developed soils, whether the rocks are unmetamorphosed sandstone or schist.

In spite of the parallels, there is a striking contrast in properties between the schist and sedimentary members of weakly developed soils in wet areas. Atwell soils, which formed from mudstone and shale, have 30 to 40 percent clay in the C horizon. By contrast, the Devilscreek and Panthercreek soils, which formed from schist, have 10 to 20 percent clay in the C horizon. Perhaps, when released from confining pressure, the unmetamorphosed mudstone and shale break down physically into their silt and clay constituents; whereas the schist, being more altered, requires chemical weathering to form clay.

Soils of moderate development (for example, Ahpah, Coppercreek, Lackscreek, and Slidecreek soils) are quite similar in terms of behavior, clay content, and position on the landscape in sedimentary and schist areas. Although there is considerable overlap, the soils that formed from schist seem to average a bit more dithionate-extractable iron than their equivalents that formed from sedimentary rocks and consequently have a bit brighter chromas and redder hues.

Two soils that have strongly developed Bt horizons, Tectah and Trailhead soils, are at slightly lower elevations and on slightly steeper slopes on schist than in sedimentary areas. If the degree of development is a reflection of a balance between erosional and soil-forming processes and if relief primarily determines rates of erosional processes, then the soil-forming processes, which produce Bt horizons, may be more active on schist than on sedimentary rocks. A possible reason is that, due to its greater metamorphism, the schist is more labile in a near-surface environment (Janda 1979). This reason may also help explain why soils with moderate amounts of clay are redder on schist. Starting from schist regolith, which initially has a low content of clay, more chemical weathering is required to reach a moderate content of clay than is required of sedimentary regolith, which initially has a higher content of clay. The amount of chemical weathering largely determines the amount of free iron oxides and consequent increases in chroma and redness.

Parent materials vary at local scales and within profiles. Coppercreek, Devilscreek, and Panthercreek soils adjoin on the landscape. Coppercreek soils tend to be higher on the landscape than the Devilscreek and Panthercreek soils, which are down in hillslope hollows. Typically, the Devilscreek soils are around the sides and upper margins of the hollows and the Panthercreek soils are in the lower parts and along the axis of the hollows. The Coppercreek soils have a B horizon with hue of 10YR or 7.5YR and 25 to 35 percent clay overlying weathered bedrock or a C horizon with 20 to 25 percent clay. The Devilscreek soils have a B horizon that is slightly less developed than that of the Coppercreek soil and that is abruptly juxtaposed over a gray, 2C horizon of unweathered, sheared rock. The 2C horizon contains only about 10 to 20 percent clay. The Panthercreek soils have a very weak, grayish B horizon that has 10 to 20 percent clay overlying a gray C horizon similar to the 2C horizon in the Devilscreek soil. There is a difference in parent material between the B and 2C horizons in the Devilscreek soil. The A and B horizons in the Devilscreek soil appear preweathered and are thought to have been delivered by mass movement from the Coppercreek soil directly upslope. The 2C horizon is apparently derived locally from relatively unweathered, sheared schist beneath the hollow. The axis and lower parts

of the hollow typically do not have big, old-growth trees. An absence of large trees is a sign that a hollow has experienced a debris flow in the past few hundred years. Based upon many such observations, it appears in general that regolith is stripped more frequently and vigorously from the lower positions of such hollows than from the upper margins. The lower positions are also farther from a source of preweathered colluvium. Therefore, most if not all of the material in the Panthercreek soils probably derives from the sheared schist beneath the hollow.

Living Organisms

Because it is at the ground surface, the A horizon is the part of the soil most strongly influenced by vegetation. There are definitive visual and chemical differences between the A horizons of soils beneath respective vegetation types in the lower Redwood Creek watershed (Popenoe and others, 1992).

Commonly, climate determines vegetation, and vegetation determines the type of A horizon. Footstep, Ladybird, Sasquatch, Sisterrocks, and Stonehill soils are the dominant forest soils on ocean-facing slopes. Ahpah, Coppercreek, Lackscreek, and Slidecreek soils, which are also forest soils, are in similar topographic positions farther inland. The Footstep, Ladybird, Sasquatch, Sisterrocks, and Stonehill soils have thick, dark A horizons, which, in terms of color and organic carbon content, easily meet the technical requirements for an umbric epipedon. In contrast, the Ahpah, Coppercreek, Lackscreek, and Slidecreek soils have thinner, lighter-colored A horizons, which do not meet the color requirement for an umbric epipedon. On the landscape, the pattern of A horizons is closely correlated with the pattern of understory vegetation. Forests on Ladybird, Sasquatch, Sisterrocks, and Stonehill soils tend to have a dense herbaceous understory dominated by swordfern. By contrast, forests on Lackscreek, Coppercreek, Ahpah, and Slidecreek soils tend to have understories dominated by shrubs with a sparse herb layer. Dense, herbaceous, fern-dominated understories occur both on ocean-facing slopes and on wet, lower, inland slopes. This type of understory apparently develops in response to perennial soil moisture, whether due to fog drip or a shallow water table.

A parallel situation involving soils and vegetation occurs inland. The prairies and oak woodlands in Bald Hills have very lush herbaceous vegetation. Airstrip, Countshill, Dolason, Doolyville, Elkcamp, Maneze, and Pasturerock soils in the prairies and oak woodlands have thick, dark A horizons, which, in terms of color and organic carbon content, easily meet the technical requirements for an umbric or mollic epipedon. In contrast, soils in nearby conifer forests with a shrub understory have thinner, lighter-colored A horizons, which do not meet the technical requirements for an umbric or mollic epipedon.

Soils under prairie vegetation have thicker A horizons than soils under other vegetation types in the park. Examples of soils under prairie vegetation are Airstrip, Countshill, Dolason, and Elkcamp soils. The content of organic carbon and nitrogen is greater in all horizons under prairie vegetation than under other vegetation types, and the content of soil carbon and nitrogen decreases more gradually with depth.

The A horizons of soils under prairie vegetation also differ in other ways from those under other types of vegetation. Exchangeable calcium exhibits little change with depth under prairies but decreases with depth in the A horizons of soils under forestland and oak woodland. Calcium is taken up in excess by trees and bound up in cell walls. Calcium is cycled when foliage and branches are returned to the forest floor by litterfall (Powers, 1976). Well drained soils have lower calcium exchange percentages under prairie than under any other type of vegetation in the survey area. Apparently, the rate at which calcium is cycled by herbaceous vegetation is overwhelmed by the rate of leaching.

The distinctive surface horizons under contrasting vegetation types in the Bald Hills require many years to develop. Birkland (1984) estimates that an A horizon

may require up to a millennium to reach a steady state. The fact that the soils are so well differentiated means that the prairies and oak woodlands in the Bald Hills have persisted largely in their present configuration for many years (USDI, 1999).

The distribution of vegetation and soils seems to result from a complex interplay of several site factors and events. This interplay is still only partially understood (Popenoe and others, 1992). Some of the vegetation patterns probably depend upon fire. If prairies are burned frequently and regularly, the fires can prevent encroachment by Douglas-fir. The fires can kill the Douglas-fir before they reproduce. Many prairie-forest boundaries are at natural firebreaks, such as abrupt changes in slope and drainages, with or without a controlling change in geology or aspect. As a process, fire helps to account for many existing vegetation patterns that are not readily explained on the basis of geology or climate. Although fire can slow or prevent forest encroachment, it does not account well for how grasslands might have originated, replacing the climax conifer forest in such a moist climate. Fires are not known to be stand replacing, particularly at the northern end of redwood's distribution (Agee, 1993).

The initial establishment of the prairies and oak woodlands in the Bald Hills was probably the result of climatic change. According to Heusser (1965), prairies and oak woodlands displaced areas of conifer forest during a time of warmer, drier climate. Then, approximately 2,500 to 2,800 years ago (West, 1983), there was a transition to the present-day, cooler, moister climate, accompanied by a shift back toward conifer forest.

Ugolini and Schlicte (1973) hypothesize that frequent burning by humans helped preserve prairies of western Washington into the modern climate, which favors conifer forest. Remains of the first known permanent settlements in the Bald Hills date to about the time of climatic transition (Eidsness, 1988). Prior to the arrival of Europeans, Native Americans of northwestern California often set fires along ridges to control invasions of trees and brush. Thus, frequent, regular, anthropogenic fire may have been necessary to preserve vegetation boundaries unprotected by geology or climate. If so, such actions by humans would have reinforced the differentiation of A horizons specific to the individual vegetation types present today.

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Glossary

AASHTO classification. A system for classifying soils specifically for geotechnical engineering purposes related to highway and airfield construction. It is based on particle-size distribution and Atterberg limits.

AASHTO group index (GI). An empirical index number used to evaluate clayey and silty clay material.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvial fan. A low, outspread mass of loose material and/or rock material washed down the sides of mountains and hills. It commonly has gentle slopes and is shaped like an open fan or a segment of a cone. It is deposited by a stream at the place where the stream issues from a narrow mountain valley or where a tributary stream is near or at its junction with the main stream. An alluvial fan is steepest near its apex that points upstream, and it slopes gently and convexly outward with a gradual decrease in gradient.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Aquic moisture regime. See Moisture regime, soil.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (AWC) (available moisture capacity). The volume of water that should be available to plants if the soil, inclusive of fragments, were at field capacity. It is commonly estimated as the difference between the amount of water at field capacity and the amount at wilting point with adjustments for salinity, fragments, and rooting depth. 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 2.5
Low	2.5 to 5.0
Moderate	5.0 to 7.5
High	7.5 to 10.0
Very high	more than 10.0

AWC. See Available water capacity.

Backslope. The hillslope profile position that forms the steepest and generally linear, middle portion of the slope. In profile, backslopes commonly are bounded by a

convex shoulder above and a concave footslope below. They may or may not include cliff segments, or free faces. Backslopes are commonly erosional forms produced by mass movement, colluvial action, and running water.

Bar (coast). A general term for any of the various elongated offshore ridges, banks, or mounds of sand, gravel, or other unconsolidated material submerged at least at high tide and built up by the action of waves or currents, especially at the mouth of a river or estuary or a short distance offshore from the beach.

Bar (microfeature). A small, sinuous or arcuate, ridgelike lineation separated from others similar to it by small channels. It is caused by fluvial processes and is common on flood plains and young alluvial terraces. It is a constituent of bar-and-channel topography.

Bar (streams). A general term for a ridgelike accumulation of sand, gravel, or other alluvial material in the channel, along the banks, or at the mouth of a stream where a decrease in velocity induces deposition. Examples are channel bars and meander bars.

Bar-and-channel topography. A local topography of recurring, small, sinuous or arcuate ridges separated by shallow troughs irregularly spaced across low-relief flood plains (with slopes generally of 2 to 6 percent). The effect is a subdued, sinuously undulating surface that is common on active flood plains. Micro differences in elevation generally range from less than 1 meter to less than 2 meters. The differences in elevation between the bars and channels are largely controlled by the competency of the stream. The ridgelike bars commonly consist of sediment that is coarser than the finer textured sediment of the low-lying areas.

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, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Beach terrace. A landform that consists of a wave-cut scarp and wave-built terrace of well-sorted marine and lacustrine sand and gravel. Colloquially, in the western United States, relict shoreline from pluvial lakes, generally restricted to sides of valleys.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedrock. A general term for 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.

Blowout. A shallow depression from which all or most of the soil material has been removed by the 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.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

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.

Bulk density. A measurement of the oven-dry weight of the soil material that is less than 2 millimeters in diameter per unit volume. Common measurements are taken at 1/3-, 1/10-, or 15-bar moisture tension. Bulk density influences plant growth and engineering applications. It is used to convert measurements from a weight basis to a volume basis. Within a family particle-size class, bulk density is an indicator of how well plant roots are able to extend into the soil. Bulk density is used to calculate porosity.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcium carbonate equivalent. The amount of calcium carbonate in a soil measured by treating the soil sample with hydrochloric acid (HCl). The evolved carbon dioxide (CO_2) is measured, and the amount of carbonate is then calculated as calcium carbonate ($CaCO_3$).

Cambic horizon. A mineral soil horizon that has the texture of loamy very fine sand or finer, has soil structure rather than rock structure, and contains some weatherable minerals. It is characterized by the alteration or removal of mineral material as indicated by mottling or gray color, stronger chroma or redder hue than the underlying horizons, or the removal of carbonates. The cambic horizon lacks cementation or induration and has too little evidence of illuviation to meet the requirements for an argillic horizon.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

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 of soils on a landscape that are about the same age and formed in similar kinds of parent material under similar climatic conditions but have different characteristics as a result of differences in relief and drainage.

Cathodic protection. Control of the electrolytic corrosion of an underground or underwater metallic structure, such as a pipeline, by the application of an electrical current in such a way that the structure acts as the cathode rather than the anode of an electrolytic cell. (See Coatings for pipelines.)

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity (CEC). The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

CEC. See Cation-exchange capacity.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

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. Sandy clay, silty clay, and clay soil textures.
Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.
Coarse fragments. See Rock fragments.
Coarse textured soil. Sand or loamy sand.
Coatings for pipelines. Coatings used as a barrier to the flow of electricity and moisture, thereby preventing the formation of corrosion cells.
Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.
COLE (coefficient of linear extensibility). See Linear extensibility percent.
Colluvium. Unconsolidated, unsorted earth material transported or deposited on side slopes and/or at the base of slopes by mass movement, or direct gravitational action, and by local unconcentrated runoff.
Compaction. The process by which the soil grains are rearranged to decrease void space and bring them into closer contact with one another, thereby increasing bulk density.
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.
Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.
Confidence limits. Two statistics between which, with a specified degree of probability, the parameter being estimated is expected to lie.
Conglomerate. A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter, commonly with a matrix of sand and finer textured material. Cementing agents include silica, calcium carbonate, and iron oxide. Conglomerate is the consolidated equivalent of gravel.
Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.
Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.
Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness

of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

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.

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.

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.

Debris flow (mass movement). The process, associated sediment (debris flow deposit), or resultant landform characterized by a very rapid type of flow dominated by sudden downslope movement of a mass of rock, soil, and mud (more than 50 percent particles that are more than 2 millimeters in size) that behaves much like viscous fluid whether it is saturated or relatively dry.

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. See Depth, soil.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Depth to bedrock (in tables). Bedrock is too near the surface for the specified use.

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.

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. A general term for a course or channel along which water moves in draining an area.

Draw. A small stream channel that generally is more open and has a broader floor than a ravine or gulch.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune. A low mound, ridge, bank, or hill of loose, windblown, granular material (generally sand), either barren or covered with vegetation, that is capable of movement from place to place but always retains its characteristic shape.

Earthflow. Slow to rapid mass wasting of fine-grained slope material that moves downslope as a viscous fluid.

EC. See Electrical conductivity.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Electrical conductivity (EC). The electrolytic conductivity of an extract from saturated soil paste.

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 material. Material transported and deposited by wind, including earth material such as dune sand, sand sheets, loess, and clay.

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.

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. The term is most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Family, soil. The most specific hierarchical category in soil taxonomy.

Fan remnant. A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, fan aprons, inset fans, and fan skirts, that either have been dissected (erosional fan remnants) or partially buried (nonburied fan remnants). An erosional fan remnant has a relatively flat summit that is a relict fan surface. A nonburied fan remnant is a relict surface in its entirety.

Fan terrace. See Fan remnant.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fine textured soil. Sandy clay, silty clay, or clay.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. The nearly level plain that borders a stream and is subject to inundation under floodstage conditions unless protected artificially. It is commonly a constructional landform consisting of sediment deposited during overflow and lateral migration of a stream.

Fluvial. Of or pertaining to rivers; produced by river action.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragments. Unattached cemented pieces of bedrock, bedrocklike material, durinodes, concretions, and nodules 2 millimeters in diameter or larger in mineral soils; woody material 20 millimeters in diameter or larger in organic soils.

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.

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 has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Graywacke. A sandstone with more than 15 percent fine-grained matrix between sand grains. A “dirty sandstone.”

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides cut by the concentrated, but intermittent, flow of water commonly during and immediately following heavy rainfall or following icemelt or snowmelt. A gully generally is an obstacle to wheeled vehicles 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 content. The percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

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 generic term for an area of the land surface that rises as much as 1,000 feet (300 meters) above surrounding lowlands, commonly has restricted summit area relative to surrounding surfaces, and has a well-defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and commonly is dependent on local usage.

Holocene. The epoch of the Quaternary period of geologic time that extends from the end of the Pleistocene (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. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical

of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Hummock. Rounded or conical mound or other small rise.

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.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Inset fan. Specific name for the flood plain of an ephemeral stream that is confined between fan remnants, ballenas, basin floor remnants, or closely opposed fan toeslopes of a basin.

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 does not flow year-round (commonly is dry for 3 months or more annually), and its channel generally is below the local water table. It flows only when it receives baseflow during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Isomesic temperature regime. See Temperature regime, soil.

K factor. A measurement of potential soil erodibility caused by detachment of soil particles by water.

Landform. A discrete, natural, individual feature of the earth's surface that is mappable at common survey scales. Examples include alluvial fans, flood plains, and hillslopes.

Landscape. A broad assemblage or unique group of natural, spatially associated features. Examples include alluvial plains, mountains, and uplands.

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.

Leaching. The removal of soluble material from soil or other material by percolating water.

LEP. See Linear extensibility percent.

Linear extensibility percent (LEP). The linear expression of the volume difference between the water content of the natural soil fabric at $^1/_3$-bar or $^1/_{10}$-bar and oven dryness. The volume change is reported as a percent for the whole soil.

Liquid limit (LL). The moisture content at which the soil passes from a plastic to a liquid state.

LL. See Liquid limit.

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. Coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, silt, clay loam, sandy clay loam, and silty clay loam soil textures.

Loess. Material transported and deposited by wind that consists dominantly of silt-sized clastics.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as

a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mesic temperature regime. See Temperature regime, soil.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement in the earth's crust. Nearly all such rocks are crystalline. Examples are schist, gneiss, quartzite, slate, and marble.

Metasediment. A sediment or sedimentary rock that shows evidence of having been subjected to metamorphism.

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. See Depth, soil.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Moisture regime, soil. Refers to the presence or absence either of ground water or of water held at a tension of less than 1,500 kPa in the soil or in specific horizons during periods of the year.

Aquic.—The moisture regime in which the soil, for some period of time, is virtually free of dissolved oxygen because it is saturated by water. Redoximorphic features are common.

Oxyaquic.—The moisture subregime in which the soil, for some period of time, is saturated but dissolved oxygen is still present. Redoximorphic features are uncommon.

Udic.—The moisture regime in which the amount of stored moisture in the soil is approximately equal to, or exceeds, the amount of evapotranspiration. This regime is common along the north coast of California where winters are moist and cool and summers are cool and foggy.

Ustic.—The moisture regime that is intermediate between the aridic and udic regimes. This regime is common in temperate subhumid or semiarid regions and in tropical and subtropical regions that have a monsoon climate. A limited amount of water is available for plants, but availability occurs when the soil temperature is optimum for plant growth.

Xeric.—The typical moisture regime in areas of Mediterranean climates, where it is moist and cool in winter and warm and dry in summer. When potential evapotranspiration is at a minimum, the moisture, which falls in winter, is particularly effective in leaching. The mean annual soil temperature is less than 22 degrees C, and the difference between the mean summer and mean winter soil temperature is 6 degrees.

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 that rises more than 1,000 feet (300 meters) above surrounding lowlands, commonly has limited summit area relative to surrounding surfaces, and generally has steep sides (slopes of more than 25 percent) with or without considerable bare-rock surface. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic and/or volcanic activity and by differential erosion.

Muck. Unconsolidated soil material consisting primarily of highly decomposed organic material in which the original plants are not recognizable. It generally contains more mineral material and is darker in color than peat. (See Sapric soil material.)

Mudstone. A blocky or massive, fine-grained sedimentary rock indurated by clay and silt in approximately equal amounts. Also, a general term for clay, silt, claystone, siltstone, shale, and argillite that is used only when the amounts of clay and silt are not known or cannot be precisely determined.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Ochric epipedon. In a mineral soil, a surface horizon that is too light in color, too high in chroma, too low in organic carbon, or too thin to be a plaggen, mollic, umbric, anthropic, or histic epipedon or that is both hard and massive when dry.

OM. See Organic matter.

Organic matter (OM). Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Oxyaquic moisture regime. See Moisture regime, soil.

Paleosol. A soil that formed in a particular area with distinctive morphological features resulting from a soil-forming environment that no longer exists in the area. The pedogenic process was either altered as a result of external environmental changes or interrupted by burial. A paleosol (or component horizon) is classified as relict if it has persisted without major alteration of morphology by the prevailing pedogenic environment. An exhumed paleosol is one that was buried and has been re-exposed by erosion of the mantle. Most paleosols have been affected by some subsequent modification of the morphology of diagnostic horizons and truncation of the profile.

Parent material. The unconsolidated and chemically weathered mineral and organic material in which the solum of a soil is formed as a result of pedogenic processes.

Peat. Unconsolidated soil material consisting largely of undecomposed or slightly decomposed organic matter that has accumulated under excessive moisture conditions. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Perched water table. The upper surface of unconfined ground water separated from an underlying main body of ground water by an unsaturated zone.

Percolation. The downward movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow	0.0 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

PI. See Plasticity index.

Plasticity index (PI). 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.

Pleistocene. The epoch of the Quaternary period of geologic time following the Pliocene and preceding the Holocene (approximately 2 million to 10 thousand years ago). Also refers to the corresponding (time-stratigraphic) "series" of earth material.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential 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.

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 differs from the potential.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs. 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, proportion, and 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	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. All unconsolidated earth material above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits. Soil scientists regard as soil only that part of

the regolith that has been modified by organisms and soil-forming processes. Most engineers describe the entire regolith, even to a great depth, as “soil.”

Relief. The elevations or inequalities of a land surface, considered collectively.

Remnant. The remaining part of a larger landform or land surface that has been dissected or partially buried.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A small steep-sided channel resulting from erosion. It is cut by a concentrated, but intermittent, flow of water, usually during and immediately following moderate rains or following icemelt or snowmelt. Generally, a rill is not an obstacle to wheeled vehicles and is shallow enough to be obliterated by ordinary tillage.

Riverwash. Barren alluvial areas of unstabilized sand, silt, clay, or gravel reworked frequently by stream activity.

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 bedrock, excluding lava and rock-lined pits.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline-sodic soil. A soil that contains sufficient exchangeable sodium to interfere with the growth of most crops and appreciable quantities of soluble salts. The exchangeable sodium ratio is greater than 0.15; the conductivity of the soil solution, when saturated, is greater than 4 decisiemens per meter (at 25 degrees C); and the pH is commonly 8.5 or less when the soil is saturated.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium. Salinity is expressed as the electrical conductivity of a saturation extract at 25 degrees C. Salinity classes, expressed in millimhos per centimeter, are 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

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sandy. Sand and loamy sand soil textures.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

SAR. See Sodium adsorption ratio.

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.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic matter accumulated at or near the surface of the earth under

"normal" low temperature and pressure conditions. Sedimentary rock includes the consolidated equivalents of alluvial, colluvial, drift, eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

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 that formed as a result of the induration of a clay, silty clay, or silty clay loam deposit and has the tendency to split into thin layers (fissility).

Shallow soil. See Depth, soil.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Site index (pinyon and juniper). A designation of the quality of a pinyon or juniper stand based on the basal area in square feet when the stand averages 5 inches in diameter 1 foot above the ground. A site index of 50 means that the stand will have a basal area of 50 square feet.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level	0 to 2 percent
Gently sloping	0 to 5 percent
Moderately sloping	5 to 9 percent
Strongly sloping	9 to 15 percent
Moderately steep	15 to 30 percent
Steep	30 to 50 percent
Very steep	50 percent and higher

Classes for complex slopes are as follows:

Nearly level	0 to 2 percent
Gently undulating	0 to 5 percent
Undulating	5 to 9 percent

Hilly	15 to 30 percent
Steep	30 to 50 percent
Very steep	50 percent and higher

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil erodibility factors. The Kw and Kf factors quantify the susceptibility of soil to detachment by water. These erodibility factors predict the long-term average soil loss that results from sheet and rill erosion when various cropping systems and conservation techniques are used. The whole soil is considered in the Kw factor, but only the fine-earth fraction, which is the material less than 2 millimeters in diameter, is considered in the Kf factor.

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.

Stone line. A sheetlike lag concentration of coarse fragments in surficial sediment. In cross section, the line may be marked only by scattered fragments or it may be a discrete layer of fragments. The fragments are more commonly pebbles or cobbles than stones. A stone line generally overlies material that was subject to weathering, soil formation, and erosion before deposition of the overlying material. Many stone lines appear to be buried erosion pavement originally formed by running water on the land surface and concurrently covered by surficial sediment.

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.

Stratified. Referring to geologic deposits that were formed, arranged, or laid down in layers. Layers in soils that are a result of the processes of soil formation are called horizons; those inherited from the parent material are called strata.

Stream terrace. One of a series of platforms in a stream valley that flanks and is more or less parallel to the stream channel, originally formed near the level of the stream, and represents the dissected remnants of an abandoned flood plain, streambed, or valley floor produced during an earlier period of erosion or deposition.

Strike-slip fault. A fault in which the movement is parallel to the strike of the fault surface.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subduction. The sliding of the seafloor ocean plate beneath a continent or island arc plate.

Subduction zone. The elongate region in which subduction is occurring.

Subsidence. The decrease in surface elevation as a result of the drainage of wet soils that have organic layers or semifluid mineral layers.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Rock fragments of any size or shape (commonly coarse and angular) at the base of a cliff or very steep rock slope; the accumulated mass of such loose, broken rock formed mainly by falling, rolling, or sliding.

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.

Temperature regime, soil. A system that categorizes for taxonomic purposes general, long-term soil temperature conditions at the standard depth of 20 inches or at the surface of the bedrock, whichever is at a shallower depth. The various regimes are defined according to the freezing point of water or to the high and low extremes for significant biological activity. The regimes, which are defined in “Keys to Soil Taxonomy,” are as follows:

Cryic.—Soils that have a mean annual temperature of 32 to 47 degrees F and remain cold in summer.

Frigid.—Soils that have a mean annual temperature similar to that of the cryic regime but have a mean summer temperature at least 9 degrees warmer.

Isomesic.—Soils that have a mean annual soil temperature of 47 to 59 degrees F, and the difference between mean summer and mean winter temperature is less than 9 degrees F.

Mesic.—Soils that have a mean annual temperature of 47 to 59 degrees F, and the difference between the mean summer and mean winter temperature is more than 9 degrees.

Thermic.—Soils that have a mean annual temperature of 59 to 72 degrees F, and the difference between the mean summer and mean winter temperature is more than 9 degrees.

Terrace (conservation practice). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Terrace (geomorphologic). A steplike surface bordering a valley floor or shoreline that represents the former position of a flood plain, lake, or seashore. The term is commonly applied to both the relatively flat summit surface (tread) that has been cut or builtup by stream or wave action and the steeper descending slope (scarp or riser) that grades to a lower base level of erosion. Practically, terraces are considered to be generally flat alluvial areas above the 100-year flood stage.

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.”

Abbreviations for the texture terms are *C—clay, CL—clay loam, COS—coarse sand, COSL—coarse sandy loam, FS—fine sand, FSL—fine sandy loam, L—loam, LCOS—loamy coarse sand, LFS—loamy fine sand, LS—loamy sand, LVFS—loamy very fine sand, S—sand, SC—sandy clay, SCL—sandy clay loam, SI—silt, SIC—silty clay, SICL—silty clay loam, SIL—silt loam, SL—sandy loam, VFS—very fine sand,* and *VFSL—very fine sandy loam.*

Terms used in lieu of texture descriptions are *BR—bedrock, BY—boulders, CB—cobbles, CN—channers, FL—flagstones, G—gravel, HPM—highly decomposed plant material, MAT—material, MPM—moderately decomposed plant material, MUCK—muck, MPT—mucky peat, MUCK—muck, PBY—paraboulders, PCB—paracobbles, PCN—parachanners, PEAT—peat, PFY—paraflagstones, PG—paragravel, PST—parastones, SPM—slightly decomposed plant material, ST—stones, VAR—variable,* and *W—water.*

The texture modifiers that may apply to textural classes are *ASHY—ashy, BY—bouldery, BYV—very bouldery, BYX—extremely bouldery, CB—cobbly, CBV—very cobbly, CBX—extremely cobbly, CEM—cemented, CN—channery, CNV—very channery, CNX—extremely channery, COP—coprogenous, DIA—diatomaceous, FL—flaggy, FLV—very flaggy, FLX—extremely flaggy, GR—gravelly, GRC—coarse gravelly, GRF—fine gravelly, GRM—medium gravelly, GRV—very gravelly, GRX—extremely gravelly, GS—grassy, GYP—gypsiferous, HB—herbaceous, HYDR—hydrous, MEDL—medial, MK—mucky, MR—marly, MS—mossy, PBY—parabouldery, PBYV—very parabouldery, PBYX—extremely parabouldery, PCB—*

paracobbly, PCBV—very paracobbly, PCBX—extremely paracobbly, PCN—parachannery, PCNV—very parachannery, PCNX—extremely parachannery, PF—permanently frozen, PFY—paraflaggy, PFYV—very paraflaggy, PFYX—extremely paraflaggy, PG—paragravelly, PGV—very paragravelly, PGX—extremely paragravelly, PST—parastony, PSTV—very parastony, PSTX—extremely parastony, PT—peaty, ST—stony, STV—very stony, STX—extremely stony, and *WD—woody.*

T factor. The soil loss tolerance, which is defined as the maximum amount of erosion at which the quality of a soil as a medium for plant growth can be maintained. Maintaining the quality of the soil includes maintaining the surface soil as a seedbed for plants, maintaining the atmosphere-soil interface to allow the entry of air and water into the soil and still protect the underlying soil from wind and water erosion, and maintaining the total soil volume as a reservoir for water and plant nutrients, which is preserved by minimizing soil loss.

Thermic temperature regime. See Temperature regime, soil.

Thrust fault. A fault in which the dip of the fault plane is at a low angle to the horizon.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The outermost inclined surface at the base of a hill; part of a footslope.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Udic moisture regime. See Moisture regime, soil.

Umbric epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has low base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Unified soil classification. A system for classifying mineral and organic soils for engineering purposes based on particle-size characteristics, liquid limit, and plasticity index.

Upland (geomorphologic). A general term for the higher land of a region in contrast to the low-lying, adjacent land, such as a valley or plain; land at a higher elevation than the flood plain or low stream terrace; or land above the footslope zone of the hillslope continuum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) that fills or partly fills a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Vegetative cover. The crown cover of all live plants in relation to the ground surface.

Very deep soil. See Depth, soil.

Very shallow soil. See Depth, soil.

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.

Water table. The upper surface of ground water or the level below which the soil is saturated by water. Also, the top of an aquifer.

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.

WEG. See Wind erodibility group.

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.

Wind erodibility group (WEG). A grouping of soils that have similar properties affecting their resistance to wind erosion in cultivated areas.

Windthrow. The uprooting and tipping over of trees by the wind.

Xeric moisture regime. See Moisture regime, soil.

Tables

Table 1.--Temperature and Precipitation

[Recorded in the period 1948-2004 at Orick Prairie Creek Park and Crescent City, California]

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temp. higher than--	Minimum temp. lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
ORICK:											
January-----	52.6	36.9	44.7	66	20	160	11.15	0.3	4.4	13	0.20
February----	55.5	38.2	46.8	71	22	198	9.13	0.3	3.2	12	0.10
March-------	57.2	38.2	47.7	76	26	241	8.99	0.3	3.0	13	0.0
April-------	59.5	39.4	49.5	83	26	284	5.06	0.2	2.1	9	0.0
May---------	62.7	42.7	52.7	90	30	393	3.19	0.1	1.7	6	0.0
June--------	65.8	46.2	56.0	94	33	479	1.19	0.0	1.0	3	0.0
July--------	68.4	48.5	58.5	85	38	573	0.27	0.0	0.5	1	0.0
August------	69.6	48.9	59.3	91	38	597	0.60	0.0	0.8	1	0.0
September---	70.8	46.2	58.5	93	33	556	1.40	0.0	1.4	3	0.0
October-----	65.8	42.9	54.3	88	29	444	4.67	0.1	2.5	6	0.0
November----	57.5	40.4	49.0	70	25	271	9.74	0.2	3.4	12	0.0
December----	52.1	37.5	44.7	66	20	160	12.11	0.3	3.8	14	0.13
Yearly:											
Average---	61.5	42.2	51.8	---	---	---	67.50	---	---	---	---
Extreme---	99	2	---	94	20	---	---	---	---	---	---
Total-----	---	---	---	---	---	4,355	---	---	---	93	0.33
CRESCENT CITY:											
January-----	54.7	40.5	47.6	72	25	241	11.54	0.3	4.3	13	0.18
February----	55.8	41.4	48.6	74	27	245	8.89	0.3	3.5	11	0.0
March-------	56.3	41.8	49.0	75	29	280	8.27	0.3	2.6	12	0.0
April-------	58.1	43.1	50.6	79	31	319	4.71	0.2	2.2	8	0.0
May---------	60.9	45.9	53.4	83	35	415	3.10	0.1	2.1	5	0.0
June--------	63.5	48.8	56.2	80	38	486	1.35	0.0	1.3	3	0.0
July--------	65.3	50.9	58.1	80	40	563	0.36	0.0	0.9	1	0.0
August------	66.2	51.6	58.9	83	41	585	0.75	0.0	1.3	1	0.0
September---	66.4	49.8	58.1	88	39	544	1.61	0.0	1.6	3	0.0
October-----	63.5	47.0	55.2	89	34	472	5.02	0.1	3.2	6	0.0
November----	58.2	43.6	50.9	74	28	328	9.08	0.2	2.9	10	0.0
December----	55.2	40.6	47.9	70	23	248	11.38	0.3	4.0	12	0.02
Yearly:											
Average---	60.4	45.4	52.9	---	----	----	66.06	---	---	---	---
Extreme---	93	19	---	109	16	----	---	---	---	---	---
Total-----	---	---	---	---	----	4,725	---	---	---	85	0.20

*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 1948-2004 at Orick Prairie Creek Park and Crescent City, California]

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
ORICK:			
Last freezing temperature in spring:	Apr. 21	May 6	Jun. 14
1 year in 10 later than-----	Feb. 13	Apr. 16	May 27
2 years in 10 later than----	Jan. 16	Mar. 31	May 12
5 years in 10 later than----	*	Mar. 2	May 7
First freezing temperature in fall:	Nov. 7	Oct. 19	Aug. 22
1 year in 10 earlier than---	Dec. 17	Nov. 7	Oct. 9
2 years in 10 earlier than--	*	Nov. 16	Oct. 16
5 years in 10 earlier than--	*	Dec. 12	Nov. 4
CRESCENT CITY:			
Last freezing temperature in spring:	May 6	Mar. 18	May 6
1 year in 10 later than-----	**	Feb. 15	Apr. 11
2 years in 10 later than----	**	Feb. 2	Mar. 29
5 years in 10 later than----	**	**	Mar. 12
First freezing temperature in fall:	Dec. 20	Nov. 1	Oct. 18
1 year in 10 earlier than---	**	Nov. 21	Nov. 6
2 years in 10 earlier than--	**	Dec. 22	Nov. 14
5 years in 10 earlier than--	**	**	Dec. 5

* There are no years on record when the minimum temperature went below threshold temperature between July 31 and December 31.

** There are no years on record when the minimum temperature went below threshold temperature.

Table 3.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
100	Riverwash	746	0.5
102	Fluvents, 2 to 5 percent slopes	105	0.1
110	Weott, 0 to 2 percent slopes	27	*
116	Swainslough, 0 to 2 percent slopes	14	*
119	Arlynda, 0 to 2 percent slopes	90	0.1
126	Loleta, 2 to 5 percent slopes	60	*
155	Samoa-Clambeach-Dune land complex, 0 to 50 percent slopes	553	0.4
157	Beaches-Samoa-Dune land complex, 0 to 50 percent slopes	1158	0.5
171	Worswick-Arlynda complex, 0 to 2 percent slopes	1,695	1.0
172	Bigriver, 2 to 5 percent slopes	104	0.1
173	Bigriver-Ferndale-Russ complex, 2 to 5 percent slopes	113	0.1
174	Bigtree-Mystery complex, 2 to 9 percent slopes	3,334	2.1
177	Battery, dry, 15 to 50 percent slopes	325	0.2
178	Battery, 15 to 50 percent slopes	189	0.1
191	Talawa, 0 to 2 percent slopes	16	*
192	Aubell, 2 to 9 percent slopes	42	*
194	Tsunami, 2 to 9 percent slopes	113	0.1
220	Ferndale, 0 to 2 percent slopes	55	*
222	Ferndale, moderately well drained, 0 to 5 percent slopes	107	0.1
251	Surpur, 2 to 9 percent slopes	626	0.4
289	Espa, 2 to 9 percent slopes	334	0.2
290	Surpur-Mettah complex, 9 to 30 percent slopes	1,280	0.8
291	Ossagon-Squashan complex, 9 to 30 percent slopes	667	0.4
292	Ossagon-Squashan complex, 30 to 50 percent slopes	1,846	1.1
293	Ossagon-Goldbluffs-Squashan complex, 9 to 30 percent slopes	3,761	2.3
294	Ossagon-Goldbluffs-Squashan complex, 30 to 50 percent slopes	9,500	5.9
462	Mooncreek-Noisy-Tossup complex, 9 to 30 percent slopes	594	0.4
463	Mooncreek-Noisy-Sidehill complex, 30 to 75 percent slopes	769	0.5
464	Mooncreek-Tossup-Noisy complex, 15 to 50 percent slopes	183	0.1
465	Sidehill-Oakside-Darkwoods complex, 50 to 100 percent slopes	4,149	2.6
473	Highoaks-Noisy-Mudhorse complex, 9 to 50 percent slopes	574	0.4
480	Dolason-Countshill-Airstrip complex, 9 to 30 percent slopes	906	0.6
481	Dolason-Airstrip-Countshill complex, cool, 15 to 50 percent slopes	534	0.4
482	Dolason-Countsill complex, 30 to 50 percent slopes	813	0.5
483	Doolyville-Pasturerock complex, 30 to 50 percent slopes	920	0.6
484	Elkcamp-Dolason-Airstrip complex, 15 to 50 percent slopes	1,957	1.2
485	Pasturerock-Coyoterock-Maneze complex, 30 to 50 percent slopes	2,961	1.8
531	Atwell-Coppercreek complex, 30 to 50 percent slopes	3,077	1.9
532	Atwell-Ladybird complex, 30 to 50 percent slopes	443	0.3
533	Coppercreek-Ahpah complex, 15 to 30 percent slopes	969	0.6
534	Coppercreek-Ahpah-Lackscreek complex, 15 to 30 percent slopes	1,008	0.6
535	Wiregrass-Scaath complex, 15 to 30 percent slopes	219	0.1
536	Coppercreek-Ahpah-Lackscreek complex, 30 to 50 percent slopes	16,642	10.3
537	Wiregrass-Scaath complex, dry, 15 to 30 percent slopes	656	0.4
538	Wiregrass-Pittplace complex, 15 to 30 percent slopes	786	0.5
539	Wiregrass-Scaath complex, 30 to 50 percent slopes	1,532	0.9
541	Wiregrass-Rockysaddle complex, 30 to 50 percent slopes	4,147	2.6
542	Coppercreek-Slidecreek-Lackscreek complex, 30 to 50 percent slopes	7,518	4.7
543	Wiregrass-Rockysaddle-Scaath complex, 30 to 50 percent slopes	3,005	1.9
544	Coppercreek-Tectah-Lackscreek complex, 30 to 50 percent slopes	39	*
545	Devilscreek-Panthercreek-Coppercreek complex, 30 to 50 percent slopes	4,012	2.5
546	Lackscreek-Coppercreek complex, 50 to 75 percent slopes	1,346	0.9
549	Scaath-Rockysaddle-Wiregrass complex, 50 to 75 percent slopes	1,116	0.7
550	Scaath-Rockysaddle-Wiregrass complex, dry, 50 to 75 percent slopes	888	0.6
553	Ladybird-Stonehill complex, 30 to 50 percent slopes	4,487	2.8
554	Ladybird-Trailhead complex, 15 to 30 percent slopes	313	0.2
555	Panthercreek-Devilscreek-Coppercreek complex, 50 to 75 percent slopes	2,780	0.4
556	Rodgerpeak-Wiregrass complex, 0 to 15 percent slopes	24	*
557	Ustic Palehumults, 15 to 50 percent slopes	84	*
558	Tectah-Coppercreek-Trailhead complex, 0 to 30 percent slopes	1,389	0.9
559	Trailhead, 0 to 9 percent slopes	353	0.2
560	Trailhead, 15 to 30 percent slopes	4,425	2.7
561	Trailhead, dry, 15 to 30 percent slopes	754	0.5

Table 3.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
562	Trailhead-Fortyfour complex, 30 to 50 percent slopes	4,507	2.8
563	Trailhead-Fortyfour complex, dry, 30 to 50 percent slopes	220	0.1
580	Coppercreek-Tectah-Slidecreek complex, 9 to 30 percent slopes	5,255	3.3
581	Coppercreek-Slidecreek-Tectah complex, 30 to 50 percent slopes	8,924	5.5
582	Slidecreek-Lackscreek-Coppercreek complex, 50 to 75 percent slopes	7,604	4.7
583	Trailhead-Wiregrass complex, 9 to 30 percent slopes	1,115	0.7
584	Wiregrass-Pittplace-Scaath complex, 9 to 30 percent slopes	578	0.4
585	Wiregrass-Rockysaddle complex, 30 to 50 percent slopes	1,609	1.0
586	Wiregrass-Rockysaddle-Trailhead complex, 30 to 50 percent slopes	2,648	1.7
587	Childshill, 5 to 30 percent slopes	513	0.3
588	Surpur, dry, 2 to 15 percent slopes	579	0.4
590	Sasquatch-Yeti-Footstep complex, 5 to 30 percent slopes	2,671	1.7
591	Sasquatch-Sisterrocks-Ladybird complex, 30 to 50 percent slopes	11,120	6.9
592	Sisterrocks-Ladybird-Footstep complex, 50 to 75 percent slopes	3,145	2.0
593	Sasquatch-Yeti-Sisterocks complex, 15 to 30 percent slopes	408	0.3
594	Sisterrocks-Sasquatch-Houda complex, 30 to 75 percent slopes	1,740	1.2
595	Battery-Catchings complex, 5 to 30 percent slopes	1,058	0.7
596	Flintrock-Highprairie complex, 15 to 75 percent slopes	1,135	0.7
597	Tarquin, 9 to 30 percent slopes	359	0.2
598	Ladybird-Stonehill complex, moist, 30 to 50 percent slopes	296	0.2
659	Raingage-Pigpen complex, 15 to 50 percent slopes	613	0.4
756	Oragran-Weitchpec complex, 30 to 50 percent slopes	41	*
759	Jayel-Walnett-Oragran complex, 30 to 75 percent slopes, extremely stony	1,266	0.8
760	Jayel-Walnett-Oragran complex, 9 to 30 percent slopes, extremely stony	632	0.4
761	Gasquet-Walnett-Jayel complex, 9 to 50 percent slopes, extremely stony	482	0.3
W	Water	245	0.1
	Total	161,993	100.0

* Less than 0.1 percent.

Table 4.--Land Capability Classification

[Land capability is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. Values in the N column are for nonirrigated areas; the I column is for irrigated areas]

Map symbol and soil name	Land capability	
	N	I
100:		
Riverwash	8	---
102:		
Fluvents	4w-2	---
110:		
Weott	5w	5w
116:		
Swainslough	5w	5w
119:		
Arlynda	5w	5w
126:		
Loleta	6w	6w
155:		
Samoa	6e	---
Clambeach	5w	---
Dune land	8	---
157:		
Beaches	8	---
Samoa	6e	---
Dune land	8	---
171:		
Worswick	3w-2	---
Arlynda	3w-2	---
172:		
Bigriver, fine sandy loam	2e-2	---
173:		
Bigriver, silt loam	2e-2	---
Ferndale	5e	---
Russ	2e-2	---
174:		
Bigtree	2e-2	---
Mystery	2e-2	---

Table 4.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
177:		
Battery, dry	4e-1	---
178:		
Battery	4e-1	---
191:		
Talawa	5w	---
192:		
Aubell	5e	---
194:		
Tsunami	2e-1	2e-1
220:		
Ferndale	2s	1
222:		
Ferndale, moderately well drained	5e	---
251:		
Surpur	2e-1	---
289:		
Espa	2e-1	---
290:		
Surpur	4e-1	---
Mettah	4e-5	---
291:		
Ossagon	4e-1	---
Squashan	4e-4	---
292:		
Ossagon	6e	---
Squashan	6e	---
293:		
Ossagon	4e-1	---
Goldbluffs	4e-1	---
Squashan	4e-4	---
294:		
Ossagon	6e	---
Goldbluffs	6e	---
Squashan	6e	---
462:		
Mooncreek	6e	---
Noisy	6e	---
Tossup	6e	---

Table 4.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
463:		
Mooncreek	6e	---
Noisy	7e	---
Sidehill	7e	---
464:		
Mooncreek	6e	---
Tossup	6e	---
Noisy	7e	---
465:		
Sidehill	8	---
Oakside	8	---
Darkwoods	8	---
473:		
Highoaks	6e	---
Noisy	6e	---
Mudhorse	6e	---
480:		
Dolason	4e-1	---
Countshill	4e-8	---
Airstrip	4e-8	---
481:		
Dolason	6e	---
Airstrip	6e	---
Countshill	6e	---
482:		
Dolason	6e	---
Countshill	6e	---
483:		
Doolyville	6e	---
Pasturerock	6e	---
484:		
Elkcamp	6e	---
Dolason	6e	---
Airstrip	6e	---

Table 4.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
485:		
Pasturerock	6e	---
Coyoterock	6e	---
Maneze	6e	---
531:		
Atwell	6e	---
Coppercreek	6e	---
532:		
Atwell	6e	---
Ladybird	6e	---
533:		
Coppercreek	4e-1	---
Ahpah	4e-8	---
534:		
Coppercreek	4e-1	---
Ahpah	4e-8	---
Lackscreek	4e-8	---
535:		
Wiregrass	4e-1	---
Scaath	4e-8	---
536:		
Coppercreek	6e	---
Ahpah	6e	---
Lackscreek	6e	---
537:		
Wiregrass	4e-1	---
Scaath	4e-8	---
538:		
Wiregrass	4e-1	---
Pittplace	4e-5	---
539:		
Wiregrass	6e	---
Scaath	6e	---
541:		
Wiregrass	6e	---
Rockysaddle	6e	---

Table 4.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
542:		
Coppercreek	6e	---
Slidecreek, gravelly loam	6e	---
Lackscreek	6e	---
543:		
Wiregrass	6e	---
Rockysaddle	6e	---
Scaath	6e	---
544:		
Coppercreek	6e	---
Tectah	6e	---
Lackscreek	6e	---
545:		
Devilscreek	6e	---
Panthercreek	6e	---
Coppercreek	6e	---
546:		
Lackscreek	7e	---
Coppercreek	7e	---
549:		
Scaath	7e	---
Rockysaddle	7e	---
Wiregrass	7e	---
550:		
Scaath	7e	---
Rockysaddle	7e	---
Wiregrass	7e	---
553:		
Ladybird	6e	---
Stonehill	6e	---
554:		
Ladybird	4e-1	---
Trailhead	4e-5	---

Table 4.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
555:		
Panthercreek	7e	---
Coppercreek	7e	---
Devilscreek	7e	---
556:		
Rodgerpeak	3e-8	---
Wiregrass	3e-1	---
557:		
Ustic Palehumults	6e	---
558:		
Tectah	4e-5	---
Coppercreek	4e-1	---
Trailhead	4e-5	---
559:		
Trailhead	2e-5	---
560:		
Trailhead	4e-5	---
561:		
Trailhead	4e-5	---
562:		
Trailhead	6e	---
Fortyfour	6e	---
563:		
Trailhead	6e	---
Fortyfour	6e	---
580:		
Coppercreek	4e-1	---
Tectah	4e-5	---
Slidecreek	4e-4	---
581:		
Coppercreek	6e	---
Slidecreek	6e	---
Tectah	6e	---
582:		
Slidecreek	7e	---
Lackscreek	7e	---
Coppercreek	7e	---

Table 4.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
583:		
Trailhead	4e-5	---
Wiregrass	4e-1	---
584:		
Wiregrass	4e-1	---
Pittplace	4e-5	---
Scaath	4e-8	---
585:		
Wiregrass	6e	---
Rockysaddle	6e	---
586:		
Wiregrass	6e	---
Rockysaddle	6e	---
Trailhead	6e	---
587:		
Childshill	4e-1	---
588:		
Surpur	4e-1	---
590:		
Sasquatch	4e-1	---
Yeti	4e-5	---
Footstep	7e	---
591:		
Sasquatch	6e	---
Sisterrocks	6e	---
Ladybird	6e	---
592:		
Sisterrocks	7e	---
Ladybird	7e	---
Footstep	7e	---
593:		
Sasquatch	4e-1	---
Yeti	4e-5	---
Sisterrocks	4e-4	---

Table 4.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
594:		
Sisterrocks	7e	---
Sasquatch	7e	---
Houda	7e	---
595:		
Battery	4e-1	---
Catchings	4e-4	---
596:		
Flintrock	7e	---
Highprairie	7e	---
597:		
Tarquin	4e-1	---
598:		
Ladybird	6e	---
Stonehill	6e	---
659:		
Raingage	6e	---
Pigpen	6e	---
756:		
Oragran	6e	---
Weitchpec	6e	---
759:		
Jayel, extremely stony	7e	---
Walnett, extremely stony	7e	---
Oragran	7e	---
760:		
Jayel, extremely stony	6e	---
Oragran	6e	---
Walnett, extremely stony	6e	---
761:		
Gasquet, extremely stony	6e	---
Walnett, extremely stony	6e	---
Jayel	6e	---

Table 5.--Prime Farmland

[Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name]

Map symbol	Soil name
110	Weott, 0 to 2 percent slopes (where irrigated)
116	Swainslough, 0 to 2 percent slopes (where irrigated)
119	Arlynda, 0 to 2 percent slopes (where irrigated)
126	Loleta, 2 to 5 percent slopes (where irrigated)
191	Talawa, 0 to 2 percent slopes (where irrigated)
220	Ferndale, 0 to 2 percent slopes (where irrigated)
222	Ferndale, moderately well drained, 0 to 5 percent slopes (where irrigated)

Table 6.--Forestland Productivity

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
100: Riverwash.							
102: Fluvents.							
110: Weott.							
116: Swainslough.							
119: Arlynda.							
126: Loleta.							
155: Samoa. Clambeach. Dune land.							
157: Beaches. Samoa. Dune land.							
171: Worswick	---	---	---	---	---	--	Red alder, redwood, Sitka spruce, bigleaf maple, western hemlock, Douglas-fir
Arlynda	---	---	---	---	---	--	Red alder, redwood, Sitka spruce, bigleaf maple, western hemlock, Douglas-fir
172: Bigriver, fine sandy loam	---	---	---	---	---	--	Redwood, red alder, western hemlock, bigleaf maple
173: Bigriver, silt loam	---	---	---	---	---	--	Redwood, red alder, western hemlock, bigleaf maple
Ferndale. Russ.							
174: Bigtree	---	---	---	---	---	--	Redwood, western hemlock, Sitka spruce, Douglas-fir, red alder
Mystery	---	---	---	---	---	--	Redwood, western hemlock, Sitka spruce, Douglas-fir, red alder
177: Battery, dry	Douglas-fir	96	---	50	---	--	Douglas-fir, redwood, red alder, tanoak
	Douglas-fir	122	---	100	118	60	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
178:							
Battery	Douglas-fir	140	4.2	50	---	--	Redwood, Douglas-fir, western
	Douglas-fir	184	5.6	100	194	60	hemlock, red alder, tanoak
	Redwood	110	21.2	50	---	--	
	Redwood	162	24.7	100	245	100	
191:							
Talawa.							
192:							
Aubell.							
194:							
Tsunami.							
220:							
Ferndale.							
222:							
Ferndale, moderately well drained.							
251:							
Surpur	Douglas-fir	115	17.6	50	---	--	Redwood, red alder, Douglas-
	Douglas-fir	146	19.0	100	153	60	fir, western hemlock
	Redwood	100	14.1	50	---	--	
	Redwood	156	19.7	100	106	100	
289:							
Espa	Redwood	148	---	100	209	100	Redwood, red alder, Sitka
	Sitka spruce	169	---	100	255	70	spruce, western hemlock, Port Orford cedar, Douglas-fir
290:							
Surpur	Douglas-fir	115	17.6	50	---	--	Redwood, Douglas-fir, tanoak
	Douglas-fir	146	19.0	100	153	60	
	Redwood	156	19.7	100	106	100	
	Redwood	100	14.1	50	---	--	
Mettah	Douglas-fir	104	7.5	50	---	--	Redwood, Douglas-fir, tanoak
	Douglas-fir	136	4.0	100	139	60	
	Redwood	157	10.6	100	232	100	
	Redwood	112	3.5	50	---	--	
291:							
Ossagon	Douglas-fir	105	---	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	131	---	100	131	60	alder, western hemlock, tanoak
	Redwood	162	24.7	100	245	100	
	Redwood	110	21.2	50	---	--	
Squashan	Douglas-fir	116	12.0	100	---	--	Redwood, Douglas-fir, red
	Douglas-fir	146	16.9	50	153	60	alder, western hemlock, tanoak
	Redwood	100	---	50	---	--	
	Redwood	150	---	100	214	100	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
292:							
Ossagon	Douglas-fir	105	---	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	131	---	100	131	60	alder, western hemlock, tanoak
	Redwood	110	21.2	50	---	--	
	Redwood	162	24.7	100	245	100	
Squashan	Douglas-fir	119	---	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	143	---	100	149	60	alder, western hemlock, tanoak
	Redwood	150	---	100	214	100	
	Redwood	100	---	50	---	--	
293:							
Ossagon	Douglas-fir	162	---	100	172	60	Redwood, Douglas-fir, red
	Douglas-fir	121	---	50	---	--	alder, western hemlock, Sitka
	Redwood	187	3.5	100	327	85	spruce
	Redwood	127	3.5	50	---	--	
	Sitka spruce	200	---	100	300	70	
	Western hemlock	179	---	100	290	50	
Goldbluffs	Douglas-fir	125	27.5	50	---	--	Redwood, Douglas-fir, western
	Douglas-fir	160	29.6	100	192	60	hemlock, red alder, Sitka
	Redwood	155	21.2	100	285	95	spruce
	Redwood	110	23.3	50	---	--	
Squashan	Douglas-fir	140	27.5	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	181	29.6	100	192	60	alder, western hemlock, Sitka
	Redwood	123	23.3	50	---	--	spruce
	Redwood	175	21.2	100	285	95	
294:							
Ossagon	Douglas-fir	117	---	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	148	---	100	156	60	alder, western hemlock, Sitka
	Redwood	153	16.2	100	222	100	spruce
	Redwood	100	21.2	50	---	--	
	Sitka spruce	187	4.0	100	282	70	
	Western hemlock	160	---	100	254	50	
Goldbluffs	Douglas-fir	125	27.5	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	160	29.6	100	192	60	alder, western hemlock, Sitka
	Redwood	110	23.3	50	---	--	spruce
	Redwood	155	21.2	100	285	95	
Squashan	Douglas-fir	140	27.5	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	181	29.6	100	192	60	alder, western hemlock, Sitka
	Redwood	123	23.3	50	---	--	spruce
	Redwood	175	21.2	100	285	95	
462:							
Mooncreek	Douglas-fir	159	9.2	100	169	60	Douglas-fir, Pacific madrone,
	Douglas-fir	121	6.2	50	---	--	tanoak
Noisy	Douglas-fir	107	18.3	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	133	26.1	100	134	60	tanoak
Tossup	Douglas-fir	97	8.4	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	129	1.4	100	128	60	tanoak

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
463:							
Mooncreek	Douglas-fir	121	6.2	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	159	9.2	100	169	60	tanoak
Noisy	Douglas-fir	107	18.3	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	133	26.1	100	134	60	tanoak
Sidehill	Douglas-fir	94	---	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	115	---	100	106	60	tanoak
464:							
Mooncreek	Douglas-fir	121	6.2	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	159	9.2	100	169	60	tanoak
Tossup	Douglas-fir	97	8.4	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	129	1.4	100	128	60	tanoak
Noisy	Douglas-fir	107	18.3	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	133	26.1	100	134	60	tanoak
465:							
Sidehill	Douglas-fir	94	---	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	115	---	100	106	60	tanoak
Oakside	Douglas-fir	85	---	50	---	--	Douglas-fir, canyon live oak,
	Douglas-fir	105	---	100	106	60	tanoak
Darkwoods	Douglas-fir	98	---	50	---	--	Douglas-fir, Pacific madrone,
	Douglas-fir	124	---	100	121	60	tanoak
473:							
Highoaks	---	---	---	---	---	--	California black oak, Douglas-
							fir, Oregon white oak
Noisy	---	---	---	---	---	--	California black oak, Douglas-
							fir, Oregon white oak
Mudhorse	---	---	---	---	---	--	California black oak, Douglas-
							fir, Oregon white oak
480:							
Dolason.							
Countshill.							
Airstrip.							
481:							
Dolason	Douglas-fir	157	6.3	100	167	60	Douglas-fir, tanoak
	Douglas-fir	126	10.6	50	---	--	
Airstrip	Douglas-fir	133	---	100	150	60	Douglas-fir, tanoak
	Douglas-fir	105	---	50	---	--	
Countshill	Douglas-fir	105	---	50	---	--	Douglas-fir, tanoak
	Douglas-fir	133	---	100	150	60	
482:							
Dolason.							
Countshill.							

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
483:							
Doolyville	---	---	---	---	---	--	Oregon white oak, California black oak, Douglas-fir, bigleaf maple, California bay
Pasturerock	---	---	---	---	---	--	Oregon white oak, California black oak, Douglas-fir, bigleaf maple, California bay
484:							
Elkcamp.							
Dolason.							
Airstrip.							
485:							
Pasturerock	---	---	---	---	---	--	Oregon white oak, California black oak, Douglas-fir, bigleaf maple
Coyoterock	---	---	---	---	---	--	Oregon white oak, California black oak, Douglas-fir, bigleaf maple
Maneze	---	---	---	---	---	--	Oregon white oak, California black oak, Douglas-fir, bigleaf maple
531:							
Atwell	---	---	---	---	---	--	Redwood, Douglas-fir, red alder, tanoak, western hemlock
Coppercreek	Douglas-fir	140	4.2	50	---	--	Redwood, red alder, Douglas-
	Douglas-fir	184	5.6	100	194	60	fir, western hemlock, tanoak
	Redwood	110	21.2	50	---	--	
	Redwood	162	24.7	100	245	100	
532:							
Atwell	---	---	---	---	---	--	Redwood, red alder, Douglas- fir, western hemlock
Ladybird	Douglas-fir	136	11.3	50	---	--	Redwood, red alder, Douglas-
	Douglas-fir	175	18.3	100	186	60	fir, western hemlock
	Redwood	126	26.1	50	---	--	
	Redwood	177	24.7	100	219	90	
533:							
Coppercreek	Douglas-fir	174	---	100	185	60	Redwood, red alder, Douglas-
	Douglas-fir	128	---	50	---	--	fir, western hemlock, tanoak
	Redwood	127	---	50	---	--	
	Redwood	190	---	100	200	60	
Ahpah	Douglas-fir	148	2.2	100	156	60	Douglas-fir, redwood, tanoak
	Douglas-fir	110	0.7	50	---	--	
	Redwood	85	14.1	50	---	--	
	Redwood	160	14.1	100	239	100	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
534:							
Coppercreek	Douglas-fir	174	---	100	185	60	Redwood, Douglas-fir, tanoak,
	Douglas-fir	128	---	50	---	--	western hemlock, red alder
	Redwood	**127**	**---**	**50**	**---**	**--**	
	Redwood	**190**	**---**	**100**	**200**	**60**	
Ahpah	Douglas-fir	110	0.7	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	148	2.2	100	156	60	
	Redwood	**85**	**14.1**	**50**	**---**	**--**	
	Redwood	**160**	**14.1**	**100**	**239**	**100**	
Lackscreek	Douglas-fir	140	4.3	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	167	---	100	178	60	
	Redwood	**117**	**18.0**	**50**	**---**	**--**	
	Redwood	**169**	**15.0**	**100**	**266**	**95**	
535:							
Wiregrass	Douglas-fir	123	10.4	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	138	7.7	100	142	60	Pacific madrone
	Redwood	**117**	**12.0**	**50**	**---**	**--**	
	Redwood	**145**	**27.0**	**100**	**202**	**100**	
Scaath	Douglas-fir	94	---	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	115	---	100	106	60	Pacific madrone
536:							
Coppercreek	Douglas-fir	178	11.0	100	189	60	Redwood, Douglas-fir, red
	Douglas-fir	134	7.9	50	---	--	alder, western hemlock, tanoak
	Redwood	**174**	**11.5**	**100**	**282**	**75**	
	Redwood	**122**	**10.4**	**50**	**---**	**--**	
	Western hemlock	**184**	**7.8**	**100**	**299**	**50**	
Ahpah	Douglas-fir	148	2.2	100	156	60	Douglas-fir, redwood, western
	Douglas-fir	110	0.7	50	---	--	hemlock, tanoak
	Redwood	**160**	**14.1**	**100**	**239**	**100**	
	Redwood	**85**	**14.1**	**50**	**---**	**--**	
	Western hemlock	**126**	**---**	**100**	**192**	**50**	
Lackscreek	Douglas-fir	140	4.3	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	167	---	100	178	60	
	Redwood	**117**	**18.0**	**50**	**---**	**--**	
	Redwood	**169**	**15.0**	**100**	**266**	**95**	
537:							
Wiregrass	Douglas-fir	123	10.4	50	---	--	Douglas-fir, tanoak, Pacific
	Douglas-fir	138	7.7	100	142	60	madrone
Scaath	Douglas-fir	94	---	50	---	--	Douglas-fir, tanoak, Pacific
	Douglas-fir	115	---	100	106	60	madrone
538:							
Wiregrass	Douglas-fir	134	---	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	168	---	100	179	60	Pacific madrone
	Redwood	**115**	**---**	**50**	**---**	**--**	
	Redwood	**164**	**---**	**100**	**251**	**100**	
Pittplace	Douglas-fir	106	6.3	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	132	11.3	100	133	60	Pacific madrone
	Redwood	**86**	**19.7**	**50**	**---**	**--**	
	Redwood	**135**	**21.2**	**100**	**178**	**100**	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
539:							
Wiregrass	Douglas-fir	134	---	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	168	---	100	179	60	
	Redwood	164	---	100	251	100	
	Redwood	115	---	50	---	--	
Scaath	Douglas-fir	123	---	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	153	---	100	162	60	
	Redwood	90	---	50	---	--	
	Redwood	130	---	100	166	100	
541:							
Wiregrass	Douglas-fir	123	10.4	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	138	7.7	100	142	60	
	Redwood	145	27.0	100	202	100	
	Redwood	117	12.0	50	---	--	
Rockysaddle	Douglas-fir	164	2.2	100	174	60	Douglas-fir, redwood, tanoak
	Douglas-fir	127	1.5	50	---	--	
	Redwood	166	1.7	100	257	100	
	Redwood	111	2.6	50	---	--	
542:							
Coppercreek	Douglas-fir	140	4.2	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	184	5.6	100	194	60	alder, western hemlock, tanoak
	Redwood	162	24.7	100	245	100	
	Redwood	110	21.2	50	---	--	
Slidecreek, gravelly loam	Douglas-fir	170	---	100	181	60	Redwood, Douglas-fir, red
	Douglas-fir	129	---	50	---	--	alder, western hemlock, tanoak
	Redwood	110	21.2	50	---	--	
	Redwood	162	24.7	100	245	100	
Lackscreek	Douglas-fir	115	---	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	135	---	100	181	60	
	Redwood	90	21.2	50	---	--	
	Redwood	130	24.7	100	245	100	
543:							
Wiregrass	Douglas-fir	123	10.4	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	138	7.7	100	142	60	Pacific madrone
	Redwood	117	12.0	50	---	--	
	Redwood	145	27.0	100	202	100	
Rockysaddle	Douglas-fir	127	1.5	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	164	2.2	100	174	60	Pacific madrone
	Redwood	166	1.7	100	257	100	
	Redwood	111	2.6	50	---	--	
Scaath	Douglas-fir	94	---	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	115	---	100	106	60	Pacific madrone
	Redwood	90	21.2	50	---	--	
	Redwood	130	24.7	100	245	100	
544:							
Coppercreek	Douglas-fir	140	4.2	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	184	5.6	100	194	60	alder, western hemlock, tanoak
	Redwood	110	21.2	50	---	--	
	Redwood	162	24.7	100	245	100	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
544:							
Tectah	Douglas-fir	140	4.2	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	184	5.6	100	194	60	alder, western hemlock, tanoak
	Redwood	**110**	**21.2**	**50**	---	--	
	Redwood	**162**	**24.7**	**100**	**245**	**100**	
Lackscreek	Douglas-fir	115	---	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	135	---	100	181	60	
	Redwood	**90**	**21.2**	**50**	---	--	
	Redwood	**130**	**24.7**	**100**	**245**	**100**	
545:							
Devilscreek	Douglas-fir	134	7.9	50	---	--	Red alder, redwood, western
	Douglas-fir	178	11.0	100	189	60	hemlock, Douglas-fir
	Redwood	**122**	**10.4**	**50**	---	--	
	Redwood	**174**	**11.5**	**100**	**282**	**75**	
	Western hemlock	**184**	**7.8**	**100**	**299**	**50**	
Panthercreek	**Redwood**	**181**	---	**100**	**304**	**90**	**Red alder, redwood, western**
	Redwood	131	---	50	---	--	hemlock, Douglas-fir
Coppercreek	Douglas-fir	134	7.9	50	---	--	Redwood, red alder, western
	Douglas-fir	178	11.0	100	189	60	hemlock, Douglas-fir
	Redwood	**174**	**11.5**	**100**	**282**	**75**	
	Redwood	**122**	**10.4**	**50**	---	--	
	Western hemlock	**184**	**7.8**	**100**	**299**	**50**	
546:							
Lackscreek	Douglas-fir	115	---	50	---	--	Redwood, red alder, Douglas-
	Douglas-fir	135	---	100	181	60	fir, western hemlock
	Redwood	**90**	**21.2**	**50**	---	--	
	Redwood	**130**	**24.7**	**100**	**245**	**100**	
Coppercreek	Douglas-fir	140	4.2	50	---	--	Redwood, red alder, Douglas-
	Douglas-fir	184	5.6	100	194	60	fir, western hemlock
	Redwood	**110**	**21.2**	**50**	---	--	
	Redwood	**162**	**24.7**	**100**	**245**	**100**	
549:							
Scaath	Douglas-fir	94	---	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	115	---	100	106	60	
	Redwood	**90**	**21.2**	**50**	---	--	
	Redwood	**130**	**24.7**	**100**	**245**	**100**	
Rockysaddle	Douglas-fir	127	1.5	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	164	2.2	100	174	60	
	Redwood	**111**	**2.6**	**50**	---	--	
	Redwood	**166**	**1.7**	**100**	**257**	**100**	
Wiregrass	Douglas-fir	123	10.4	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	138	7.7	100	142	60	
	Redwood	**117**	**12.0**	**50**	---	--	
	Redwood	**145**	**27.0**	**100**	**202**	**100**	
550:							
Scaath	Douglas-fir	94	---	50	---	--	Douglas-fir, tanoak, Pacific
	Douglas-fir	115	---	100	106	60	madrone
Rockysaddle	Douglas-fir	127	1.5	50	---	--	Douglas-fir, tanoak, Pacific
	Douglas-fir	164	2.2	100	174	60	madrone

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
550:							
Wiregrass	Douglas-fir	123	10.4	50	---	--	Douglas-fir, tanoak, Pacific
	Douglas-fir	138	7.7	100	142	60	madrone
553:							
Ladybird	Douglas-fir	139	---	50	---	--	Redwood, red alder, Douglas-
	Douglas-fir	179	---	100	190	60	fir, western hemlock, Sitka
	Redwood	130	14.1	50	---	--	spruce
	Redwood	185	7.1	100	319	85	
	Sitka spruce	200	---	100	300	70	
	Western hemlock	210	---	100	346	50	
Stonehill	Douglas-fir	125	---	50	---	--	Redwood, red alder, Douglas-
	Douglas-fir	160	---	100	190	60	fir, western hemlock, Sitka
	Redwood	115	14.1	50	---	--	spruce
	Redwood	160	7.1	100	319	85	
	Sitka spruce	180	---	100	271	70	
	Western hemlock	190	---	100	310	50	
554:							
Ladybird	Douglas-fir	160	---	100	170	60	Redwood, Douglas-fir, western
	Douglas-fir	122	---	50	---	--	hemlock, Sitka spruce
	Redwood	125	---	50	---	--	
	Redwood	180	---	100	300	90	
	Sitka spruce	195	---	100	293	70	
Trailhead	Douglas-fir	122	---	50	---	--	Redwood, Douglas-fir, western
	Douglas-fir	160	---	100	170	60	hemlock, Sitka spruce, red
	Redwood	125	---	50	---	--	alder
	Redwood	180	---	100	300	90	
	Sitka spruce	195	---	100	293	70	
555:							
Panthercreek	Redwood	181	---	100	304	90	Red alder, redwood, western
	Redwood	131	---	50	---	--	hemlock, Douglas-fir
Coppercreek	Douglas-fir	134	7.9	50	---	--	Redwood, red alder, western
	Douglas-fir	178	11.0	100	189	60	hemlock, Douglas-fir
	Redwood	122	10.4	50	---	--	
	Redwood	174	11.5	100	282	75	
	Western hemlock	184	7.8	100	299	50	
Devilscreek	Douglas-fir	134	7.9	50	---	--	Red alder, redwood, western
	Douglas-fir	178	11.0	100	189	60	hemlock, Douglas-fir
	Redwood	174	11.5	100	282	75	
	Redwood	122	10.4	50	---	--	
	Western hemlock	184	7.8	100	299	50	
556:							
Rodgerpeak	Douglas-fir	110	---	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	130	---	100	162	60	red alder
	Redwood	80	---	50	---	--	
	Redwood	115	---	100	166	100	
Wiregrass	Douglas-fir	134	---	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	168	---	100	179	60	Pacific madrone
	Redwood	115	---	50	---	--	
	Redwood	164	---	100	251	100	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
557:							
Ustic Palehumults--	Douglas-fir------	127	1.5	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir------	164	2.2	100	174	60	Pacific madrone, red alder
	Redwood---------	100	2.6	50	---	--	
	Redwood---------	150	1.7	100	257	100	
558:							
Tectah----------	Douglas-fir------	126	10.6	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir------	157	6.3	100	167	60	alder, western hemlock, tanoak
	Redwood---------	130	4.9	50	---	--	
	Redwood---------	185	7.0	100	319	95	
Coppercreek------	Douglas-fir------	157	6.3	100	167	60	Redwood, Douglas-fir, red
	Douglas-fir------	126	10.6	50	---	--	alder, western hemlock, tanoak
	Redwood---------	130	4.9	50	---	--	
	Redwood---------	185	7.0	100	319	95	
Trailhead----------	Douglas-fir------	126	10.6	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir------	157	6.3	100	167	60	alder, western hemlock, tanoak
	Redwood---------	130	4.9	50	---	--	
	Redwood---------	185	7.0	100	319	95	
559:							
Trailhead----------	Douglas-fir------	151	16.2	100	159	60	Redwood, Douglas-fir, western
	Douglas-fir------	120	12.7	50	---	--	hemlock, tanoak, red alder
	Redwood---------	157	5.1	100	232	100	
	Redwood---------	117	10.6	50	---	--	
	Western hemlock-	150	34.6	100	238	50	
560:							
Trailhead----------	Douglas-fir------	121	7.7	50	---	--	Redwood, Douglas-fir, tanoak,
	Douglas-fir------	155	7.0	100	164	60	western hemlock, red alder
	Redwood---------	95	---	50	---	--	
	Redwood---------	154	---	100	224	100	
	Western hemlock-	136	---	100	211	50	
561:							
Trailhead----------	Douglas-fir------	106	1.4	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir------	139	4.9	100	144	60	Pacific madrone
	Redwood---------	106	---	50	---	--	
	Redwood---------	158	---	100	234	100	
562:							
Trailhead----------	Douglas-fir------	120	15.0	50	---	--	Redwood, Douglas-fir, tanoak,
	Douglas-fir------	127	24.0	100	178	60	western hemlock, red alder
	Redwood---------	167	2.8	100	248	100	
	Redwood---------	108	4.6	50	---	--	
	Western hemlock-	163	---	100	260	50	
Fortyfour----------	Douglas-fir------	128	---	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir------	169	---	100	180	60	
	Redwood---------	126	---	50	---	--	
	Redwood---------	176	---	100	288	100	
563:							
Trailhead----------	Douglas-fir------	106	1.4	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir------	139	4.9	100	144	60	
	Redwood---------	106	---	50	---	--	
	Redwood---------	158	---	100	234	100	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
563:							
Fortyfour	Douglas-fir	87	---	50	---	--	Douglas-fir, redwood, tanoak
	Douglas-fir	116	---	100	108	60	
	Redwood	**76**	**---**	**50**	**---**	**--**	
	Redwood	**104**	**---**	**100**	**113**	**100**	
580:							
Coppercreek	Douglas-fir	106	6.3	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	132	11.3	100	133	60	alder, western hemlock, tanoak
	Redwood	**135**	**21.2**	**100**	**178**	**100**	
	Redwood	**86**	**19.7**	**50**	**---**	**--**	
Tectah	Douglas-fir	164	30.4	100	174	--	Redwood, Douglas-fir, red
	Douglas-fir	127	16.2	50	---	--	alder, western hemlock, tanoak
	Redwood	**162**	**26.8**	**100**	**245**	**--**	
	Redwood	**109**	**21.9**	**50**	**---**	**--**	
Slidecreek	Douglas-fir	183	11.3	100	194	60	Redwood, Douglas-fir, red
	Douglas-fir	145	4.2	50	---	--	alder, western hemlock, tanoak
	Redwood	**180**	**21.2**	**100**	**300**	**90**	
	Redwood	**122**	**2.1**	**50**	**---**	**--**	
581:							
Coppercreek	Douglas-fir	132	0.7	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	171	2.1	100	182	60	alder, western hemlock, tanoak
	Redwood	**188**	**2.8**	**100**	**331**	**80**	
	Redwood	**134**	**5.6**	**50**	**---**	**--**	
Slidecreek	Douglas-fir	150	12.0	100	158	60	Redwood, Douglas-fir, red
	Douglas-fir	115	2.8	50	---	--	alder, western hemlock, tanoak
	Redwood	**151**	**12.7**	**100**	**217**	**100**	
	Redwood	**109**	**1.4**	**50**	**---**	**--**	
Tectah	Douglas-fir	168	14.1	100	179	60	Redwood, Douglas-fir, red
	Douglas-fir	139	2.0	50	---	--	alder, western hemlock, tanoak
	Redwood	**171**	**10.4**	**100**	**273**	**95**	
	Redwood	**126**	**5.3**	**50**	**---**	**--**	
582:							
Slidecreek	Douglas-fir	150	12.0	100	158	60	Redwood, Douglas-fir, red
	Douglas-fir	115	2.8	50	---	--	alder, western hemlock, tanoak
	Redwood	**151**	**12.7**	**100**	**217**	**100**	
	Redwood	**109**	**1.4**	**50**	**---**	**--**	
Lackscreek	Douglas-fir	100	2.8	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	135	12.0	100	158	60	alder, western hemlock, tanoak
	Redwood	**135**	**12.7**	**100**	**217**	**100**	
	Redwood	**100**	**1.4**	**50**	**---**	**--**	
Coppercreek	Douglas-fir	160	11.5	100	170	60	Redwood, Douglas-fir, red
	Douglas-fir	125	9.8	50	---	--	alder, western hemlock, tanoak
	Redwood	**173**	**11.5**	**100**	**279**	**95**	
	Redwood	**123**	**12.7**	**50**	**---**	**--**	
583:							
Trailhead	Douglas-fir	142	---	100	148	60	Douglas-fir, redwood, tanoak,
	Douglas-fir	123	---	50	---	--	Pacific madrone
	Redwood	**85**	**---**	**50**	**---**	**--**	
	Redwood	**138**	**---**	**100**	**184**	**100**	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
583:							
Wiregrass	Douglas-fir	87	---	100	118	60	Douglas-fir, redwood, tanoak,
	Douglas-fir	68	---	50	---	--	Pacific madrone
	Redwood	**170**	**---**	**100**	**270**	**95**	
	Redwood	**120**	**---**	**50**	**---**	**--**	
584:							
Wiregrass	Douglas-fir	122	---	100	118	60	Douglas-fir, redwood, tanoak,
	Douglas-fir	96	---	50	---	--	Pacific madrone
	Redwood	**115**	**---**	**50**	**---**	**--**	
	Redwood	**172**	**---**	**100**	**276**	**95**	
Pittplace	Douglas-fir	96	---	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	122	---	100	118	60	Pacific madrone
	Redwood	**115**	**---**	**50**	**---**	**--**	
	Redwood	**172**	**---**	**100**	**276**	**95**	
Scaath	Douglas-fir	94	---	50	---	--	Douglas-fir, redwood, tanoak,
	Douglas-fir	115	---	100	106	60	Pacific madrone
	Redwood	**130**	**24.7**	**100**	**245**	**100**	
	Redwood	**90**	**21.2**	**50**	**---**	**--**	
585:							
Wiregrass	Douglas-fir	146	4.9	100	153	60	Douglas-fir, redwood, tanoak,
	Douglas-fir	111	8.3	50	---	--	Pacific madrone
	Redwood	**172**	**---**	**100**	**276**	**95**	
	Redwood	**115**	**---**	**50**	**---**	**--**	
Rockysaddle	Douglas-fir	124	---	100	121	60	Douglas-fir, redwood, tanoak
	Douglas-fir	98	---	50	---	--	
586:							
Wiregrass	Douglas-fir	87	---	100	118	60	Douglas-fir, redwood, tanoak
	Douglas-fir	68	---	50	---	--	
	Redwood	**120**	**---**	**50**	**---**	**--**	
	Redwood	**170**	**---**	**100**	**270**	**95**	
Rockysaddle	Douglas-fir	149	---	100	157	60	Douglas-fir, redwood, tanoak
	Douglas-fir	121	---	50	---	--	
	Redwood	**170**	**---**	**100**	**270**	**95**	
	Redwood	**120**	**---**	**50**	**---**	**--**	
Trailhead	Douglas-fir	174	---	100	186	--	Douglas-fir, redwood, tanoak
587:							
Childshill	Douglas-fir	127	3.0	100	125	60	Chinquapin, Douglas-fir,
	Douglas-fir	87	9.5	50	---	--	redwood, tanoak, Pacific madrone
588:							
Surpur	Douglas-fir	127	3.0	100	125	60	Douglas-fir, redwood, tanoak,
	Douglas-fir	87	9.5	50	---	--	Pacific madrone
590:							
Sasquatch	Douglas-fir	175	18.3	100	186	60	Redwood, Douglas-fir, western
	Douglas-fir	136	11.3	50	---	--	hemlock, Sitka spruce, red
	Redwood	**128**	**10.4**	**50**	**---**	**--**	alder
	Redwood	**184**	**11.5**	**100**	**315**	**85**	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
590:							
Yeti	Douglas-fir	175	18.3	100	186	60	Redwood, Douglas-fir, western
	Douglas-fir	136	11.3	50	---	--	hemlock, Sitka spruce, red
	Redwood	128	10.4	50	---	--	alder
	Redwood	184	11.5	100	315	85	
Footstep	Douglas-fir	130	19.0	50	---	--	Redwood, Douglas-fir, western
	Douglas-fir	162	24.7	100	245	100	hemlock, Sitka spruce, red
	Redwood	164	19.7	100	251	100	alder
	Redwood	111	12.0	50	---	--	
591:							
Sasquatch	Douglas-fir	136	11.3	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	175	18.3	100	186	60	alder, western hemlock, Sitka
	Redwood	184	11.5	100	315	85	spruce
	Redwood	128	10.4	50	---	--	
Sisterrocks	Douglas-fir	140	27.5	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	181	29.6	100	192	60	alder, western hemlock, Sitka
	Redwood	185	7.7	100	319	85	spruce
	Redwood	125	7.7	50	---	--	
Ladybird	Douglas-fir	175	18.3	100	186	60	Redwood, Douglas-fir, red
	Douglas-fir	136	11.3	50	---	--	alder, western hemlock, Sitka
	Redwood	126	26.1	50	---	--	spruce
	Redwood	177	24.7	100	219	90	
592:							
Sisterrocks	Douglas-fir	140	27.5	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	181	29.6	100	192	60	alder, western hemlock, Sitka
	Redwood	123	23.3	50	---	--	spruce
	Redwood	175	21.2	100	285	95	
Ladybird	Douglas-fir	136	11.3	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	175	18.3	100	186	60	alder, western hemlock, Sitka
	Redwood	126	26.1	50	---	--	spruce
	Redwood	177	24.7	100	219	90	
Footstep	Douglas-fir	112	---	100	101	60	Redwood, Douglas-fir, red
	Redwood	102	---	50	---	50	alder, western hemlock, Sitka
							spruce
593:							
Sasquatch	Douglas-fir	119	---	50	---	--	Sitka spruce, red alder,
	Douglas-fir	158	---	100	168	60	Douglas-fir
	Sitka spruce	145	10.6	100	212	70	
Yeti	Douglas-fir	119	---	50	---	--	Sitka spruce, red alder,
	Douglas-fir	158	---	100	168	60	Douglas-fir
	Sitka spruce	145	10.6	100	212	70	
Sisterrocks	Douglas-fir	119	---	50	---	--	Sitka spruce, red alder,
	Douglas-fir	158	---	100	168	60	Douglas-fir
	Sitka spruce	145	10.6	100	212	70	
594:							
Sisterrocks	Douglas-fir	119	---	50	---	--	Sitka spruce, red alder,
	Douglas-fir	158	---	100	168	60	Douglas-fir
	Sitka spruce	182	4.9	100	274	70	

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
594:							
Sasquatch	Douglas-fir	119	---	50	---	--	Sitka spruce, red alder,
	Douglas-fir	158	---	100	168	60	Douglas-fir
	Sitka spruce	145	10.6	100	212	70	
Houda	---	---	---	---	---	--	Sitka spruce, red alder
595:							
Battery	Douglas-fir	132	0.7	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	171	2.1	100	182	60	alder, western hemlock, tanoak
	Redwood	134	5.6	50	---	--	
	Redwood	188	2.8	100	331	80	
Catchings	Douglas-fir	115	2.8	50	---	--	Redwood, Douglas-fir, red
	Douglas-fir	150	12.0	100	158	60	alder, western hemlock, tanoak
	Redwood	109	1.4	50	---	--	
	Redwood	151	12.7	100	217	100	
596: Flintrock.							
Highprairie	---	---	---	---	---	--	Sitka spruce, Douglas-fir
597:							
Tarquin	Douglas-fir	136	11.3	50	---	--	Douglas-fir, red alder,
	Douglas-fir	175	18.3	100	186	60	redwood, western hemlock
	Redwood	128	10.4	50	---	--	
	Redwood	184	11.5	100	315	85	
598:							
Ladybird	Douglas-fir	119	---	50	---	--	Sitka spruce, red alder,
	Douglas-fir	158	---	100	168	60	Douglas-fir
	Sitka spruce	182	4.9	100	---	--	
Stonehill	Sitka spruce	182	4.9	100	---	--	Sitka spruce, red alder, Douglas-fir
659: Raingage. Pigpen.							
756:							
Oragran	---	---	---	---	---	--	Jeffrey pine, knobcone pine, Douglas-fir
Weitchpec	---	---	---	---	---	--	Jeffrey pine, knobcone pine, Douglas-fir
759:							
Jayel, extremely stony	---	---	---	---	---	--	Jeffrey pine, knobcone pine, Douglas-fir
Walnett, extremely stony	---	---	---	---	---	--	Jeffrey pine, knobcone pine, Douglas-fir
Oragran	---	---	---	---	---	--	Jeffrey pine, knobcone pine, Douglas-fir

Table 6.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity						Forest trees
	Common trees	Site index avg.	Site index std. dev.*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		ft		*yrs*	*cu ft/ ac/yr*	*yrs*	
760:							
Jayel, extremely stony	---	---	---	---	---	--	**Jeffrey pine, knobcone pine, Douglas-fir, Port Orford cedar**
Oragran	---	---	---	---	---	--	**Jeffrey pine, knobcone pine, Douglas-fir, Port Orford cedar**
Walnett, extremely stony	---	---	---	---	---	--	**Jeffrey pine, knobcone pine, Douglas-fir, Port Orford cedar**
761:							
Gasquet, extremely stony	---	---	---	---	---	--	**Jeffrey pine, knobcone pine, Douglas-fir, tanoak**
Walnett, extremely stony	---	---	---	---	---	--	**Jeffrey pine, knobcone pine, Douglas-fir, tanoak**
Jayel	---	---	---	---	---	--	**Jeffrey pine, knobcone pine, Douglas-fir, tanoak**

*** The site index standard deviation provides a measure of the statistical dispersion of the plot site index data. The standard deviation is only given if there are three or more plots used to calculate the average site index.**

Table 7a.--Forestland Management (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100:							
Riverwash	90	Not rated		Not rated		Not rated	
102:							
Fluvents	75	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
110:							
Weott	85	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
116:							
Swainslough	90	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
119:							
Arlynda	85	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
126:							
Loleta	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
155:							
Samoa	50	Moderately suited		Unsuited		Moderately suited	
		Sandiness	0.50	Slope	1.00	Slope	0.50
		Slope	0.50	Sandiness	0.50	Sandiness	0.50
Clambeach	30	Moderately suited		Moderately suited		Poorly suited	
		Sandiness	0.50	Sandiness	0.50	Wetness	1.00
						Sandiness	0.50
Dune land	15	Not rated		Not rated		Not rated	
157:							
Beaches	35	Not rated		Not rated		Not rated	
Samoa	35	Moderately suited		Unsuited		Moderately suited	
		Sandiness	0.50	Slope	1.00	Slope	0.50
		Slope	0.50	Sandiness	0.50	Sandiness	0.50
Dune land	25	Not rated		Not rated		Not rated	
171:							
Worswick	40	Well suited		Well suited		Moderately suited	
						Wetness	0.50
						Low strength	0.50
Arlynda	35	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
172:							
Bigriver, fine sandy loam	80	Well suited		Well suited		Well suited	
173:							
Bigriver, silt loam	55	Well suited		Well suited		Moderately suited Low strength	0.50
Ferndale	20	Well suited		Well suited		Moderately suited Low strength	0.50
Russ	15	Well suited		Well suited		Moderately suited Low strength	0.50
174:							
Bigtree	50	Well suited		Well suited		Moderately suited Low strength	0.50
Mystery	25	Well suited		Moderately suited Slope	0.50	Well suited	
177:							
Battery, dry	75	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
178:							
Battery	85	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
191:							
Talawa	85	Well suited		Well suited		Well suited	
192:							
Aubell	85	Well suited		Well suited		Moderately suited Low strength	0.50
194:							
Tsunami	85	Well suited		Moderately suited Rock fragments	0.50	Moderately suited Low strength	0.50
220:							
Ferndale	85	Well suited		Well suited		Moderately suited Low strength	0.50
222:							
Ferndale, moderately well drained	75	Well suited		Well suited		Moderately suited Low strength	0.50
251:							
Surpur	75	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
289:							
Espa	80	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
290:							
Surpur	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Mettah	35	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
291:							
Ossagon	65	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Squashan	20	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
292:							
Ossagon	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Squashan	20	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
293:							
Ossagon	50	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Goldbluffs	25	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Slope	0.50	Sandiness	0.50
				Sandiness	0.50		
				Rock fragments	0.50		
Squashan	15	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
294:							
Ossagon	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Goldbluffs	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Squashan	15	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
462:							
Mooncreek	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
Noisy	25	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
462:							
Tossup	15	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
463:							
Mooncreek	25	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
Noisy	20	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00	Sandiness	0.50
		Slope	0.50	Sandiness	0.50		
Sidehill	20	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Low strength	1.00
		Sandiness	0.50	Rock fragments	1.00	Slope	1.00
		Slope	0.50	Sandiness	0.50	Sandiness	0.50
464:							
Mooncreek	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Tossup	20	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
						Low strength	0.50
Noisy	15	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Slope	1.00	Slope	0.50
		Slope	0.50	Rock fragments	0.75		
465:							
Sidehill	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Oakside	25	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.75	Rock fragments	1.00	Sandiness	0.50
		Slope	0.50	Sandiness	0.50		
		Sandiness	0.50	Restrictive layer	0.50		
Darkwoods	20	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
		Sandiness	0.50	Sandiness	0.50		
473:							
Highoaks	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Noisy	25	Moderately suited		Unsuited		Moderately suited	
		Sandiness	0.50	Slope	1.00	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
		Slope	0.50	Sandiness	0.50		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
473:							
Mudhorse	15	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
				Rock fragments	0.50		
480:							
Dolason	50	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Countshill	25	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Airstrip	20	Moderately suited		Moderately suited		Well suited	
		Rock fragments	0.50	Slope	0.50		
				Rock fragments	0.50		
481:							
Dolason	45	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
						Low strength	0.50
Airstrip	25	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
				Rock fragments	0.50		
Countshill	20	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
						Low strength	0.50
482:							
Dolason	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Countshill	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
483:							
Doolyville	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Pasturerock	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
484:							
Elkcamp	50	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
						Low strength	0.50
Dolason	30	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
						Low strength	0.50
Airstrip	15	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Slope	1.00	Slope	0.50
				Rock fragments	0.50		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
485:							
Pasturerock	40	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Sandiness	0.50	Low strength	0.50
Coyoterock	25	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
				Rock fragments	0.50	Low strength	0.50
Maneze	15	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Rock fragments	1.00	Slope	1.00
		Slope	0.50	Slope	1.00	Low strength	0.50
531:							
Atwell	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Coppercreek	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
532:							
Atwell	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Ladybird	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
533:							
Coppercreek	60	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Ahpah	15	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50		
534:							
Coppercreek	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
Ahpah	20	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
Lackscreek	20	Moderately suited		Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.75	Low strength	1.00
				Rock fragments	0.75	Slope	0.50
535:							
Wiregrass	60	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
Scaath	25	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
536:							
Coppercreek	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Ahpah	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Lackscreek	15	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
537:							
Wiregrass	50	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
Scaath	20	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
538:							
Wiregrass	60	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
Pittplace	15	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50		
539:							
Wiregrass	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Scaath	30	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
541:							
Wiregrass	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rockysaddle	20	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
		Slope	0.50	Sandiness	0.50		
542:							
Coppercreek	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Slidecreek, gravelly loam	30	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
		Slope	0.50	Sandiness	0.50		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542:							
Lackscreek	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
543:							
Wiregrass	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rockysaddle	30	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
		Slope	0.50	Sandiness	0.50		
Scaath	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
544:							
Coppercreek	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Tectah	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Lackscreek	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
545:							
Devilscreek	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Panthercreek	20	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
Coppercreek	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
546:							
Lackscreek	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Coppercreek	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
549:							
Scaath	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
549:							
Rockysaddle	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
Wiregrass	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
550:							
Scaath	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rockysaddle	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
Wiregrass	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
553:							
Ladybird	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Stonehill	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
554:							
Ladybird	50	Well suited		Poorly suited		Poorly suited	
				Slope	0.75	Low strength	1.00
				Rock fragments	0.50		
Trailhead	25	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
555:							
Panthercreek	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Coppercreek	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Devilscreek	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
556:							
Rodgerpeak	50	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
Wiregrass	30	Well suited		Moderately suited		Moderately suited	
				Rock fragments	0.50	Low strength	0.50
				Slope	0.50		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
557:							
Ustic Palehumults---	90	Poorly suited		Unsuited		Moderately suited	
		Rock fragments	0.75	Rock fragments	1.00	Slope	0.50
				Slope	1.00	Rock fragments	0.50
558:							
Tectah----------	45	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Coppercreek---------	25	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Trailhead----------	15	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
559:							
Trailhead----------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
560:							
Trailhead----------	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
561:							
Trailhead----------	75	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
562:							
Trailhead----------	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Fortyfour----------	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
563:							
Trailhead----------	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Fortyfour----------	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
580:							
Coppercreek---------	40	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Tectah----------	30	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Slidecreek----------	20	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
581:							
Coppercreek---------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
581:							
Slidecreek	30	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
Tectah	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
582:							
Slidecreek	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
Lackscreek	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Coppercreek	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
583:							
Trailhead	65	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
Wiregrass	25	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
584:							
Wiregrass	40	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Pittplace	25	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
Scaath	20	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.50		
585:							
Wiregrass	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Rockysaddle	40	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
586:							
Wiregrass	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Rockysaddle	30	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
586:							
Trailhead	15	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
						Low strength	0.50
587:							
Childshill	65	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
588:							
Surpur	75	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
590:							
Sasquatch	45	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Yeti	20	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Footstep	15	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		
591:							
Sasquatch	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Sisterrocks	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Ladybird	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
592:							
Sisterrocks	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
Ladybird	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Footstep	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
593:							
Sasquatch	50	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Yeti	20	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
593:							
Sisterrocks	15	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
594:							
Sisterrocks	45	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
Sasquatch	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Houda	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
595:							
Battery	50	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
Catchings	30	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Slope	0.75	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75	Slope	0.50
				Sandiness	0.50		
596:							
Flintrock	40	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
Highprairie	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
597:							
Tarquin	70	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
598:							
Ladybird	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Stonehill	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
659:							
Raingage	65	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
						Low strength	0.50
Pigpen	20	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
				Rock fragments	0.50		

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
756:							
Oragran	40	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	1.00	Low strength	0.50
Weitchpec	25	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
759:							
Jayel, extremely stony	35	Moderately suited		Unsuited		Poorly suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.75	Rock fragments	0.50
		Rock fragments	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
		Slope	0.50				
Walnett, extremely stony	20	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75	Rock fragments	0.50
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
Oragran	20	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	1.00	Low strength	0.50
760:							
Jayel, extremely stony	30	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Low strength	0.50
		Rock fragments	0.50	Stickiness; high plasticity index	0.50	Slope	0.50
Oragran	25	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
				Slope	0.75	Slope	0.50
Walnett, extremely stony	25	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
		Stickiness; high plasticity index	0.50	Rock fragments	0.75	Slope	0.50
				Stickiness; high plasticity index	0.50		
761:							
Gasquet, extremely stony	30	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75	Rock fragments	0.50
		Rock fragments	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50

Table 7a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
761:							
Walnett, extremely stony	25	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Slope	1.00	Slope	0.50
		Stickiness; high plasticity index	0.50	Rock fragments	0.75	Rock fragments	0.50
				Stickiness; high plasticity index	0.50		
Jayel	20	Moderately suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Slope	0.50
				Stickiness; high plasticity index	0.50	Low strength	0.50

Table 7b.--Forestland Management (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100:					
Riverwash	90	Not rated		Not rated	
102:					
Fluvents	75	Well suited		Unsuited	
110:					
Weott	85	Well suited		Unsuited	
				Wetness	1.00
116:					
Swainslough	90	Well suited		Unsuited	
				Wetness	1.00
119:					
Arlynda	85	Well suited		Unsuited	
				Wetness	1.00
126:					
Loleta	85	Well suited		Well suited	
155:					
Samoa	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Clambeach	30	Well suited		Unsuited	
				Wetness	1.00
Dune land	15	Not rated		Not rated	
157:					
Beaches	35	Not rated		Not rated	
Samoa	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Dune land	25	Not rated		Not rated	
171:					
Worswick	40	Well suited		Unsuited	
				Wetness	1.00
Arlynda	35	Well suited		Unsuited	
				Wetness	1.00
172:					
Bigriver, fine sandy loam	80	Well suited		Well suited	

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
173:					
Bigriver, silt loam--	55	Well suited		Well suited	
Ferndale----------	20	Well suited		Well suited	
Russ----------	15	Well suited		Well suited	
174:					
Bigtree----------	50	Well suited		Well suited	
Mystery----------	25	Well suited		Well suited	
177:					
Battery, dry---------	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
178:					
Battery----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
191:					
Talawa----------	85	Well suited		Well suited	
192:					
Aubell----------	85	Well suited		Well suited	
194:					
Tsunami----------	85	Well suited		Well suited	
220:					
Ferndale----------	85	Well suited		Well suited	
222:					
Ferndale, moderately well drained--------	75	Well suited		Well suited	
251:					
Surpur----------	75	Well suited		Well suited	
289:					
Espa----------	80	Well suited		Well suited	
290:					
Surpur----------	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Mettah----------	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
291:					
Ossagon----------	65	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Squashan----------	20	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
292:					
Ossagon	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Squashan	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
293:					
Ossagon	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Goldbluffs	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Squashan	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
294:					
Ossagon	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Goldbluffs	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Squashan	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
462:					
Mooncreek	35	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
Noisy	25	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
Tossup	15	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
463:					
Mooncreek	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Noisy	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Sidehill	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
464:					
Mooncreek	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
464:					
Tossup	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Noisy	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
465:					
Sidehill	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Oakside	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
		Restrictive layer	0.50		
Darkwoods	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
473:					
Highoaks	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Noisy	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
Mudhorse	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
480:					
Dolason	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Countshill	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Airstrip	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
481:					
Dolason	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Airstrip	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Countshill	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
482:					
Dolason	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
482:					
Countshill	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
483:					
Doolyville	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Pasturerock	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
484:					
Elkcamp	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Dolason	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Airstrip	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
485:					
Pasturerock	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Coyoterock	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Maneze	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
531:					
Atwell	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Coppercreek	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
532:					
Atwell	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Ladybird	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
533:					
Coppercreek	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Ahpah	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
534:					
Coppercreek	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Ahpah	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
534:					
Lackscreek	20	Poorly suited		Poorly suited	
		Slope	0.50	Restrictive layer	0.50
		Rock fragments	0.50	Slope	0.50
535:					
Wiregrass	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Scaath	25	Poorly suited		Poorly suited	
		Slope	0.50	Restrictive layer	0.50
				Slope	0.50
536:					
Coppercreek	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Ahpah	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Lackscreek	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
537:					
Wiregrass	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Scaath	20	Poorly suited		Poorly suited	
		Slope	0.50	Restrictive layer	0.50
				Slope	0.50
538:					
Wiregrass	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Pittplace	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
539:					
Wiregrass	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Scaath	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
541:					
Wiregrass	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rockysaddle	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
542:					
Coppercreek	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
542:					
Slidecreek, gravelly loam	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Lackscreek	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
543:					
Wiregrass	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rockysaddle	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Scaath	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
544:					
Coppercreek	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Tectah	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Lackscreek	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
545:					
Devilscreek	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Panthercreek	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Coppercreek	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
546:					
Lackscreek	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Coppercreek	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
549:					
Scaath	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Rockysaddle	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
549:					
Wiregrass	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
550:					
Scaath	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rockysaddle	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Wiregrass	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
553:					
Ladybird	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Stonehill	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
554:					
Ladybird	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Trailhead	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
555:					
Panthercreek	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Coppercreek	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Devilscreek	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
556:					
Rodgerpeak	50	Well suited		Unsuited	
				Restrictive layer	1.00
Wiregrass	30	Well suited		Well suited	
557:					
Ustic Palehumults	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
558:					
Tectah	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Coppercreek	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Trailhead	15	Well suited		Well suited	

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
559:					
Trailhead	85	Well suited		Well suited	
560:					
Trailhead	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
561:					
Trailhead	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
562:					
Trailhead	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Fortyfour	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
563:					
Trailhead	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Fortyfour	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
580:					
Coppercreek	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Tectah	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Slidecreek	20	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
581:					
Coppercreek	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Slidecreek	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Tectah	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
582:					
Slidecreek	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Lackscreek	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Coppercreek	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
583:					
Trailhead	65	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Wiregrass	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
584:					
Wiregrass	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Pittplace	25	Well suited		Well suited	
Scaath	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
585:					
Wiregrass	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rockysaddle	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
586:					
Wiregrass	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rockysaddle	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Trailhead	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
587:					
Childshill	65	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
588:					
Surpur	75	Well suited		Well suited	
590:					
Sasquatch	45	Well suited		Well suited	
Yeti	20	Well suited		Well suited	
Footstep	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
591:					
Sasquatch	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Sisterrocks	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
591:					
Ladybird	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
592:					
Sisterrocks	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Ladybird	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Footstep	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
593:					
Sasquatch	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Yeti	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Sisterrocks	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
594:					
Sisterrocks	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Sasquatch	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Houda	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
595:					
Battery	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Catchings	30	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
596:					
Flintrock	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Highprairie	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
597:					
Tarquin	70	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
598:					
Ladybird	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
598:					
Stonehill	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
659:					
Raingage	65	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Pigpen	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
756:					
Oragran	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Weitchpec	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
759:					
Jayel, extremely stony	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
Walnett, extremely stony	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Oragran	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
760:					
Jayel, extremely stony	30	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
		Slope	0.50	Restrictive layer	0.50
				Slope	0.50
Oragran	25	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
		Slope	0.50	Slope	0.50
Walnett, extremely stony	25	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
		Slope	0.50	Slope	0.50
761:					
Gasquet, extremely stony	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50

Table 7b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
761:					
Walnett, extremely stony	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Jayel	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50

Table 7c.--Forestland Management (Part 3)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100:							
Riverwash	90	Not rated		Not rated		Not rated	
102:							
Fluvents	75	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Low strength	0.50		
		Low strength	0.50	Wetness	0.50		
		Landslides	0.10	Landslides	0.10		
110:							
Weott	85	Severe		Poorly suited		Severe	
		Wetness	1.00	Ponding	1.00	Low strength	1.00
		Flooding	0.50	Flooding	0.50		
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
116:							
Swainslough	90	Severe		Poorly suited		Severe	
		Wetness	1.00	Ponding	1.00	Low strength	1.00
		Flooding	0.50	Flooding	0.50		
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
119:							
Arlynda	85	Severe		Poorly suited		Severe	
		Wetness	1.00	Ponding	1.00	Low strength	1.00
		Flooding	0.50	Wetness	0.50		
		Low strength	0.50	Flooding	0.50		
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
126:							
Loleta	85	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
155:							
Samoa	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
				Sandiness	0.50		
Clambeach	30	Severe		Poorly suited		Moderate	
		Wetness	1.00	Ponding	1.00	Low strength	0.50
		Sandiness	0.50	Sandiness	0.50		
Dune land	15	Not rated		Not rated		Not rated	
157:							
Beaches	35	Not rated		Not rated		Not rated	

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157:							
Samoa	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
				Sandiness	0.50		
Dune land	25	Not rated		Not rated		Not rated	
171:							
Worswick	40	Moderate		Moderately suited		Severe	
		Wetness	0.50	Wetness	0.50	Low strength	1.00
		Flooding	0.50	Ponding	0.50		
		Low strength	0.50	Flooding	0.50		
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Arlynda	35	Severe		Poorly suited		Severe	
		Wetness	1.00	Ponding	1.00	Low strength	1.00
		Flooding	0.50	Wetness	0.78		
		Low strength	0.50	Flooding	0.50		
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
172:							
Bigriver, fine sandy loam	80	Moderate		Moderately suited		Moderate	
		Flooding	0.50	Flooding	0.50	Low strength	0.50
		Low strength	0.50	Landslides	0.10		
		Landslides	0.10				
173:							
Bigriver, silt loam	55	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Ferndale	20	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
Russ	15	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
174:							
Bigtree	50	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
Mystery	25	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
		Landslides	0.10	Wetness	1.00		
				Slope	0.50		
				Landslides	0.10		
177:							
Battery, dry	75	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
178:							
Battery	85	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
191:							
Talawa	85	Slight		Well suited		Moderate	
		Landslides	0.10	Landslides	0.10	Low strength	0.50
192:							
Aubell	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Wetness	0.50		
				Landslides	0.10		
194:							
Tsunami	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
220:							
Ferndale	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
222:							
Ferndale, moderately well drained	75	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
251:							
Surpur	75	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Slope	0.50		
				Landslides	0.10		
289:							
Espa	80	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
290:							
Surpur	50	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
Mettah	35	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
291:							
Ossagon	65	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
291:							
Squashan	20	Moderate		Poorly suited		Slight	
		Landslides	0.50	Slope	1.00	Strength	0.10
		Slope	0.50	Landslides	0.50		
292:							
Ossagon	65	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Squashan	20	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Landslides	0.50		
293:							
Ossagon	50	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Goldbluffs	25	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Sandiness	0.50	Sandiness	0.50		
		Landslides	0.10	Landslides	0.10		
Squashan	15	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
294:							
Ossagon	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Goldbluffs	20	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Landslides	0.50		
Squashan	15	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Landslides	0.50		
462:							
Mooncreek	35	Moderate		Poorly suited		Slight	
		Landslides	0.50	Slope	1.00	Strength	0.10
		Slope	0.50	Landslides	0.50		
Noisy	25	Moderate		Poorly suited		Moderate	
		Landslides	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50	Landslides	0.50		
Tossup	15	Moderate		Poorly suited		Slight	
		Landslides	0.50	Slope	1.00	Strength	0.10
		Slope	0.50	Landslides	0.50		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
463:							
Mooncreek	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
		Low strength	0.50				
Noisy	20	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
Sidehill	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	1.00		
				Sandiness	0.50		
				Landslides	0.10		
464:							
Mooncreek	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
		Low strength	0.50				
Tossup	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Noisy	15	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Landslides	0.50		
465:							
Sidehill	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
Oakside	25	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.10	Sandiness	0.50		
				Landslides	0.10		
Darkwoods	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
473:							
Highoaks	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Landslides	0.50		
		Low strength	0.50				
Noisy	25	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.10	Sandiness	0.50		
				Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
473:							
Mudhorse	15	Severe		Poorly suited		Slight	
		Landslides	1.00	Slope	1.00	Strength	0.10
		Slope	1.00	Landslides	1.00		
		Low strength	0.50				
480:							
Dolason	50	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Countshill	25	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Airstrip	20	Severe		Poorly suited		Slight	
		Restrictive layer	1.00	Slope	1.00	Strength	0.10
		Slope	0.50	Landslides	0.10		
		Landslides	0.10				
481:							
Dolason	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Airstrip	25	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.10	Landslides	0.10		
Countshill	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
482:							
Dolason	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Countshill	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
		Low strength	0.50				
483:							
Doolyville	40	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
				Wetness	0.50		
				Low strength	0.50		
Pasturerock	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
484:							
Elkcamp	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Dolason	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Airstrip	15	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.10	Landslides	0.10		
485:							
Pasturerock	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Coyoterock	25	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Landslides	1.00		
				Low strength	0.50		
Maneze	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
531:							
Atwell	45	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
Coppercreek	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
532:							
Atwell	75	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
Ladybird	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
533:							
Coppercreek	60	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
533:							
Ahpah	15	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
534:							
Coppercreek	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Ahpah	20	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
Lackscreek	20	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	1.00		
		Landslides	0.10	Landslides	0.10		
535:							
Wiregrass	60	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
Scaath	25	Moderate		Poorly suited		Moderate	
		Restrictive layer	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50	Landslides	0.10		
		Landslides	0.10				
536:							
Coppercreek	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Landslides	0.50		
Ahpah	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Low strength	0.50	Landslides	0.10		
		Landslides	0.10				
Lackscreek	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
537:							
Wiregrass	50	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Scaath	20	Moderate		Poorly suited		Moderate	
		Restrictive layer	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50	Landslides	0.10		
		Landslides	0.10				

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
538:							
Wiregrass	60	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
Pittplace	15	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
539:							
Wiregrass	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
Scaath	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
541:							
Wiregrass	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Rockysaddle	20	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
542:							
Coppercreek	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Slidecreek, gravelly loam	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
Lackscreek	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
543:							
Wiregrass	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
		Low strength	0.50				
Rockysaddle	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
Scaath	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
544:							
Coppercreek	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Tectah	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Lackscreek	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
545:							
Devilscreek	45	Severe		Poorly suited		Moderate	
		Landslides	1.00	Slope	1.00	Low strength	0.50
		Slope	1.00	Landslides	1.00		
Panthercreek	20	Severe		Poorly suited		Slight	
		Landslides	1.00	Slope	1.00	Strength	0.10
		Slope	1.00	Landslides	1.00		
Coppercreek	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
546:							
Lackscreek	65	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Coppercreek	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Landslides	0.50		
549:							
Scaath	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Rockysaddle	25	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
Wiregrass	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
		Low strength	0.50				
550:							
Scaath	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
550:							
Rockysaddle	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
Wiregrass	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
		Low strength	0.50				
553:							
Ladybird	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Stonehill	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
554:							
Ladybird	50	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	1.00		
				Landslides	0.10		
Trailhead	25	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
555:							
Panthercreek	35	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	1.00	Landslides	1.00		
Coppercreek	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Devilscreek	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	1.00	Landslides	1.00		
556:							
Rodgerpeak	50	Severe		Well suited		Moderate	
		Restrictive layer	1.00	Landslides	0.10	Low strength	0.50
		Landslides	0.10				
Wiregrass	30	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
557:							
Ustic Palehumults	90	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Stoniness	0.50	Rock fragments	0.50		
		Landslides	0.10	Landslides	0.10		
558:							
Tectah	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Coppercreek	25	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Trailhead	15	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
559:							
Trailhead	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Landslides	0.10		
560:							
Trailhead	80	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
561:							
Trailhead	75	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
562:							
Trailhead	65	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Fortyfour	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
563:							
Trailhead	65	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Fortyfour	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
580:							
Coppercreek	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Tectah	30	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Slidecreek	20	Moderate		Poorly suited		Moderate	
		Landslides	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50	Landslides	0.50		
581:							
Coppercreek	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Slidecreek	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
Tectah	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
582:							
Slidecreek	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
Lackscreek	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Coppercreek	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
583:							
Trailhead	65	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Wiregrass	25	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
584:							
Wiregrass	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Pittplace	25	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Scaath	20	Moderate		Poorly suited		Moderate	
		Restrictive layer	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50	Landslides	0.10		
		Landslides	0.10				
585:							
Wiregrass	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Rockysaddle	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
586:							
Wiregrass	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Rockysaddle	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.10	Landslides	0.10		
Trailhead	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
587:							
Childshill	65	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
588:							
Surpur	75	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
590:							
Sasquatch	45	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
590:							
Yeti	20	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Footstep	15	Moderate		Poorly suited		Moderate	
		Restrictive layer	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50	Landslides	0.10		
		Landslides	0.10				
591:							
Sasquatch	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Sisterrocks	25	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Ladybird	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
592:							
Sisterrocks	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Sandiness	0.50		
				Landslides	0.50		
Ladybird	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Footstep	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
593:							
Sasquatch	50	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Yeti	20	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Sisterrocks	15	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
594:							
Sisterrocks	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
594:							
Sasquatch	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Houda	20	Severe		Poorly suited		Moderate	
		Landslides	1.00	Slope	1.00	Low strength	0.50
		Slope	1.00	Landslides	1.00		
595:							
Battery	50	Moderate		Poorly suited		Moderate	
		Landslides	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50	Landslides	0.50		
Catchings	30	Moderate		Poorly suited		Moderate	
		Landslides	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50	Sandiness	0.50		
		Sandiness	0.50	Landslides	0.50		
596:							
Flintrock	40	Severe		Poorly suited		Moderate	
		Landslides	1.00	Slope	1.00	Low strength	0.50
		Slope	1.00	Landslides	1.00		
Highprairie	30	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
597:							
Tarquin	70	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Slope	0.50	Slope	1.00		
				Low strength	0.50		
598:							
Ladybird	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.50	Landslides	0.50		
Stonehill	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
659:							
Raingage	65	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Pigpen	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
				Wetness	0.50		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
756:							
Oragran	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Weitchpec	25	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.10	Landslides	0.10		
759:							
Jayel, extremely stony	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Walnett, extremely stony	20	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Landslides	0.50	Rock fragments	0.50		
		Stoniness	0.50	Landslides	0.50		
Oragran	20	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Low strength	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
760:							
Jayel, extremely stony	30	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
		Slope	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Oragran	25	Severe		Poorly suited		Slight	
		Restrictive layer	1.00	Slope	1.00	Strength	0.10
		Slope	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Walnett, extremely stony	25	Moderate		Poorly suited		Slight	
		Stoniness	0.50	Slope	1.00	Strength	0.10
		Landslides	0.50	Rock fragments	0.50		
		Slope	0.50	Landslides	0.50		
761:							
Gasquet, extremely stony	30	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		

Table 7c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
761:							
Walnett, extremely stony	25	Moderate		Poorly suited		Slight	
		Stoniness	0.50	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	0.50		
		Landslides	0.50	Landslides	0.50		
Jayel	20	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		

Table 7d.--Forestland Management (Part 4)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100:							
Riverwash	90	Not rated		Not rated		Not rated	
102:							
Fluvents	75	Slight		Moderate		Poorly suited	
				Slope/erodibility	0.50	Flooding	1.00
						Low strength	0.50
						Wetness	0.50
						Landslides	0.10
110:							
Weott	85	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	0.50
						Low strength	0.50
						Landslides	0.10
116:							
Swainslough	90	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	0.50
						Low strength	0.50
						Landslides	0.10
119:							
Arlynda	85	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.50
						Flooding	0.50
						Low strength	0.50
						Landslides	0.10
126:							
Loleta	85	Slight		Slight		Poorly suited	
						Wetness	1.00
						Low strength	0.50
						Landslides	0.10
155:							
Samoa	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Clambeach	30	Slight		Slight		Poorly suited	
						Ponding	1.00
						Sandiness	0.50
Dune land	15	Not rated		Not rated		Not rated	
157:							
Beaches	35	Not rated		Not rated		Not rated	
Samoa	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157:							
Dune land	25	Not rated		Not rated		Not rated	
171:							
Worswick	40	Slight		Slight		Moderately suited	
						Wetness	0.50
						Ponding	0.50
						Flooding	0.50
						Low strength	0.50
						Landslides	0.10
Arlynda	35	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.78
						Flooding	0.50
						Low strength	0.50
						Landslides	0.10
172:							
Bigriver, fine sandy loam	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Flooding	0.50
						Landslides	0.10
173:							
Bigriver, silt loam	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Flooding	0.50
						Low strength	0.50
						Landslides	0.10
Ferndale	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Landslides	0.10
Russ	15	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Flooding	0.50
						Low strength	0.50
						Landslides	0.10
174:							
Bigtree	50	Slight		Slight		Moderately suited	
						Low strength	0.50
						Landslides	0.10
Mystery	25	Slight		Moderate		Poorly suited	
				Slope/erodibility	0.50	Flooding	1.00
						Wetness	1.00
						Slope	0.50
						Landslides	0.10
177:							
Battery, dry	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
178:							
Battery	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
191:							
Talawa	85	Slight		Slight		Well suited	
						Landslides	0.10
192:							
Aubell	85	Slight		Slight		Moderately suited	
						Low strength	0.50
						Wetness	0.50
						Landslides	0.10
194:							
Tsunami	85	Slight		Slight		Moderately suited	
						Low strength	0.50
						Landslides	0.10
220:							
Ferndale	85	Slight		Slight		Moderately suited	
						Low strength	0.50
						Landslides	0.10
222:							
Ferndale, moderately well drained	75	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Landslides	0.10
251:							
Surpur	75	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Slope	0.50
						Landslides	0.10
289:							
Espa	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Landslides	0.10
290:							
Surpur	50	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Landslides	0.10
Mettah	35	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.10
291:							
Ossagon	65	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Squashan	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
292:							
Ossagon	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Squashan	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
293:							
Ossagon	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Goldbluffs	25	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Sandiness	0.50
						Landslides	0.10
Squashan	15	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.50
294:							
Ossagon	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Goldbluffs	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Squashan	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
462:							
Mooncreek	35	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Landslides	0.50
Noisy	25	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Landslides	0.50
Tossup	15	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Landslides	0.50
463:							
Mooncreek	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
463:							
Noisy	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
Sidehill	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	1.00
						Sandiness	0.50
						Landslides	0.10
464:							
Mooncreek	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Tossup	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Noisy	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
465:							
Sidehill	35	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
Oakside	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.10
Darkwoods	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
473:							
Highoaks	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Noisy	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.10
Mudhorse	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
480:							
Dolason	50	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.10

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
480:							
Countshill	25	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Airstrip	20	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Landslides	0.10
481:							
Dolason	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Airstrip	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
Countshill	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
482:							
Dolason	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Countshill	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
483:							
Doolyville	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Wetness	0.50
						Low strength	0.50
Pasturerock	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
484:							
Elkcamp	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Dolason	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Airstrip	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
485:							
Pasturerock	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Coyoterock	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
Maneze	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
531:							
Atwell	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
Coppercreek	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
532:							
Atwell	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
Ladybird	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
533:							
Coppercreek	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Ahpah	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
534:							
Coppercreek	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Ahpah	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
534:							
Lackscreek	20	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	1.00
						Landslides	0.10
535:							
Wiregrass	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
Scaath	25	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Landslides	0.10
536:							
Coppercreek	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Ahpah	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
Lackscreek	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
537:							
Wiregrass	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Scaath	20	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Landslides	0.10
538:							
Wiregrass	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
Pittplace	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
539:							
Wiregrass	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
Scaath	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
541:							
Wiregrass	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
541:							
Rockysaddle	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
542:							
Coppercreek	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Slidecreek, gravelly loam	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
Lackscreek	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
543:							
Wiregrass	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Rockysaddle	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
Scaath	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
544:							
Coppercreek	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Tectah	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Lackscreek	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
545:							
Devilscreek	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
Panthercreek	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
545:							
Coppercreek	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
546:							
Lackscreek	65	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Coppercreek	15	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
549:							
Scaath	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Rockysaddle	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
Wiregrass	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
550:							
Scaath	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Rockysaddle	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
Wiregrass	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
553:							
Ladybird	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Stonehill	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
554:							
Ladybird	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	1.00
						Landslides	0.10

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
554:							
Trailhead	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
555:							
Panthercreek	35	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
Coppercreek	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Devilscreek	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
556:							
Rodgerpeak	50	Slight		Slight		Well suited	
						Landslides	0.10
Wiregrass	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
						Landslides	0.10
557:							
Ustic Palehumults	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Landslides	0.10
558:							
Tectah	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Coppercreek	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Trailhead	15	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Landslides	0.10
559:							
Trailhead	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Landslides	0.10
560:							
Trailhead	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
561:							
Trailhead	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
562:							
Trailhead	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Fortyfour	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
563:							
Trailhead	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Fortyfour	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
580:							
Coppercreek	40	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Tectah	30	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Slidecreek	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
581:							
Coppercreek	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Slidecreek	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
Tectah	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
582:							
Slidecreek	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
Lackscreek	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Coppercreek	15	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
583:							
Trailhead	65	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Wiregrass	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
584:							
Wiregrass	40	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Pittplace	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Scaath	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
585:							
Wiregrass	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Rockysaddle	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
586:							
Wiregrass	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Rockysaddle	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
586:							
Trailhead	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
587:							
Childshill	65	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
						Landslides	0.50
588:							
Surpur	75	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
						Landslides	0.50
590:							
Sasquatch	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Yeti	20	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Footstep	15	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Landslides	0.10
591:							
Sasquatch	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Sisterrocks	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Ladybird	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
592:							
Sisterrocks	35	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
Ladybird	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Footstep	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
593:							
Sasquatch	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Yeti	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Sisterrocks	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
594:							
Sisterrocks	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Sasquatch	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Houda	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
595:							
Battery	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50
Catchings	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Landslides	0.50
596:							
Flintrock	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
Highprairie	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
597:							
Tarquin	70	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Landslides	1.00
						Slope	1.00
						Low strength	0.50
598:							
Ladybird	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.50

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
598:							
Stonehill	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
659:							
Raingage	65	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Pigpen	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Wetness	0.50
756:							
Oragran	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Weitchpec	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	0.10
759:							
Jayel, extremely stony	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Landslides	0.10
Walnett, extremely stony	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Landslides	0.50
Oragran	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
760:							
Jayel, extremely stony	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Landslides	0.10
Oragran	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10

Table 7d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
760:							
Walnett, extremely stony	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Landslides	0.50
761:							
Gasquet, extremely stony	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Landslides	0.10
Walnett, extremely stony	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Landslides	0.50
Jayel	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10

Table 7e.--Forestland Management (Part 5)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100:					
Riverwash	90	Not rated		Not rated	
102:					
Fluvents	75	High Texture/surface depth/rock fragments	1.00	High Wetness	1.00
110:					
Weott	85	Low Texture/rock fragments	0.10	High Wetness	1.00
116:					
Swainslough	90	Low		High Wetness	1.00
119:					
Arlynda	85	Low		High Wetness	1.00
126:					
Loleta	85	Low Texture/surface depth/rock fragments	0.10	High Wetness	1.00
155:					
Samoa	50	High Texture/slope/ rock fragments	1.00	Low	
Clambeach	30	High Texture/rock fragments	1.00	High Wetness	1.00
Dune land	15	Not rated		Not rated	
157:					
Beaches	35	Not rated		Not rated	
Samoa	35	High Texture/rock fragments	1.00	Low	
Dune land	25	Not rated		Not rated	
171:					
Worswick	40	Low Texture/rock fragments	0.10	Moderate Wetness	0.50

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
171:					
Arlynda	35	Moderate		High	
		Texture/surface depth/rock fragments	0.50	Wetness	1.00
172:					
Bigriver, fine sandy loam	80	Low		Low	
		Texture/surface depth/rock fragments	0.10		
173:					
Bigriver, silt loam	55	Low		Low	
		Texture/rock fragments	0.10		
Ferndale	20	Low		Low	
		Texture/rock fragments	0.10		
Russ	15	Low		Low	
		Texture/rock fragments	0.10		
174:					
Bigtree	50	Low		Low	
		Texture/rock fragments	0.10		
Mystery	25	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
177:					
Battery, dry	75	Low		Low	
178:					
Battery	85	Low		Moderate	
		Texture/rock fragments	0.10	Available water	0.50
191:					
Talawa	85	Low		Moderate	
		Texture/rock fragments	0.10	Wetness	0.50
192:					
Aubell	85	Low		High	
				Wetness	1.00
194:					
Tsunami	85	Low		Low	
		Texture/rock fragments	0.10		
220:					
Ferndale	85	Low		Low	
		Texture/rock fragments	0.10		

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
222:					
Ferndale, moderately well drained	75	Low Texture/rock fragments	0.10	Moderate Wetness	0.50
251:					
Surpur	75	Low Texture/rock fragments	0.10	Low	
289:					
Espa	80	Low Texture/rock fragments	0.10	Low	
290:					
Surpur	50	Low Texture/rock fragments	0.10	Low	
Mettah	35	Low		Low	
291:					
Ossagon	65	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Squashan	20	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
292:					
Ossagon	65	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Squashan	20	Low Texture/rock fragments	0.10	Moderate Available water	0.50
293:					
Ossagon	50	Low Texture/rock fragments	0.10	Low	
Goldbluffs	25	Low Texture/rock fragments	0.10	Low	
Squashan	15	Low Texture/rock fragments	0.10	Low	
294:					
Ossagon	35	Low Texture/rock fragments	0.10	Moderate Available water	0.50

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
294:					
Goldbluffs	20	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Squashan	15	Low Texture/rock fragments	0.10	Moderate Available water	0.50
462:					
Mooncreek	35	Low Texture/rock fragments	0.10	Low	
Noisy	25	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Tossup	15	Low Texture/rock fragments	0.10	Moderate Available water	0.50
463:					
Mooncreek	25	High Texture/slope/ surface depth/ rock fragments	1.00	High Available water	1.00
Noisy	20	Moderate Texture/slope/ rock fragments	0.50	High Available water	1.00
Sidehill	20	High Texture/slope/ surface depth/ rock fragments	1.00	Moderate Available water	0.50
464:					
Mooncreek	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Tossup	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Noisy	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
465:					
Sidehill	35	Low		High Available water	1.00
Oakside	25	High Texture/slope/ surface depth/ rock fragments	1.00	High Available water	1.00

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
465:					
Darkwoods	20	Moderate Texture/slope/ rock fragments	0.50	High Available water	1.00
473:					
Highoaks	30	Low		High Available water	1.00
Noisy	25	High Texture/slope/ surface depth/ rock fragments	1.00	High Available water	1.00
Mudhorse	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
480:					
Dolason	50	Low Texture/rock fragments	0.10	Low	
Countshill	25	Low Texture/rock fragments	0.10	Low	
Airstrip	20	Low Texture/rock fragments	0.10	Low	
481:					
Dolason	45	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Airstrip	25	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Countshill	20	Low		Moderate Available water	0.50
482:					
Dolason	55	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Countshill	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
483:					
Doolyville	40	Low		High Wetness Available water	1.00 0.50
Pasturerock	35	Low		High Available water	1.00

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
484:					
Elkcamp	50	Low		Moderate Available water	0.50
Dolason	30	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Airstrip	15	Low Texture/rock fragments	0.10	High Available water	1.00
485:					
Pasturerock	40	Moderate Texture/slope/surface depth/rock fragments	0.50	High Available water	1.00
Coyoterock	25	Low		High Available water	1.00
Maneze	15	Low Texture/rock fragments	0.10	High Available water	1.00
531:					
Atwell	45	Low Texture/rock fragments	0.10	Low	
Coppercreek	40	Moderate Texture/slope/surface depth/rock fragments	0.50	Low	
532:					
Atwell	75	Low		Moderate Available water	0.50
Ladybird	15	Low		Moderate Available water	0.50
533:					
Coppercreek	60	Low Texture/surface depth/rock fragments	0.10	Low	
Ahpah	15	Low		Low	
534:					
Coppercreek	40	Low Texture/surface depth/rock fragments	0.10	Low	
Ahpah	20	Low Texture/rock fragments	0.10	Low	

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
534:					
Lackscreek	20	Low Texture/surface depth/rock fragments	0.10	Low	
535:					
Wiregrass	60	Moderate Texture/surface depth/rock fragments	0.50	Low	
Scaath	25	Low Texture/rock fragments	0.10	Low	
536:					
Coppercreek	45	Low Texture/slope/ rock fragments	0.10	Low	
Ahpah	20	Low		Low	
Lackscreek	15	Low Texture/slope/ rock fragments	0.10	Low	
537:					
Wiregrass	50	Low Texture/surface depth/rock fragments	0.10	Low	
Scaath	20	Low Texture/rock fragments	0.10	Low	
538:					
Wiregrass	60	Low Texture/surface depth/rock fragments	0.10	Low	
Pittplace	15	Low		Low	
539:					
Wiregrass	50	High Texture/slope/ surface depth/ rock fragments	1.00	Low	
Scaath	30	Low Texture/rock fragments	0.10	Low	
541:					
Wiregrass	60	High Texture/slope/ surface depth/ rock fragments	1.00	Low	

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
541:					
Rockysaddle	20	High Texture/slope/ rock fragments	1.00	Low	
542:					
Coppercreek	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Slidecreek, gravelly loam	30	High Texture/slope/ rock fragments	1.00	Moderate Available water	0.50
Lackscreek	15	Low Texture/rock fragments	0.10	Moderate Available water	0.50
543:					
Wiregrass	40	Low		Low	
Rockysaddle	30	High Texture/slope/ surface depth/ rock fragments	1.00	Low	
Scaath	15	Low		Low	
544:					
Coppercreek	40	High Texture/slope/ surface depth/ rock fragments	1.00	Moderate Available water	0.50
Tectah	20	Low		Moderate Available water	0.50
Lackscreek	15	Low Texture/rock fragments	0.10	Moderate Available water	0.50
545:					
Devilscreek	45	Low Texture/slope/ rock fragments	0.10	Low	
Panthercreek	20	Low Texture/slope/ rock fragments	0.10	Low	
Coppercreek	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
546:					
Lackscreek	65	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Coppercreek	15	Low Texture/slope/ rock fragments	0.10	Low	
549:					
Scaath	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Rockysaddle	25	High Texture/slope/ rock fragments	1.00	Low	
Wiregrass	20	Low		Low	
550:					
Scaath	40	Low Texture/rock fragments	0.10	Low	
Rockysaddle	30	Moderate Texture/rock fragments	0.50	Low	
Wiregrass	20	Low		Low	
553:					
Ladybird	60	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Stonehill	20	Low Texture/rock fragments	0.10	Low	
554:					
Ladybird	50	Low Texture/rock fragments	0.10	Low	
Trailhead	25	Low		Low	
555:					
Panthercreek	35	Low Texture/slope/ rock fragments	0.10	Low	
Coppercreek	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
555:					
Devilscreek	20	Low Texture/rock fragments	0.10	Low	
556:					
Rodgerpeak	50	Low Texture/rock fragments	0.10	Low	
Wiregrass	30	Low Texture/rock fragments	0.10	Low	
557:					
Ustic Palehumults	90	Moderate Texture/slope/rock fragments	0.50	Low	
558:					
Tectah	45	Low		Low	
Coppercreek	25	Low Texture/rock fragments	0.10	Low	
Trailhead	15	Low Texture/rock fragments	0.10	Low	
559:					
Trailhead	85	Low		Low	
560:					
Trailhead	80	Low		Low	
561:					
Trailhead	75	Low Texture/surface depth/rock fragments	0.10	Low	
562:					
Trailhead	65	Low		Low	
Fortyfour	15	Low		Low	
563:					
Trailhead	65	Low Texture/slope/rock fragments	0.10	Low	
Fortyfour	15	Low Texture/rock fragments	0.10	Low	
580:					
Coppercreek	40	Low Texture/rock fragments	0.10	Low	

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
580:					
Tectah	30	Low		Low	
Slidecreek	20	Low		Low	
		Texture/rock fragments	0.10		
581:					
Coppercreek	40	Low		Low	
		Texture/slope/ rock fragments	0.10		
Slidecreek	30	Low		Low	
		Texture/slope/ rock fragments	0.10		
Tectah	15	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
582:					
Slidecreek	40	Low		Moderate	
				Available water	0.50
Lackscreek	25	Moderate		Moderate	
		Texture/slope/ rock fragments	0.50	Available water	0.50
Coppercreek	15	Low		Moderate	
				Available water	0.50
583:					
Trailhead	65	Low		Low	
		Texture/rock fragments	0.10		
Wiregrass	25	Low		Low	
		Texture/rock fragments	0.10		
584:					
Wiregrass	40	Low		Low	
		Texture/rock fragments	0.10		
Pittplace	25	Low		Low	
Scaath	20	Low		Low	
		Texture/rock fragments	0.10		
585:					
Wiregrass	45	Low		Low	
		Texture/rock fragments	0.10		
Rockysaddle	40	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
586:					
Wiregrass	40	Low		Low	
Rockysaddle	30	Low		Low	
Trailhead	15	Low		Low	
		Texture/rock fragments	0.10		
587:					
Childshill	65	Low		Low	
		Texture/surface depth/rock fragments	0.10		
588:					
Surpur	75	Low		Low	
		Texture/rock fragments	0.10		
590:					
Sasquatch	45	Low		Low	
		Texture/rock fragments	0.10		
Yeti	20	Low		Low	
		Texture/rock fragments	0.10		
Footstep	15	Low		Low	
		Texture/rock fragments	0.10		
591:					
Sasquatch	45	Low		Low	
		Texture/rock fragments	0.10		
Sisterrocks	25	Low		Low	
		Texture/rock fragments	0.10		
Ladybird	15	Low		Low	
		Texture/slope/ rock fragments	0.10		
592:					
Sisterrocks	35	Low		Low	
		Texture/slope/ rock fragments	0.10		
Ladybird	30	Low		Low	
		Texture/rock fragments	0.10		
Footstep	20	Low		Low	
		Texture/slope/ rock fragments	0.10		

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
593:					
Sasquatch	50	Low Texture/rock fragments	0.10	Low	
Yeti	20	Low		Low	
Sisterrocks	15	Low Texture/rock fragments	0.10	Low	
594:					
Sisterrocks	45	Low		Moderate Available water	0.50
Sasquatch	20	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Houda	20	Low		Moderate Available water	0.50
595:					
Battery	50	Low		Low	
Catchings	30	Low Texture/rock fragments	0.10	Low	
596:					
Flintrock	40	Low		Moderate Available water	0.50
Highprairie	30	Low		Moderate Available water	0.50
597:					
Tarquin	70	Low Texture/rock fragments	0.10	Low	
598:					
Ladybird	60	Low Texture/rock fragments	0.10	Low	
Stonehill	20	Low Texture/rock fragments	0.10	Low	
659:					
Raingage	65	Low Texture/rock fragments	0.10	High Available water	1.00
Pigpen	20	Low		High Wetness Available water	1.00 1.00

Table 7e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
756:					
Oragran	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Weitchpec	25	Low Texture/slope/ rock fragments	0.10	Low	
759:					
Jayel, extremely stony	35	Low		High Available water	1.00
Walnett, extremely stony	20	Moderate Texture/slope/ rock fragments	0.50	High Available water	1.00
Oragran	20	High Texture/slope/ surface depth/ rock fragments	1.00	High Available water	1.00
760:					
Jayel, extremely stony	30	Low		Low	
Oragran	25	Moderate Texture/surface depth/rock fragments	0.50	Low	
Walnett, extremely stony	25	Low Texture/rock fragments	0.10	Low	
761:					
Gasquet, extremely stony	30	Low Texture/rock fragments	0.10	Low	
Walnett, extremely stony	25	Moderate Texture/slope/ rock fragments	0.50	Low	
Jayel	20	Low		Low	

Table 8.--Rangeland Ecological Sites, Productivity, and Characteristic Vegetation

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Species composition by weight
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	*Lb/acre*	*Lb/acre*		*Pct*
480:						
Dolason	Upper prairie, mountain slopes, sandstone and mudstone, clay loam-R004BX101CA	5,300	3,900	2,000	Tall oatgrass (AREL3)	25
					Annual vernalgrass (ANAR7)	10
					Bentgrass (AGROS2)	10
					Western brackenfern (PTAQ)	10
					California oatgrass (DACA3)	7
					Hairy catsear (HYRA3)	7
					Blue wildrye (ELGL)	5
					Bristly dogstail grass (CYEC)	5
					Sheep sorrel (RUAC3)	5
					Soft brome (BRHO2)	5
					Common velvetgrass (HOLA)	3
					Orchardgrass (DAGL)	3
					California brome (BRCA5)	1
					Annual lupine (LUBI)	1
					Common yarrow (ACMI2)	1
					Pale flax (LIBI5)	1
					Silver hairgrass (AICA)	1
Countshill	Upper prairie, mountain slopes, sandstone and mudstone, clay loam-R004BX101CA	3,000	2,400	1,500	Tall oatgrass (AREL3)	25
					Annual vernalgrass (ANAR7)	15
					California oatgrass (DACA3)	10
					Bentgrass (AGROS2)	10
					Bristly dogstail grass (CYEC)	10
					Blue wildrye (ELGL)	5
					Common velvetgrass (HOLA)	5
					Hairy catsear (HYRA3)	5
					Soft brome (BRHO2)	5
					Western brackenfern (PTAQ)	5
					Sheep sorrel (RUAC3)	3
					Common yarrow (ACMI2)	1
					Sweet vernalgrass (ANOD)	1

Table 8.--Rangeland Ecological Sites, Productivity, and Characteristic Vegetation--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Species composition by weight
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	*Lb/acre*	*Lb/acre*		*Pct*
480:						
Airstrip	Upper prairie, mountain slopes, sandstone and mudstone, clay loam-R004BX101CA	4,500	3,100	1,500	Tall oatgrass (AREL3)	25
					Annual vernalgrass (ANAR7)	20
					Bristly dogstail grass (CYEC)	10
					Western brackenfern (PTAQ)	10
					California oatgrass (DACA3)	5
					Blue wildrye (ELGL)	5
					Common velvetgrass (HOLA)	5
					Hairy catsear (HYRA3)	5
					Sheep sorrel (RUAC3)	5
					Orchardgrass (DAGL)	3
					Soft brome (BRHO2)	3
					Annual lupine (LUBI)	1
					Plantain (PLANT)	1
					Silver hairgrass (AICA)	1
					Trefoil (LOTUS)	1
482:						
Dolason	Upper prairie, mountain slopes, sandstone and mudstone, clay loam-R004BX101CA	5,300	3,900	2,000	Tall oatgrass (AREL3)	25
					Annual vernalgrass (ANAR7)	10
					Bentgrass (AGROS2)	10
					Western brackenfern (PTAQ)	10
					California oatgrass (DACA3)	7
					Hairy catsear (HYRA3)	7
					Blue wildrye (ELGL)	5
					Bristly dogstail grass (CYEC)	5
					Sheep sorrel (RUAC3)	5
					Soft brome (BRHO2)	5
					Common velvetgrass (HOLA)	3
					Orchardgrass (DAGL)	3
					California brome (BRCA5)	1
					Annual lupine (LUBI)	1
					Common yarrow (ACMI2)	1
					Pale flax (LIBI5)	1
					Silver hairgrass (AICA)	1

Table 8.--Rangeland Ecological Sites, Productivity, and Characteristic Vegetation--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Species composition by weight
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	*Lb/acre*	*Lb/acre*		*Pct*
482:						
Countshill	Upper prairie, mountain slopes, sandstone and mudstone, clay loam-R004BX101CA	3,000	2,400	1,500	Tall oatgrass (AREL3)	25
					Annual vernalgrass (ANAR7)	15
					California oatgrass (DACA3)	10
					Bentgrass (AGROS2)	10
					Bristly dogstail grass (CYEC)	10
					Blue wildrye (ELGL)	5
					Common velvetgrass (HOLA)	5
					Hairy catsear (HYRA3)	5
					Soft brome (BRHO2)	5
					Western brackenfern (PTAQ)	5
					Sheep sorrel (RUAC3)	3
					Common yarrow (ACMI2)	1
					Sweet vernalgrass (ANOD)	1
484:						
Elkcamp	Middle prairie, mountain slopes, sandstone and mudstone, gravelly clay loam-R004BX104CA	6,800	4,000	3,000	Blue wildrye (ELGL)	22
					Soft brome (BRHO2)	20
					Bristly dogstail grass (CYEC)	15
					Tall oatgrass (AREL3)	10
					California oatgrass (DACA3)	5
					Sheep sorrel (RUAC3)	5
					Western brackenfern (PTAQ)	5
					Annual vernalgrass (ANAR7)	2
					Bentgrass (AGROS2)	2
					Common velvetgrass (HOLA)	2
					Common yarrow (ACMI2)	2
					Hairy catsear (HYRA3)	2
					Orchardgrass (DAGL)	2
					Trefoil (LOTUS)	2
					Junegrass (KOMA)	1
					Rattail fescue (VUMY)	1
					Ripgut brome (BRDI3)	1
					Silver hairgrass (AICA)	1

Table 8.--Rangeland Ecological Sites, Productivity, and Characteristic Vegetation--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Species composition by weight
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	*Lb/acre*	*Lb/acre*		*Pct*
484:						
Dolason	Upper prairie, mountain slopes, sandstone and mudstone, clay loam- R004BX101CA	5,300	3,900	2,000	Tall oatgrass (AREL3)	25
					Annual vernalgrass (ANAR7)	10
					Bentgrass (AGROS2)	10
					Western brackenfern (PTAQ)	10
					California oatgrass (DACA3)	7
					Hairy catsear (HYRA3)	7
					Blue wildrye (ELGL)	5
					Bristly dogstail grass (CYEC)	5
					Sheep sorrel (RUAC3)	5
					Soft brome (BRHO2)	5
					Common velvetgrass (HOLA)	3
					Orchardgrass (DAGL)	3
					California brome (BRCA5)	1
					Annual lupine (LUBI)	1
					Common yarrow (ACMI2)	1
					Pale flax (LIBI5)	1
					Silver hairgrass (AICA)	1
Airstrip	Upper prairie, mountain slopes, sandstone and mudstone, clay loam- R004BX101CA	4,500	3,100	1,500	Tall oatgrass (AREL3)	25
					Annual vernalgrass (ANAR7)	20
					Bristly dogstail grass (CYEC)	10
					Western brackenfern (PTAQ)	10
					California oatgrass (DACA3)	5
					Blue wildrye (ELGL)	5
					Common velvetgrass (HOLA)	5
					Hairy catsear (HYRA3)	5
					Sheep sorrel (RUAC3)	5
					Orchardgrass (DAGL)	3
					Soft brome (BRHO2)	3
					Annual lupine (LUBI)	1
					Plantain (PLANT)	1
					Silver hairgrass (AICA)	1
					Trefoil (LOTUS)	1

Table 8.--Rangeland Ecological Sites, Productivity, and Characteristic Vegetation--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Species composition by weight
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	*Lb/acre*	*Lb/acre*		*Pct*
596:						
Flintrock	Coastal scrub and prairie, hills, sandstone and mudstone, gravelly clay loam-R004BX102CA	3,600	3,000	2,400	Himalaya blackberry (RUDI2)	30
					Sweet vernalgrass (ANOD)	20
					Fescue (FESTU)	15
					Western brackenfern (PTAQ)	7
					California blackberry (RUUR)	5
					Tall oatgrass (AREL3)	5
					Western thimbleberry (RUPA)	5
					Common yarrow (ACMI2)	3
					Sheep sorrel (RUAC3)	3
					California buckthorn (RHCA)	1
					Kentucky bluegrass (POPR)	1
					Bedstraw (GALIU)	1
					Bentgrass (AGROS2)	1
					Carex (CAREX)	1
					Coyotebrush (BAPI)	1
					Western swordfern (POMU)	1
Highprairie	Coastal scrub and prairie, hills, sandstone and mudstone, gravelly clay loam-R004BX102CA	2,000	1,400	800	Tall oatgrass (AREL3)	40
					Western brackenfern (PTAQ)	20
					California blackberry (RUUR)	10
					Himalaya blackberry (RUDI2)	10
					Western thimbleberry (RUPA)	10
					Carex (CAREX)	3
					Orchardgrass (DAGL)	2
					California brome (BRCA5)	1
					Kentucky bluegrass (POPR)	1
					Bedstraw (GALIU)	1
					Sheep sorrel (RUAC3)	1
					Yarrow (ACHIL)	1
659:						
Raingage	Lower prairie, earthflows, sandstone and mudstone, gravelly Loam-R004BX103CA	4,000	3,000	2,200	Bristly dogstail grass (CYEC)	30
					Orchardgrass (DAGL)	15
					Soft brome (BRHO2)	15
					Annual vernalgrass (ANAR7)	10
					Hairy catsear (HYRA3)	10
					lupine (LUPIN)	7
					Pale flax (LIBI5)	5
					Tall oatgrass (AREL3)	5
					California brome (BRCA5)	3

Table 8.--Rangeland Ecological Sites, Productivity, and Characteristic Vegetation--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Species composition by weight
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	*Lb/acre*	*Lb/acre*		*Pct*
659:						
Pigpen	Lower prairie, earthflows, sandstone and mudstone, gravelly loam-R004BX103CA	2,800	2,000	1,200	Bristly dogstail grass (CYEC)	25
					Hairy catsear (HYRA3)	15
					Orchardgrass (DAGL)	15
					Soft brome (BRHO2)	15
					Annual vernalgrass (ANAR7)	10
					Tall oatgrass (AREL3)	10
					California brome (BRCA5)	5
					Pale flax (LIBI5)	5

Table 9.--Index of Common and Scientific Plant Names and Plant Symbols

[This table aids in correct plant identification and serves as a cross-reference to plant species listed in table 8. The plant synonymy matches the USDA-NRCS National PLANTS Database as of the time of publication]

Common local name	Scientific name	Plant symbol
Alaska oniongrass	Melica subulata	MESU
American dunegrass	Leymus mollis	LEMO8
annual lupine	Lupinus bicolor	LUBI
annual vernalgrass	Anthoxanthum aristatum	ANAR7
beach strawberry	Fragaria chiloensis	FRCH
beach tidytips	Layia carnosa	LACA4
beach wormwood	Artemisia pycnocephala	ARPY3
bedstraw	Galium spp.	GALIU
bentgrass	Agrostis spp.	AGROS2
bigleaf maple	Acer macrophyllum	ACMA3
blue wildrye	Elymus glaucus	ELGL
Brewer's rush	Juncus breweri	JUBR10
bristly dogstail grass	Cynosurus echinatus	CYEC
bush lupine	Lupinus arboreus	LUAR
buttercup	Ranunculus spp.	RANUN
California bay	Umbellularia californica	UMCA
California black oak	Quercus kelloggii	QUKE
California blackberry	Rubus ursinus	RUUR
California brome	Bromus carinatus	BRCA5
California buckthorn	Rhamnus californica	RHCA
California fescue	Festuca californica	FECA
California huckleberry	Vaccinium ovatum	VAOV2
California live oak	Quercus agrifolia	QUAG
California oatgrass	Danthonia californica	DACA3
California red huckleberry	Vaccinium parvifolium	VAPA
California wax myrtle	Morella californica	MOCA6
canyon live oak	Quercus chrysolepis	QUCH2
carex	Carex spp.	CAREX
Cascade barberry	Berberis nervosa	BENE2
cascara	Rhamnus purshiana	RHPU
chinquapin	Castanopsis spp.	CASTA2
coastal sand verbena	Abronia latifolia	ABLA2
common beargrass	Xerophyllum tenax	XETE
common snowberry	Symphoricarpos albus	SYAL
common velvetgrass	Holcus lanatus	HOLA
common whipplea	Whipplea modesta	WHMO
common yarrow	Achillea millefolium	ACMI2
cottonwood	Populus spp.	POPUL
coyotebrush	Baccharis pilularis	BAPI
creambush oceanspray	Holodiscus discolor	HODI
dandelion	Taraxacum spp.	TARAX
deer fern	Blechnum spicant	BLSP
dogtail	Cynosurus spp.	CYNOS2
Douglas-fir	Pseudotsuga menziesii	PSME
dune willow	Salix hookeriana	SAHO
European beachgrass	Ammophila arenaria	AMAR4
evergreen violet	Viola sempervirens	VISE3
fescue	Festuca spp.	FESTU
greenleaf manzanita	Arctostaphylos patula	ARPA6
hairy cat’s ear	Hypochaeris radicata	HYRA3
hairy manzanita	Arctostaphylos columbiana	ARCO3
hemlock	Tsuga spp.	TSUGA
Himalaya blackberry	Rubus discolor	RUDI2
hooded ladies' tresses	Spiranthes romanzoffiana	SPRO
huckleberry oak	Quercus vacciniifolia	QUVA
Idaho fescue	Festuca idahoensis	FEID
Jeffrey pine	Pinus jeffreyi	PIJE
junegrass	Koeleria macrantha	KOMA

Table 9.--Index of Common and Scientific Plant Names and Plant Symbols--Continued

Common local name	Scientific name	Plant symbol
Kentucky bluegrass	Poa pratensis	POPR
knobcone pine	Pinus attenuata	PIAT
larkspur	Delphinium spp.	DELPH
lupine	Lupinus spp.	LUPIN
Mt. Albert goldenrod	Solidago simplex ssp. simplex var. spathulata	SOSIS4
orchardgrass	Dactylis glomerata	DAGL
Oregon white oak	Quercus garryana	QUGA4
other annual forbs	unknown	AAFF
other annual grasses	unknown	AAGG
other perennial forbs	unknown	PPFF
other perennial grasses	unknown	PPGG
Pacific madrone	Arbutus menziesii	ARME
Pacific rhododendron	Rhododendron macrophyllum	RHMA3
Pacific trillium	Trillium ovatum	TROV2
pale flax	Linum bienne	LIBI5
phacelia	Phacelia spp.	PHACE
pinemat manzanita	Arctostaphylos nevadensis	ARNE
pink sand verbena	Abronia umbellata	ABUM
plantain	Plantago spp.	PLANT
Port Orford cedar	Chamaecyparis lawsoniana	CHLA
rattail fescue	Vulpia myuros	VUMY
red alder	Alnus rubra	ALRU2
redwood	Sequoia sempervirens	SESE3
redwood-sorrel	Oxalis oregana	OXOR
ripgut brome	Bromus diandrus	BRDI3
rose	Rosa spp.	ROSA5
rush	Juncus spp.	JUNCU
ryegrass	Lolium spp.	LOLIU
salal	Gaultheria shallon	GASH
salmonberry	Rubus spectabilis	RUSP
sanicle	Sanicula spp.	SANIC
Scotch broom	Cytisus scoparius	CYSC4
sheep sorrel	Rumex acetosella	RUAC3
shore pine	Pinus contorta ssp. contorta	PICOC
Sierra gooseberry	Ribes roezlii	RIRO
silver hairgrass	Aira caryophyllea	AICA
silverweed cinquefoil	Argentina anserina	ARAN7
Sitka spruce	Picea sitchensis	PISI
skunkcabbage	Lysichiton spp.	LYSIC
Slough sedge	Carex obnupta	CAOB3
soft brome	Bromus hordeaceus	BRHO2
soft chess	Bromus hordeaceus ssp. hordeaceus	BRHOH
Spanish lotus	Lotus purshianus	LOPU3
spikerush	Eleocharis spp.	ELEOC
stink currant	Ribes bracteosum	RIBR
sumac	Rhus spp.	RHUS
sweet vernalgrass	Anthoxanthum odoratum	ANOD
tall oatgrass	Arrhenatherum elatius	AREL3
tanoak	Lithocarpus densiflorus	LIDE3
thistle	Cirsium spp.	CIRSI
timothy	Phleum pratense	PHPR3
trefoil	Lotus spp.	LOTUS
vetch	Vicia spp.	VICIA
western brackenfern	Pteridium aquilinum	PTAQ
western hemlock	Tsuga heterophylla	TSHE
western swordfern	Polystichum munitum	POMU
western thimbleberry	Rubus parviflorus	RUPA
wild pea	Lathyrus spp.	LATHY
willow	Salix spp.	SALIX
yarrow	Achillea spp.	ACHIL

Table 10a.--Recreational Development (Part 1)

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The rating is based on the limitation with the highest value. Only the three highest-value limitations are listed. There may be more limitations. Fine-earth fractions and coarse fragments are reported on the basis of weight. An explanation of the rating criteria and of the abbreviations used in describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
100:							
Riverwash	90	Not rated		Not rated		Not rated	
102:							
Fluvents	75	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 12" depth	1.00	Saturation < 18" depth	1.00
		Flooding >= rare	1.00	Frequent flooding	0.50	Flooding > Occasional	1.00
						Slopes 2 to 6%	0.50
110:							
Weott	85	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 12" depth	1.00	Saturation < 18" depth	1.00
		Flooding >= rare	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00			Occasional flooding	0.50
116:							
Swainslough	90	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 12" depth	1.00	Saturation < 18" depth	1.00
		Flooding >= rare	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Permeability is .06-.6"/hr	0.21	Occasional flooding	0.50
119:							
Arlynda	85	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 12" depth	1.00	Saturation < 18" depth	1.00
		Flooding >= rare	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Permeability is .06-.6"/hr	0.26	Occasional flooding	0.50
126:							
Loleta	85	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 12" depth	1.00	Saturation < 18" depth	1.00
						Slopes 2 to 6%	0.02
155:							
Samoa	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
155:							
Clambeach	30	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 12" depth	1.00	Saturation < 18" depth	1.00
		Surface sand fractions > 90% by wt.	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Surface sand fractions > 90% by wt.	1.00	Surface sand fractions > 90% by wt.	1.00
Dune land	15	Not rated		Not rated		Not rated	
157:							
Beaches	35	Not rated		Not rated		Not rated	
Samoa	35	Limitations		Limitations		Limitations	
		Surface sand fractions > 90% by wt.	1.00	Surface sand fractions > 90% by wt.	1.00	Surface sand fractions > 90% by wt.	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Dune land	25	Not rated		Not rated		Not rated	
171:							
Worswick	40	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Ponded (any duration)	1.00	Saturation < 18" depth	1.00
		Flooding >= rare	1.00	Saturation from 12 to 30" depth	0.83	Ponded (any duration)	1.00
		Ponded (any duration)	1.00			Occasional flooding	0.50
Arlynda	35	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 12" depth	1.00	Saturation < 18" depth	1.00
		Flooding >= rare	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00			Occasional flooding	0.50
172:							
Bigriver, fine sandy loam	80	Limitations		No limitations		Limitations	
		Flooding >= rare	1.00			Slopes 2 to 6%	0.50
						Occasional flooding	0.50
173:							
Bigriver, silt loam	55	Limitations		No limitations		Limitations	
		Flooding >= rare	1.00			Slopes 2 to 6%	0.50
						Occasional flooding	0.50
Ferndale	20	Limitations		No limitations		Limitations	
		Flooding >= rare	1.00			Slopes 2 to 6%	0.50

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
173:							
Russ	15	Limitations		No limitations		Limitations	
		Flooding >= rare	1.00			Slopes 2 to 6%	0.50
						Occasional flooding	0.50
174:							
Bigtree	50	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Very dusty	1.00	Very dusty	1.00
		Very dusty	1.00			Slopes 2 to 6%	0.26
Mystery	25	Limitations		No limitations		Limitations	
		Flooding >= rare	1.00			Slopes 2 to 6%	0.98
						Occasional flooding	0.50
177:							
Battery, dry	75	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.54	Fragments (<3") 25-50%	0.54	Surface fragments (<3") >25%	1.00
178:							
Battery	85	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.54	Fragments (<3") 25-50%	0.54	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
191:							
Talawa	85	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation from 12 to 30" depth	0.83	Saturation < 18" depth	1.00
192:							
Aubell	85	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 12" depth	1.00	Saturation < 18" depth	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
						Slopes 2 to 6%	0.50
194:							
Tsunami	85	No limitations		No limitations		Limitations	
						Surface fragments (<3") 10-25%	0.78
						Slopes 2 to 6%	0.50
220:							
Ferndale	85	Limitations		No limitations		No limitations	
		Flooding >= rare	1.00				

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
222:							
Ferndale, moderately well drained	75	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation from 12 to 30" depth	0.90	Saturation < 18" depth	1.00
		Flooding >= rare	1.00			Slopes 2 to 6%	0.26
251:							
Surpur	75	No limitations		No limitations		Limitations	
						Slopes 2 to 6%	0.98
289:							
Espa	80	No limitations		No limitations		Limitations	
						Slopes 2 to 6%	0.74
290:							
Surpur	50	Limitations		Limitations		Limitations	
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Slopes > 6%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Organic surface layer >= 4" thick	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Mettah	35	Limitations		Limitations		Limitations	
		Very dusty	1.00	Very dusty	1.00	Slopes > 6%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Very dusty	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
291:							
Ossagon	65	Limitations		Limitations		Limitations	
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Slopes > 6%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Organic surface layer >= 4" thick	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Squashan	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
292:							
Ossagon	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Squashan	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
293:							
Ossagon	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Goldbluffs	25	Limitations		Limitations		Limitations	
		Fragments (<3") > 50%	1.00	Fragments (<3") > 50%	1.00	Slopes > 6%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Surface fragments (<3") >25%	1.00
						Fragments >3" 5 to 30%	0.01
Squashan	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
294:							
Ossagon	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Goldbluffs	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Squashan	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
462:							
Mooncreek	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Noisy	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Tossup	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.44	Permeability is .06-.6"/hr	0.44	Permeability is .06-.6"/hr	0.44
463:							
Mooncreek	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Noisy	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
463:							
Sidehill	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
						Bedrock 20-40" and slope > 2%	0.50
464:							
Mooncreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Tossup	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.34	Permeability is .06-.6"/hr	0.34	Permeability is .06-.6"/hr	0.34
Noisy	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
465:							
Sidehill	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
						Bedrock 20-40" and slope > 2%	0.50
Oakside	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00
Darkwoods	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
473:							
Highoaks	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.34	Permeability is .06-.6"/hr	0.34	Permeability is .06-.6"/hr	0.34
Noisy	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Mudhorse	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability < .06"/hr	0.99	Permeability < .06"/hr	0.99	Permeability < .06"/hr	0.99
		Saturation from 18 to 30" depth	0.88	Saturation from 12 to 30" depth	0.56	Saturation from 18 to 30" depth	0.88

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
480:							
Dolason	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") 10-25%	0.92
						Dusty	0.50
Countshill	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Airstrip	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") >25%	1.00
		Fragments (<3") 25-50%	0.31	Fragments (<3") 25-50%	0.31	Dusty	0.50
481:							
Dolason	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Airstrip	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
						Bedrock 20-40" and slope > 2%	0.50
Countshill	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
						Bedrock 20-40" and slope > 2%	0.50
482:							
Dolason	55	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") 10-25%	0.92
						Dusty	0.50
Countshill	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") >25%	1.00
		Fragments (<3") 25-50%	0.32	Fragments (<3") 25-50%	0.32	Dusty	0.50

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
483:							
Doolyville	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Saturation < 18" depth	1.00	Saturation from 12 to 30" depth	0.95	Saturation < 18" depth	1.00
		Permeability is .06-.6"/hr	0.50	Permeability is .06-.6"/hr	0.50	Permeability is .06-.6"/hr	0.50
Pasturerock	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
484:							
Elkcamp	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") 10-25%	0.86
						Dusty	0.50
Dolason	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") 10-25%	0.92
						Dusty	0.50
Airstrip	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") >25%	1.00
		Fragments (<3") 25-50%	0.23	Fragments (<3") 25-50%	0.23		
						Dusty	0.50
485:							
Pasturerock	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Coyoterock	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.50	Permeability is .06-.6"/hr	0.50	Permeability is .06-.6"/hr	0.50
		Saturation from 18 to 30" depth	0.01	Saturation from 12 to 30" depth	0.01	Saturation from 18 to 30" depth	0.01
Maneze	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
531:							
Atwell	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
		Saturation from 18 to 30" depth	0.01			Surface fragments (<3") 10-25%	0.08
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
532:							
Atwell	75	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability < .06"/hr	1.00	Permeability < .06"/hr	1.00	Permeability < .06"/hr	1.00
		Saturation from 18 to 30" depth	0.01			Saturation from 18 to 30" depth	0.01
Ladybird	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
533:							
Coppercreek	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Ahpah	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
534:							
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Ahpah	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Lackscreek	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Bedrock 20-40" and slope > 2%	0.50
						Permeability is .06-.6"/hr	0.21

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
535:							
Wiregrass	60	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6%	 1.00
Scaath	25	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6% Bedrock 20-40" and slope > 2%	 1.00 0.50
536:							
Coppercreek	45	Limitations Slopes > 15% Organic surface layer >= 4" thick Permeability is .06-.6"/hr	 1.00 1.00 0.21	Limitations Slopes > 15% Organic surface layer >= 4" thick Permeability is .06-.6"/hr	 1.00 1.00 0.21	Limitations Slopes > 6% Organic surface layer >= 4" thick Permeability is .06-.6"/hr	 1.00 1.00 0.21
Ahpah	20	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 6% Permeability is .06-.6"/hr	 1.00 0.21
Lackscreek	15	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 6% Bedrock 20-40" and slope > 2% Permeability is .06-.6"/hr	 1.00 0.50 0.21
537:							
Wiregrass	50	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6%	 1.00
Scaath	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6% Bedrock 20-40" and slope > 2%	 1.00 0.50
538:							
Wiregrass	60	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6%	 1.00
Pittplace	15	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.46	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.46	Limitations Slopes > 6% Permeability is .06-.6"/hr Surface fragments (<3") 10-25%	 1.00 0.46 0.04

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
539:							
Wiregrass	50	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6%	 1.00
Scaath	30	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6% Bedrock 20-40" and slope > 2%	 1.00 0.50
541:							
Wiregrass	60	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6%	 1.00
Rockysaddle	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6%	 1.00
542:							
Coppercreek	45	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 6% Permeability is .06-.6"/hr	 1.00 0.21
Slidecreek, gravelly loam	30	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 6% Permeability is .06-.6"/hr	 1.00 0.21
Lackscreek	15	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 15% Permeability is .06-.6"/hr	 1.00 0.21	Limitations Slopes > 6% Bedrock 20-40" and slope > 2% Permeability is .06-.6"/hr	 1.00 0.50 0.21
543:							
Wiregrass	40	Limitations Slopes > 15% Fragments (<3") 25-50% Dusty	 1.00 0.97 0.50	Limitations Slopes > 15% Fragments (<3") 25-50% Dusty	 1.00 0.97 0.50	Limitations Slopes > 6% Surface fragments (<3") >25% Dusty	 1.00 1.00 0.50
Rockysaddle	30	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6%	 1.00
Scaath	15	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 6% Bedrock 20-40" and slope > 2%	 1.00 0.50

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
544:							
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Tectah	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
Lackscreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Bedrock 20-40" and slope > 2%	0.50
						Permeability is .06-.6"/hr	0.21
545:							
Devilscreek	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
		Saturation from 18 to 30" depth	0.01			Saturation from 18 to 30" depth	0.01
Panthercreek	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
546:							
Lackscreek	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Bedrock 20-40" and slope > 2%	0.50
						Permeability is .06-.6"/hr	0.21
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
549:							
Scaath	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
						Bedrock depth < 20"	1.00

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
549:							
Rockysaddle---------	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Wiregrass----------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
550:							
Scaath-------------	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
						Bedrock 20-40" and slope > 2%	0.50
Rockysaddle---------	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Wiregrass----------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
553:							
Ladybird-----------	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Stonehill----------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Bedrock 20-40" and slope > 2%	0.50
554:							
Ladybird-----------	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Trailhead----------	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
555:							
Panthercreek--------	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Coppercreek---------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Devilscreek---------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
556:							
Rodgerpeak----------	50	Limitations		Limitations		Limitations	
		Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00
						Slopes 2 to 6%	0.26
Wiregrass-----------	30	Limitations		Limitations		Limitations	
		Slopes 8 to 15%	0.01	Slopes 8 to 15%	0.01	Slopes > 6%	1.00
557:							
Ustic Palehumults---	90	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments >10" >3%	1.00	Fragments >10" >3%	1.00	Fragments >10" >3%	1.00
558:							
Tectah--------------	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
Coppercreek---------	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Trailhead-----------	15	Limitations		Limitations		Limitations	
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Slopes 2 to 6%	0.74
						Permeability is .06-.6"/hr	0.21
559:							
Trailhead-----------	85	Limitations		Limitations		Limitations	
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Slopes 2 to 6%	0.74
						Permeability is .06-.6"/hr	0.21
560:							
Trailhead-----------	80	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
561:							
Trailhead	75	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
562:							
Trailhead	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Fortyfour	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
563:							
Trailhead	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
Fortyfour	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46	Surface fragments (<3") >25%	1.00
		Fragments (<3") 25-50%	0.01	Fragments (<3") 25-50%	0.01	Permeability is .06-.6"/hr	0.46
580:							
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Tectah	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
						Surface fragments (<3") 10-25%	0.14
Slidecreek	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
581:							
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Slidecreek	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.97	Fragments (<3") 25-50%	0.97	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
581:							
Tectah	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
						Surface fragments (<3") 10-25%	0.14
582:							
Slidecreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.92	Fragments (<3") 25-50%	0.92	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Lackscreek	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") > 50%	1.00	Fragments (<3") > 50%	1.00	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.26	Fragments (<3") 25-50%	0.26	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
583:							
Trailhead	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46	Dusty	0.50
Wiregrass	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
584:							
Wiregrass	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Pittplace	25	Limitations		Limitations		Limitations	
		Slopes 8 to 15%	0.63	Slopes 8 to 15%	0.63	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46
						Surface fragments (<3") 10-25%	0.04

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
584:							
Scaath	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.61	Fragments (<3") 25-50%	0.61	Surface fragments (<3") >25%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
585:							
Wiregrass	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Rockysaddle	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.95	Fragments (<3") 25-50%	0.95	Surface fragments (<3") >25%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
586:							
Wiregrass	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Rockysaddle	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.95	Fragments (<3") 25-50%	0.95	Surface fragments (<3") >25%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Trailhead	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") 10-25%	0.86
		Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46	Dusty	0.50
587:							
Childshill	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
						Surface fragments (<3") 10-25%	0.30
588:							
Surpur	75	Limitations		Limitations		Limitations	
		Dusty	0.50	Dusty	0.50	Slopes > 6%	1.00
		Slopes 8 to 15%	0.04	Slopes 8 to 15%	0.04	Dusty	0.50

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
590:							
Sasquatch	45	Limitations		Limitations		Limitations	
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Slopes > 6%	1.00
		Slopes 8 to 15%	0.16	Slopes 8 to 15%	0.16	Permeability is .06-.6"/hr	0.21
Yeti	20	Limitations		Limitations		Limitations	
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Slopes > 6%	1.00
		Slopes 8 to 15%	0.16	Slopes 8 to 15%	0.16	Permeability is .06-.6"/hr	0.96
Footstep	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Surface fragments (<3") >25%	1.00
		Fragments (<3") 25-50%	0.26	Fragments (<3") 25-50%	0.26		
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Slopes > 6%	1.00
						Bedrock 20-40" and slope > 2%	0.50
591:							
Sasquatch	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Sisterrocks	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
						Surface fragments (<3") 10-25%	0.01
Ladybird	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") > 50%	1.00	Fragments (<3") > 50%	1.00	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21		
						Permeability is .06-.6"/hr	0.21
592:							
Sisterrocks	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.46	Fragments (<3") 25-50%	0.46	Surface fragments (<3") >25%	1.00
Ladybird	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
592:							
Footstep	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.32	Fragments (<3") 25-50%	0.32	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21		
						Bedrock 20-40" and slope > 2%	0.50
593:							
Sasquatch	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Yeti	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
Sisterrocks	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
594:							
Sisterrocks	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Sasquatch	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Houda	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
		Saturation from 18 to 30" depth	0.01			Saturation from 18 to 30" depth	0.01
595:							
Battery	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Surface fragments (<3") >25%	1.00
		Fragments (<3") 25-50%	0.54	Fragments (<3") 25-50%	0.54	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
595:							
Catchings	30	Limitations		Limitations		Limitations	
		Fragments (<3") > 50%	1.00	Fragments (<3") > 50%	1.00	Surface fragments (<3") >25%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
596:							
Flintrock	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") > 50%	1.00	Fragments (<3") > 50%	1.00	Surface fragments (<3") >25%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
Highprairie	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Surface fragments (<3") 10-25%	0.78
						Permeability is .06-.6"/hr	0.21
597:							
Tarquin	70	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96	Permeability is .06-.6"/hr	0.96
		Saturation from 18 to 30" depth	0.05	Saturation from 12 to 30" depth	0.02	Saturation from 18 to 30" depth	0.05
598:							
Ladybird	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21
Stonehill	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.21	Permeability is .06-.6"/hr	0.21	Bedrock 20-40" and slope > 2%	0.50
						Permeability is .06-.6"/hr	0.21
659:							
Raingage	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Dusty	0.50	Dusty	0.50	Surface fragments (<3") 10-25%	0.86
		Saturation from 18 to 30" depth	0.20	Saturation from 12 to 30" depth	0.10	Dusty	0.50

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
659:							
Pigpen	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Saturation < 18" depth	1.00	Fragments (<3") 25-50%	0.99	Saturation < 18" depth	1.00
		Fragments (<3") 25-50%	0.99	Saturation from 12 to 30" depth	0.96	Surface fragments (<3") >25%	1.00
756:							
Oragran	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00
Weitchpec	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments (<3") 25-50%	0.99	Fragments (<3") 25-50%	0.99	Surface fragments (<3") >25%	1.00
		Dusty	0.50	Dusty	0.50	Bedrock 20-40" and slope > 2%	0.50
759:							
Jayel, extremely stony	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments >10" >3%	1.00	Fragments >10" >3%	1.00	Fragments >10" >3%	1.00
		Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46	Bedrock 20-40" and slope > 2%	0.50
Walnett, extremely stony	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Fragments >10" >3%	1.00	Fragments >10" >3%	1.00	Fragments >10" >3%	1.00
Oragran	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00
760:							
Jayel, extremely stony	30	Limitations		Limitations		Limitations	
		Fragments >10" >3%	1.00	Fragments >10" >3%	1.00	Slopes > 6%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments >10" >3%	1.00
		Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46	Bedrock 20-40" and slope > 2%	0.50
Oragran	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00	Bedrock depth < 20"	1.00

Table 10a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Limitation	Value	Limitation	Value	Limitation	Value
760:							
Walnett, extremely stony	25	Limitations		Limitations		Limitations	
		Fragments >10" >3%	1.00	Fragments >10" >3%	1.00	Slopes > 6%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments >10" >3%	1.00
761:							
Gasquet, extremely stony	30	Limitations		Limitations		Limitations	
		Fragments >10" >3%	1.00	Fragments >10" >3%	1.00	Slopes > 6%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments >10" >3%	1.00
		Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46
Walnett, extremely stony	25	Limitations		Limitations		Limitations	
		Fragments >10" >3%	1.00	Fragments >10" >3%	1.00	Slopes > 6%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments >10" >3%	1.00
Jayel	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 6%	1.00
		Permeability is .06-.6"/hr	0.46	Permeability is .06-.6"/hr	0.46	Surface fragments (<3") 10-25%	0.78
						Bedrock 20-40" and slope > 2%	0.50

The interpretation for camp areas evaluates the following soil properties at varying depths in the soil: flooding; ponding; wetness; slope; depth to bedrock; depth to a cemented pan; fragments less than, equal to, or greater than 3 inches in size; sodium content (SAR); salinity (EC); a clayey surface texture; Unified classes for a high content of organic matter (PT, OL, and OH); soil dustiness; and permeability (Ksat) that is too high, allowing seepage in some climates.

The interpretation for picnic areas evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, depth to bedrock, depth to a cemented pan, salinity (EC), pH, soil dustiness, fragments greater than 3 inches in size, the amount of sand or clay in the surface layer layer, surface fragments greater than 10 inches in size, Unified classes for a high content of organic matter (PT, OL, and OH), and permeability (Ksat) that is too high, allowing seepage in some climates.

The interpretation for playgrounds evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, depth to bedrock, depth to a cemented pan, surface fragments greater than 10 inches in size, fragments equal to or less than 3 inches in size, Unified class for high content of organic matter (PT, OL, and OH), soil dustiness, content of sand or clay in the surface layer, pH, salinity (EC), and permeability (Ksat) that is too high, allowing seepage in some climates.

Table 10b.--Recreational Development (Part 2)

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The rating is based on the limitation with the highest value. Only the three highest-value limitations are listed. There may be more limitations. Fine-earth fractions and coarse fragments are reported on the basis of weight. An explanation of the rating criteria and of the abbreviations used in describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
100:							
Riverwash	90	Not rated		Not rated		Not rated	
102:							
Fluvents	75	Limitations		Limitations		Not rated	
		Saturation < 12" depth	1.00	Saturation < 12" depth	1.00		
		Frequent flooding	0.50	Frequent flooding	0.50		
110:							
Weott	85	Limitations		Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 12" depth	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Saturation < 12" depth	1.00
						Occasional flooding	0.80
116:							
Swainslough	90	Limitations		Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 12" depth	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Saturation < 12" depth	1.00
						Occasional flooding	0.80
119:							
Arlynda	85	Limitations		Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 12" depth	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Saturation < 12" depth	1.00
						Occasional flooding	0.80
126:							
Loleta	85	Limitations		Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 12" depth	1.00	Saturation < 12" depth	1.00
155:							
Samoa	50	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.78	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.85

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
155:							
Clambeach	30	Limitations		Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 12" depth	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Saturation < 12" depth	1.00
		Surface sand fractions > 90% by wt.	1.00	Surface sand fractions > 90% by wt.	1.00	AWC 2-4" to 40"	0.92
Dune land	15	Not rated		Not rated		Not rated	
157:							
Beaches	35	Not rated		Not rated		Not rated	
Samoa	35	Limitations		Limitations		Limitations	
		Surface sand fractions > 90% by wt.	1.00	Surface sand fractions > 90% by wt.	1.00	Slopes > 15%	1.00
		Slopes > 25%	1.00	Slopes 25 to 40%	0.78	AWC 2-4" to 40"	0.92
						Loamy coarse sand surface	0.50
Dune land	25	Not rated		Not rated		Not rated	
171:							
Worswick	40	Limitations		Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation from 12 to 24" depth	0.62	Saturation from 12 to 24" depth	0.62	Occasional flooding	0.80
						Saturation from 12 to 24" depth	0.62
Arlynda	35	Limitations		Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 12" depth	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Saturation < 12" depth	1.00
						Occasional flooding	0.80
172:							
Bigriver, fine sandy loam	80	No limitations		No limitations		Limitations	
						Occasional flooding	0.80
173:							
Bigriver, silt loam	55	No limitations		No limitations		Limitations	
						Occasional flooding	0.80
Ferndale	20	No limitations		No limitations		No Limitations	
Russ	15	No limitations		No limitations		Limitations	
						Occasional flooding	0.80

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
174:							
Bigtree	50	Limitations Very dusty	 1.00	Limitations Very dusty	 1.00	No Limitations	
Mystery	25	No limitations		No limitations		Limitations Occasional flooding	 0.80
177:							
Battery, dry	75	Limitations Slopes > 25%	 1.00	No limitations		Limitations Slopes > 15% Fragments (gravel size) 25-50%	 1.00 0.54
178:							
Battery	85	Limitations Slopes 15 - 25%	 0.50	No limitations		Limitations Slopes > 15% Fragments (gravel size) 25-50%	 1.00 0.54
191:							
Talawa	85	Limitations Saturation from 12 to 24" depth	 0.62	Limitations Saturation from 12 to 24" depth	 0.62	Limitations Saturation from 12 to 24" depth	 0.62
192:							
Aubell	85	Limitations Saturation < 12" depth	 1.00	Limitations Saturation < 12" depth	 1.00	Limitations Saturation < 12" depth	 1.00
194:							
Tsunami	85	No limitations		No limitations		No Limitations	
220:							
Ferndale	85	No limitations		No limitations		No Limitations	
222:							
Ferndale, moderately well drained	75	Limitations Saturation from 12 to 24" depth	 0.78	Limitations Saturation from 12 to 24" depth	 0.78	Limitations Saturation from 12 to 24" depth	 0.78
251:							
Surpur	75	No limitations		No limitations		No Limitations	
289:							
Espa	80	No limitations		No limitations		No Limitations	

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
290:							
Surpur	50	Limitations		Limitations		Limitations	
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
						Slopes > 15%	1.00
Mettah	35	Limitations		Limitations		Limitations	
		Very dusty	1.00	Very dusty	1.00	Slopes > 15%	1.00
291:							
Ossagon	65	Limitations		Limitations		Limitations	
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
		Slopes 15 - 25%	0.50			Slopes > 15%	1.00
Squashan	20	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.50			Slopes > 15%	1.00
						AWC 2-4" to 40"	0.40
292:							
Ossagon	65	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Squashan	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
293:							
Ossagon	50	No limitations		No limitations		Limitations	
						Slopes > 15%	1.00
Goldbluffs	25	No limitations		No limitations		Limitations	
						Fragments (gravel-size) >50%	1.00
						Slopes > 15%	1.00
						AWC 2-4" to 40"	0.53
Squashan	15	No limitations		No limitations		Limitations	
						Slopes > 15%	1.00
294:							
Ossagon	35	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Organic surface layer >= 4" thick	1.00	Slopes > 15%	1.00
		Organic surface layer >= 4" thick	1.00	Slopes > 40%	1.00	Organic surface layer >= 4" thick	1.00

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
294:							
Goldbluffs	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.01
Squashan	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
462:							
Mooncreek	35	Limitations		No limitations		Limitations	
		Slopes > 25%	1.00			Slopes > 15%	1.00
Noisy	25	No limitations		No limitations		Limitations	
						Slopes > 15%	1.00
						AWC 2-4" to 40"	0.64
Tossup	15	No limitations		No limitations		Limitations	
						Slopes > 15%	1.00
463:							
Mooncreek	25	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Noisy	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Sidehill	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Organic surface layer >= 4" thick	1.00	Slopes > 15%	1.00
		Organic surface layer >= 4" thick	1.00	Slopes > 40%	1.00	Organic surface layer >= 4" thick	1.00
						Bedrock depth 20 to 40"	0.68
464:							
Mooncreek	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Tossup	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.78	Slopes > 15%	1.00
Noisy	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.78	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.28

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
465:							
Sidehill	35	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.50
						AWC 2-4" to 40"	0.21
Oakside	25	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Bedrock depth < 20"	1.00
						Slopes > 15%	1.00
						AWC < 2" to 40"	1.00
Darkwoods	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
473:							
Highoaks	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Noisy	25	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.78	Slopes > 15%	1.00
Mudhorse	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.78	Slopes > 15%	1.00
		Saturation from 12 to 24" depth	0.18	Saturation from 12 to 24" depth	0.18	Saturation from 12 to 24" depth	0.18
480:							
Dolason	50	Limitations		Limitations		Limitations	
		Dusty	0.50	Dusty	0.50	Slopes > 15%	1.00
Countshill	25	Limitations		Limitations		Limitations	
		Dusty	0.50	Dusty	0.50	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.61
Airstrip	20	Limitations		Limitations		Limitations	
		Dusty	0.50	Dusty	0.50	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.77
						Fragments (gravel size) 25-50%	0.30
481:							
Dolason	45	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.56	Slopes > 15%	1.00
Airstrip	25	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.56	Slopes > 15%	1.00

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
481:							
Countshill	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.56	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.94
482:							
Dolason	55	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50		
Countshill	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50	Bedrock depth 20 to 40"	0.50
						Fragments (gravel size) 25-50%	0.32
483:							
Doolyville	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Saturation from 12 to 24" depth	0.89	Saturation from 12 to 24" depth	0.89	Saturation from 12 to 24" depth	0.89
Pasturerock	35	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
484:							
Elkcamp	50	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.56	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50		
Dolason	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.56	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50		
Airstrip	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.56	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50	Bedrock depth 20 to 40"	0.32
						Fragments >3" 5 to 30%	0.26
485:							
Pasturerock	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Coyoterock	25	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.22	Slopes > 15%	1.00

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
485:							
Maneze	15	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
531:							
Atwell	45	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
Coppercreek	40	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
532:							
Atwell	75	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
Ladybird	15	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
533:							
Coppercreek	60	Limitations Slopes 15 - 25%	 0.18	No limitations		Limitations Slopes > 15%	 1.00
Ahpah	15	Limitations Slopes 15 - 25%	 0.18	No limitations		Limitations Slopes > 15% Bedrock depth 20 to 40"	 1.00 0.29
534:							
Coppercreek	40	Limitations Slopes 15 - 25%	 0.92	No limitations		Limitations Slopes > 15%	 1.00
Ahpah	20	Limitations Slopes 15 - 25%	 0.92	No limitations		Limitations Slopes > 15% Bedrock depth 20 to 40"	 1.00 0.01
Lackscreek	20	Limitations Slopes 15 - 25%	 0.92	No limitations		Limitations Slopes > 15% Bedrock depth 20 to 40" AWC 2-4" to 40"	 1.00 0.08 0.02
535:							
Wiregrass	60	Limitations Slopes 15 - 25%	 0.92	No limitations		Limitations Slopes > 15%	 1.00
Scaath	25	Limitations Slopes 15 - 25%	 0.92	No limitations		Limitations Slopes > 15% Bedrock depth 20 to 40"	 1.00 0.03

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
536:							
Coppercreek	45	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Organic surface layer >= 4" thick	1.00	Slopes > 15%	1.00
		Organic surface layer >= 4" thick	1.00	Slopes > 40%	1.00	Organic surface layer >= 4" thick	1.00
Ahpah	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.14
Lackscreek	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC < 2" to 40"	1.00
						Bedrock depth 20 to 40"	0.95
537:							
Wiregrass	50	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.92			Slopes > 15%	1.00
Scaath	20	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.92			Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.03
538:							
Wiregrass	60	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.18			Slopes > 15%	1.00
Pittplace	15	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.08			Slopes > 15%	1.00
539:							
Wiregrass	50	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Scaath	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.79
						Bedrock depth 20 to 40"	0.42
541:							
Wiregrass	60	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Rockysaddle	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.97

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
542:							
Coppercreek	45	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Slidecreek, gravelly loam	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.46
Lackscreek	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.26
						AWC 2-4" to 40"	0.01
543:							
Wiregrass	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50	Fragments (gravel size) 25-50%	0.97
Rockysaddle	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.21
Scaath	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.14
						Bedrock depth 20 to 40"	0.02
544:							
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Tectah	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Lackscreek	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.26
						AWC 2-4" to 40"	0.01
545:							
Devilscreek	45	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Panthercreek	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
545:							
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
546:							
Lackscreek	65	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.97
						Bedrock depth 20 to 40"	0.58
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00
549:							
Scaath	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.98
						Bedrock depth 20 to 40"	0.98
Rockysaddle	25	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.05
Wiregrass	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
550:							
Scaath	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.03
Rockysaddle	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.08
Wiregrass	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
553:							
Ladybird	60	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
553:							
Stonehill	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Organic surface layer >= 4" thick	1.00	Slopes > 15%	1.00
		Organic surface layer >= 4" thick	1.00	Slopes > 40%	1.00	Organic surface layer >= 4" thick	1.00
						Bedrock depth 20 to 40"	0.26
554:							
Ladybird	50	Limitations		Limitations		Limitations	
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Slopes > 15%	1.00
		Slopes 15 - 25%	0.18			Organic surface layer >= 4" thick	1.00
Trailhead	25	Limitations		Limitations		Limitations	
		Organic surface layer >= 4" thick	1.00	Organic surface layer >= 4" thick	1.00	Slopes > 15%	1.00
		Slopes 15 - 25%	0.18			Organic surface layer >= 4" thick	1.00
555:							
Panthercreek	35	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Coppercreek	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Devilscreek	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
556:							
Rodgerpeak	50	No limitations		No limitations		Limitations	
						Bedrock depth < 20"	1.00
						AWC 2-4" to 40"	0.78
Wiregrass	30	No limitations		No limitations		Limitations	
						Slopes 8 to 15%	0.01
557:							
Ustic Palehumults	90	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Surface fragments (>10") >3% coverage	1.00	Slopes > 15%	1.00
		Fragments >10" >3%	1.00	Slopes 25 to 40%	0.56		
558:							
Tectah	45	No limitations		No limitations		Limitations	
						Slopes > 15%	1.00

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
558:							
Coppercreek	25	Limitations Slopes 15 - 25%	 0.18	No limitations		Limitations Slopes > 15%	 1.00
Trailhead	15	No limitations		No limitations		No Limitations	
559:							
Trailhead	85	No limitations		No limitations		No Limitations	
560:							
Trailhead	80	Limitations Slopes 15 - 25%	 0.18	No limitations		Limitations Slopes > 15%	 1.00
561:							
Trailhead	75	Limitations Slopes 15 - 25%	 0.18	No limitations		Limitations Slopes > 15%	 1.00
562:							
Trailhead	65	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
Fortyfour	15	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15% Bedrock depth 20 to 40"	 1.00 0.01
563:							
Trailhead	65	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
Fortyfour	15	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15% Bedrock depth 20 to 40" Fragments (gravel size) 25-50%	 1.00 0.32 0.01
580:							
Coppercreek	40	No limitations		No limitations		Limitations Slopes > 15%	 1.00
Tectah	30	No limitations		No limitations		Limitations Slopes > 15%	 1.00
Slidecreek	20	Limitations Slopes 15 - 25%	 0.50	No limitations		Limitations Slopes > 15%	 1.00

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
581:							
Coppercreek	40	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
Slidecreek	30	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15% Fragments (gravel size) 25-50%	 1.00 0.97
Tectah	15	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15%	 1.00
582:							
Slidecreek	40	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15% Fragments (gravel size) 25-50%	 1.00 0.92
Lackscreek	25	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15% Fragments (gravel-size) >50% AWC 2-4" to 40"	 1.00 1.00 0.81
Coppercreek	15	Limitations Slopes > 25%	 1.00	Limitations Slopes > 40%	 1.00	Limitations Slopes > 15% Fragments (gravel size) 25-50%	 1.00 0.26
583:							
Trailhead	65	Limitations Dusty	 0.50	Limitations Dusty	 0.50	Limitations Slopes > 15% Fragments (gravel size) 25-50% AWC 2-4" to 40"	 1.00 0.26 0.01
Wiregrass	25	Limitations Dusty	 0.50	Limitations Dusty	 0.50	Limitations Slopes > 15%	 1.00
584:							
Wiregrass	40	Limitations Dusty	 0.50	Limitations Dusty	 0.50	Limitations Slopes > 15%	 1.00
Pittplace	25	No limitations		No limitations		Limitations Slopes 8 to 15%	 0.63

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
584:							
Scaath	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Dusty	0.50	Slopes > 15%	1.00
		Dusty	0.50			Fragments (gravel size) 25-50%	0.61
						Bedrock depth 20 to 40"	0.01
585:							
Wiregrass	45	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50		
Rockysaddle	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50	Fragments (gravel size) 25-50%	0.95
586:							
Wiregrass	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50		
Rockysaddle	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50	Fragments (gravel size) 25-50%	0.95
Trailhead	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.78	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50		
587:							
Childshill	65	Limitations		Limitations		Limitations	
		Dusty	0.50	Dusty	0.50	Slopes > 15%	1.00
						Fragments >3" 5 to 30%	0.01
588:							
Surpur	75	Limitations		Limitations		Limitations	
		Dusty	0.50	Dusty	0.50	Slopes 8 to 15%	0.04
590:							
Sasquatch	45	No limitations		No limitations		Limitations	
						Slopes 8 to 15%	0.16
Yeti	20	No limitations		No limitations		Limitations	
						Slopes 8 to 15%	0.16

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
590:							
Footstep	15	No limitations		No limitations		Limitations	
						Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.32
						Fragments (gravel size) 25-50%	0.26
591:							
Sasquatch	45	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Sisterrocks	25	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Ladybird	15	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Fragments (gravel-size) >50%	1.00
592:							
Sisterrocks	35	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.62
						Fragments (gravel size) 25-50%	0.46
Ladybird	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Footstep	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.78
						Bedrock depth 20 to 40"	0.68
593:							
Sasquatch	50	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.92			Slopes > 15%	1.00
Yeti	20	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.92			Slopes > 15%	1.00
Sisterrocks	15	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.92			Slopes > 15%	1.00

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
594:							
Sisterrocks	45	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						AWC 2-4" to 40"	0.01
Sasquatch	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Houda	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Fragments >3" 5 to 30%	0.01
595:							
Battery	50	Limitations		No limitations		Limitations	
		Slopes > 25%	1.00			Slopes > 15%	1.00
						Fragments (gravel size) 25-50%	0.54
Catchings	30	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.50			Fragments (gravel-size) >50%	1.00
						Slopes > 15%	1.00
						AWC 2-4" to 40"	0.01
596:							
Flintrock	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Fragments (gravel-size) >50%	1.00
						Fragments >3" 5 to 30%	0.08
Highprairie	30	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
597:							
Tarquin	70	No limitations		No limitations		Limitations	
						Slopes > 15%	1.00
598:							
Ladybird	60	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
Stonehill	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.26

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
659:							
Raingage	65	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.56	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50		
Pigpen	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Saturation from 12 to 24" depth	0.92	Slopes > 15%	1.00
		Saturation from 12 to 24" depth	0.92	Slopes 25 to 40%	0.56	Fragments (gravel size) 25-50%	0.99
		Dusty	0.50	Dusty	0.50	Saturation from 12 to 24" depth	0.92
756:							
Oragran	40	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Bedrock depth < 20"	1.00
						Slopes > 15%	1.00
						AWC 2-4" to 40"	0.94
Weitchpec	25	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Slopes > 15%	1.00
		Dusty	0.50	Dusty	0.50	Fragments (gravel size) 25-50%	0.99
						AWC 2-4" to 40"	0.33
759:							
Jayel, extremely stony	35	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Surface fragments (>10") >3% coverage	1.00	Slopes > 15%	1.00
		Fragments >10" >3%	1.00	Slopes > 40%	1.00	Bedrock depth 20 to 40"	0.29
						AWC 2-4" to 40"	0.12
Walnett, extremely stony	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Surface fragments (>10") >3% coverage	1.00	Slopes > 15%	1.00
		Fragments >10" >3%	1.00	Slopes > 40%	1.00	AWC 2-4" to 40"	0.08
Oragran	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes > 40%	1.00	Bedrock depth < 20"	1.00
						Slopes > 15%	1.00
						AWC 2-4" to 40"	0.58

Table 10b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Lawns, landscaping, golf fairways	
		Limitation	Value	Limitation	Value	Limitation	Value
760:							
Jayel, extremely stony	30	Limitations		Limitations		Limitations	
		Fragments >10" >3%	1.00	Surface fragments (>10") >3% coverage	1.00	Slopes > 15%	1.00
		Slopes 15 - 25%	0.50			Bedrock depth 20 to 40"	0.29
						AWC 2-4" to 40"	0.12
Oragran	25	Limitations		No limitations		Limitations	
		Slopes 15 - 25%	0.50			Bedrock depth < 20"	1.00
						Slopes > 15%	1.00
						AWC < 2" to 40"	0.99
Walnett, extremely stony	25	Limitations		Limitations		Limitations	
		Fragments >10" >3%	1.00	Surface fragments (>10") >3% coverage	1.00	Slopes > 15%	1.00
		Slopes 15 - 25%	0.50			AWC 2-4" to 40"	0.08
761:							
Gasquet, extremely stony	30	Limitations		Limitations		Limitations	
		Fragments >10" >3%	1.00	Surface fragments (>10") >3% coverage	1.00	Slopes > 15%	1.00
		Slopes 15 - 25%	0.50				
Walnett, extremely stony	25	Limitations		Limitations		Limitations	
		Fragments >10" >3%	1.00	Surface fragments (>10") >3% coverage	1.00	Slopes > 15%	1.00
		Slopes > 25%	1.00	Slopes 25 to 40%	0.22	AWC 2-4" to 40"	0.08
Jayel	20	Limitations		Limitations		Limitations	
		Slopes > 25%	1.00	Slopes 25 to 40%	0.22	Slopes > 15%	1.00
						Bedrock depth 20 to 40"	0.29
						AWC 2-4" to 40"	0.11

The interpretation for paths and trails evaluates the following soil properties at varying depths in the soil: flooding; ponding; wetness; slope; fragments less than, equal to, or greater than 3 inches in size; the content of clay and sand in surface layer; surface fragments greater than or equal to 10 inches in size; Unified classes for a high content of organic matter (PT, OL, and OH); soil dustiness; and the susceptibility of the soil to erosion by water.

The interpretation for off-road motorcycle trails evaluates the following soil properties at varying depths in the soil: flooding; ponding; wetness; slope; soil dustiness; fragments greater than, equal to or greater than 3 inches in size; sand or clay content in the surface layer; and Unified classes for a high content of organic matter (PT, OL, and OH).

The interpretation for lawns, landscaping, and golf fairways evaluates the following soil properties at varying depths in the soil: flooding; ponding; wetness; slope; depth to bedrock; depth to a cemented pan; fragments greater than, equal to, or less than 3 inches in size; surface fragments greater than or equal to 10 inches in size; Unified class for high content of organic matter (PT, OL, and OH); soil dustiness; sand or clay content in the surface layer; pH; salinity (EC); sodium content (SAR); calcium carbonates; and sulfur content.

Table 11a.--Building Site Development (Part 1)

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The rating is based on the limitation with the highest value. Only the three highest-value limitations are listed. There may be more limitations. Fine-earth fractions and coarse fragments are reported on the basis of weight. An explanation of the rating criteria and of the abbreviations used in describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
100:							
Riverwash	90	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Saturation from 18 to 30" depth	0.90	Saturation < 2.5' depth	1.00	Saturation from 18 to 30" depth	0.90
102:							
Fluvents	75	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
						Slopes are from 4 to 8%	0.02
110:							
Weott	85	Limitations		Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
116:							
Swainslough	90	Limitations		Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
119:							
Arlynda	85	Limitations		Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
126:							
Loleta	85	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
		Shrink-swell (LEP 3-6)	0.01			Shrink-swell (LEP 3-6)	0.01
155:							
Samoa	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
155:							
Clambeach	30	Limitations		Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
Dune land	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
157:							
Beaches	35	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Slopes > 8%	1.00
		Slopes 8 to 15%	0.16	Slopes 8 to 15%	0.16	Flooding >= rare	1.00
Samoa	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Dune land	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
171:							
Worswick	40	Limitations		Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
Arlynda	35	Limitations		Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
172:							
Bigriver, fine sandy loam	80	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
						Slopes are from 4 to 8%	0.02
173:							
Bigriver, silt loam	55	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
						Slopes are from 4 to 8%	0.02
Ferndale	20	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
				Saturation < 2.5' depth	0.99	Slopes are from 4 to 8%	0.02

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
173:							
Russ	15	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
				Saturation from 2.5' to 6' depth	0.56	Slopes are from 4 to 8%	0.02
174:							
Bigtree	50	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
Mystery	25	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
				Saturation < 2.5' depth	0.99	Slopes are from 4 to 8%	0.50
177:							
Battery, dry	75	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
178:							
Battery	85	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
191:							
Talawa	85	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
192:							
Aubell	85	Limitations		Limitations		Limitations	
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
						Slopes are from 4 to 8%	0.02
194:							
Tsunami	85	No limitations		No limitations		Limitations	
						Slopes are from 4 to 8%	0.02
220:							
Ferndale	85	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
				Saturation from 2.5' to 6' depth	0.35		

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
222:							
Ferndale, moderately well drained	75	Limitations		Limitations		Limitations	
		Flooding >= rare	1.00	Flooding >= rare	1.00	Flooding >= rare	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
251:							
Surpur	75	No limitations		No limitations		Limitations	
						Slopes are from 4 to 8%	0.50
289:							
Espa	80	No limitations		No limitations		Limitations	
						Slopes are from 4 to 8%	0.26
290:							
Surpur	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Mettah	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
291:							
Ossagon	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Squashan	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
292:							
Ossagon	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Squashan	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
293:							
Ossagon	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Goldbluffs	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Squashan	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
294:							
Ossagon	35	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Goldbluffs	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Squashan	15	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
462:							
Mooncreek	35	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Noisy	25	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Tossup	15	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
463:							
Mooncreek	25	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Noisy	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Sidehill	20	Limitations Slopes > 15% Bedrock (hard) from 20 to 40"	 1.00 0.68	Limitations Slopes > 15% Bedrock (hard) < 40" depth	 1.00 1.00	Limitations Slopes > 8% Bedrock (hard) from 20 to 40"	 1.00 0.68
464:							
Mooncreek	40	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Tossup	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Noisy	15	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
465:							
Sidehill	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.50	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.50
Oakside	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) < 20" depth	1.00
		Fragments (>3") 25 to 50%	0.02	Fragments (>3") 25 to 50%	0.02	Fragments (>3") 25 to 50%	0.02
Darkwoods	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
473:							
Highoaks	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Noisy	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Mudhorse	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Saturation from 18 to 30" depth	0.88	Saturation < 2.5' depth	1.00	Saturation from 18 to 30" depth	0.88
480:							
Dolason	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Countshill	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Bedrock (soft) from 20 to 40"	0.61		
Airstrip	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.77	Slopes > 15%	1.00	Bedrock (hard) from 20 to 40"	0.77
481:							
Dolason	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
481:							
Airstrip	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Bedrock (hard) < 40" depth	0.99		
Countshill	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.08	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.08
				Bedrock (soft) from 20 to 40"	0.93		
482:							
Dolason	55	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Countshill	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Bedrock (soft) from 20 to 40"	0.50		
483:							
Doolyville	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
Pasturerock	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
484:							
Elkcamp	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Saturation from 2.5' to 6' depth	0.56		
Dolason	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Airstrip	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.32	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.32
485:							
Pasturerock	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
485:							
Coyoterock	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Saturation from 18 to 30" depth	0.01	Saturation < 2.5' depth	1.00	Saturation from 18 to 30" depth	0.01
				Shrink-swell (LEP 3-6)	0.50		
Maneze	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Fragments (>3") 25 to 50%	0.82	Fragments (>3") 25 to 50%	0.82	Fragments (>3") 25 to 50%	0.82
				Saturation from 2.5' to 6' depth	0.75		
531:							
Atwell	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Saturation from 18 to 30" depth	0.01	Saturation < 2.5' depth	0.99	Saturation from 18 to 30" depth	0.01
				Shrink-swell (LEP 3-6)	0.50		
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Saturation from 2.5' to 6' depth	0.13		
532:							
Atwell	75	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Saturation from 18 to 30" depth	0.01	Saturation < 2.5' depth	0.99	Saturation from 18 to 30" depth	0.01
				Shrink-swell (LEP 3-6)	0.50		
Ladybird	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Saturation from 2.5' to 6' depth	0.64		
533:							
Coppercreek	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Ahpah	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Bedrock (hard) from 40 to 60"	0.92		
				Bedrock (soft) from 20 to 40"	0.29		

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
534:							
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Ahpah	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Bedrock (soft) from 20 to 40"	0.01		
Lackscreek	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.08	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.08
		Fragments (>3") 25 to 50%	0.01	Fragments (>3") 25 to 50%	0.01	Fragments (>3") 25 to 50%	0.01
535:							
Wiregrass	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Scaath	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.03	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.03
536:							
Coppercreek	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Ahpah	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Bedrock (soft) from 20 to 40"	0.13		
Lackscreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.95	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.95
		Fragments (>3") 25 to 50%	0.01	Fragments (>3") 25 to 50%	0.01	Fragments (>3") 25 to 50%	0.01
537:							
Wiregrass	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
537:							
Scaath	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.03	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.03
538:							
Wiregrass	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Pittplace	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
539:							
Wiregrass	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Scaath	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.42	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.42
		Fragments (>3") 25 to 50%	0.03	Fragments (>3") 25 to 50%	0.03	Fragments (>3") 25 to 50%	0.03
541:							
Wiregrass	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Rockysaddle	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
542:							
Coppercreek	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Slidecreek, gravelly loam	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Lackscreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.26	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.26

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
543:							
Wiregrass	40	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Rockysaddle	30	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Scaath	15	Limitations Slopes > 15% Bedrock (hard) from 20 to 40" Fragments (>3") 25 to 50%	 1.00 0.02 0.01	Limitations Slopes > 15% Bedrock (hard) < 40" depth Fragments (>3") 25 to 50%	 1.00 1.00 0.01	Limitations Slopes > 8% Bedrock (hard) from 20 to 40" Fragments (>3") 25 to 50%	 1.00 0.02 0.01
544:							
Coppercreek	40	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Tectah	20	Limitations Slopes > 15% Shrink-swell (LEP 3-6)	 1.00 0.50	Limitations Slopes > 15% Shrink-swell (LEP 3-6)	 1.00 0.50	Limitations Slopes > 8% Shrink-swell (LEP 3-6)	 1.00 0.50
Lackscreek	15	Limitations Slopes > 15% Bedrock (hard) from 20 to 40"	 1.00 0.26	Limitations Slopes > 15% Bedrock (hard) < 40" depth	 1.00 1.00	Limitations Slopes > 8% Bedrock (hard) from 20 to 40"	 1.00 0.26
545:							
Devilscreek	45	Limitations Slopes > 15% Saturation from 18 to 30" depth	 1.00 0.01	Limitations Slopes > 15% Saturation < 2.5' depth	 1.00 0.99	Limitations Slopes > 8% Saturation from 18 to 30" depth	 1.00 0.01
Panthercreek	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15% Saturation from 2.5' to 6' depth	 1.00 0.95	Limitations Slopes > 8%	 1.00
Coppercreek	15	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
546:							
Lackscreek	65	Limitations Slopes > 15% Bedrock (hard) from 20 to 40" Fragments (>3") 25 to 50%	 1.00 0.57 0.05	Limitations Slopes > 15% Bedrock (hard) < 40" depth Fragments (>3") 25 to 50%	 1.00 1.00 0.05	Limitations Slopes > 8% Bedrock (hard) from 20 to 40" Fragments (>3") 25 to 50%	 1.00 0.57 0.05

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
546:							
Coppercreek	15	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
549:							
Scaath	40	Limitations Slopes > 15% Bedrock (hard) from 20 to 40" Fragments (>3") 25 to 50%	 1.00 0.98 0.03	Limitations Slopes > 15% Bedrock (hard) < 40" depth Fragments (>3") 25 to 50%	 1.00 1.00 0.03	Limitations Slopes > 8% Bedrock (hard) from 20 to 40" Fragments (>3") 25 to 50%	 1.00 0.98 0.03
Rockysaddle	25	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Wiregrass	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
550:							
Scaath	40	Limitations Slopes > 15% Bedrock (hard) from 20 to 40"	 1.00 0.03	Limitations Slopes > 15% Bedrock (hard) < 40" depth	 1.00 1.00	Limitations Slopes > 8% Bedrock (hard) from 20 to 40"	 1.00 0.03
Rockysaddle	30	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Wiregrass	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
553:							
Ladybird	60	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Stonehill	20	Limitations Slopes > 15% Bedrock (hard) from 20 to 40"	 1.00 0.26	Limitations Slopes > 15% Bedrock (hard) < 40" depth	 1.00 1.00	Limitations Slopes > 8% Bedrock (hard) from 20 to 40"	 1.00 0.26
554:							
Ladybird	50	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Trailhead	25	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
555:							
Panthercreek	35	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Coppercreek	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Devilscreek	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15% Saturation from 2.5' to 6' depth	 1.00 0.96	Limitations Slopes > 8%	 1.00
556:							
Rodgerpeak	50	Limitations Bedrock (hard) < 20" depth	 1.00	Limitations Bedrock (hard) < 40" depth	 1.00	Limitations Bedrock (hard) < 20" depth	 1.00
Wiregrass	30	Limitations Slopes 8 to 15%	 0.01	Limitations Slopes 8 to 15%	 0.01	Limitations Slopes > 8%	 0.98
557:							
Ustic Palehumults	90	Limitations Slopes > 15% Fragments (>3") 25 to 50%	 1.00 0.89	Limitations Slopes > 15% Fragments (>3") 25 to 50%	 1.00 0.89	Limitations Slopes > 8% Fragments (>3") 25 to 50%	 1.00 0.89
558:							
Tectah	45	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15% Shrink-swell (LEP 3-6)	 1.00 0.50	Limitations Slopes > 8%	 1.00
Coppercreek	25	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Trailhead	15	No limitations		No limitations		Limitations Slopes are from 4 to 8%	 0.26
559:							
Trailhead	85	No limitations		No limitations		Limitations Slopes are from 4 to 8%	 0.26
560:							
Trailhead	80	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
561:							
Trailhead	75	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
562:							
Trailhead	65	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Fortyfour	15	Limitations Slopes > 15% Shrink-swell (LEP 3-6)	 1.00 0.50	Limitations Slopes > 15% Shrink-swell (LEP 3-6) Bedrock (soft) from 20 to 40"	 1.00 0.50 0.01	Limitations Slopes > 8% Shrink-swell (LEP 3-6)	 1.00 0.50
563:							
Trailhead	65	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Fortyfour	15	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15% Bedrock (soft) from 20 to 40"	 1.00 0.32	Limitations Slopes > 8%	 1.00
580:							
Coppercreek	40	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Tectah	30	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15% Shrink-swell (LEP 3-6)	 1.00 0.50	Limitations Slopes > 8%	 1.00
Slidecreek	20	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
581:							
Coppercreek	40	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Slidecreek	30	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00
Tectah	15	Limitations Slopes > 15% Shrink-swell (LEP 3-6)	 1.00 0.50	Limitations Slopes > 15% Shrink-swell (LEP 3-6)	 1.00 0.50	Limitations Slopes > 8% Shrink-swell (LEP 3-6)	 1.00 0.50
582:							
Slidecreek	40	Limitations Slopes > 15%	 1.00	Limitations Slopes > 15%	 1.00	Limitations Slopes > 8%	 1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
582:							
Lackscreek	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
				Bedrock (hard) < 40" depth	0.99		
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
583:							
Trailhead	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Wiregrass	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
584:							
Wiregrass	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Pittplace	25	Limitations		Limitations		Limitations	
		Slopes 8 to 15%	0.63	Slopes 8 to 15%	0.63	Slopes > 8%	1.00
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
Scaath	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.01	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.01
585:							
Wiregrass	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Rockysaddle	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
586:							
Wiregrass	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Rockysaddle	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Trailhead	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
587:							
Childshill	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
588:							
Surpur	75	Limitations		Limitations		Limitations	
		Slopes 8 to 15%	0.04	Slopes 8 to 15%	0.04	Slopes > 8%	1.00
590:							
Sasquatch	45	Limitations		Limitations		Limitations	
		Slopes 8 to 15%	0.16	Slopes 8 to 15%	0.16	Slopes > 8%	1.00
Yeti	20	Limitations		Limitations		Limitations	
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Slopes > 8%	1.00
		Slopes 8 to 15%	0.16	Slopes 8 to 15%	0.16	Shrink-swell (LEP 3-6)	0.50
Footstep	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.32	Slopes > 15%	1.00	Bedrock (hard) from 20 to 40"	0.32
591:							
Sasquatch	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Sisterrocks	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Ladybird	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
592:							
Sisterrocks	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Ladybird	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Footstep	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.68	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.68
593:							
Sasquatch	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
593:							
Yeti	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
Sisterrocks	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
594:							
Sisterrocks	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Sasquatch	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Houda	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Saturation from 18 to 30" depth	0.01	Saturation < 2.5' depth	0.99	Saturation from 18 to 30" depth	0.01
595:							
Battery	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Catchings	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
596:							
Flintrock	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
Highprairie	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
597:							
Tarquin	70	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Saturation < 2.5' depth	1.00	Slopes > 8%	1.00
		Saturation from 18 to 30" depth	0.05	Slopes > 15%	1.00	Saturation from 18 to 30" depth	0.05
				Shrink-swell (LEP 3-6)	0.50		
598:							
Ladybird	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
598:							
Stonehill	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.26	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.26
659:							
Raingage	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Saturation from 18 to 30" depth	0.20	Saturation < 2.5' depth	1.00	Saturation from 18 to 30" depth	0.20
Pigpen	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Saturation < 18" depth	1.00	Saturation < 2.5' depth	1.00	Saturation < 18" depth	1.00
756:							
Oragran	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) < 20" depth	1.00
		Fragments (>3") 25 to 50%	0.05	Fragments (>3") 25 to 50%	0.05	Fragments (>3") 25 to 50%	0.05
Weitchpec	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) from 20 to 40"	0.10	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) from 20 to 40"	0.10
759:							
Jayel, extremely stony	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Shrink-swell (LEP 3-6)	0.50	Bedrock (hard) < 40" depth	1.00	Shrink-swell (LEP 3-6)	0.50
		Bedrock (hard) from 20 to 40"	0.29	Shrink-swell (LEP 3-6)	0.50	Bedrock (hard) from 20 to 40"	0.29
Walnett, extremely stony	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Fragments (>3") 25 to 50%	0.53	Fragments (>3") 25 to 50%	0.53	Fragments (>3") 25 to 50%	0.53
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
Oragran	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00	Bedrock (hard) < 20" depth	1.00
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Limitation	Value	Limitation	Value	Limitation	Value
760:							
Jayel, extremely stony	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00	Slopes > 8%	1.00
		Shrink-swell (LEP 3-6)	0.50	Slopes > 15%	1.00	Shrink-swell (LEP 3-6)	0.50
		Bedrock (hard) from 20 to 40"	0.29	Shrink-swell (LEP 3-6)	0.50	Bedrock (hard) from 20 to 40"	0.29
Oragran	25	Limitations		Limitations		Limitations	
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Bedrock (hard) < 20" depth	1.00
		Fragments (>3") 25 to 50%	0.05	Fragments (>3") 25 to 50%	0.05	Fragments (>3") 25 to 50%	0.05
Walnett, extremely stony	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Fragments (>3") 25 to 50%	0.53	Fragments (>3") 25 to 50%	0.53	Fragments (>3") 25 to 50%	0.53
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
761:							
Gasquet, extremely stony	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
		Fragments (>3") 25 to 50%	0.05	Fragments (>3") 25 to 50%	0.05	Fragments (>3") 25 to 50%	0.05
Walnett, extremely stony	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Fragments (>3") 25 to 50%	0.53	Fragments (>3") 25 to 50%	0.53	Fragments (>3") 25 to 50%	0.53
		Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50	Shrink-swell (LEP 3-6)	0.50
Jayel	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00	Slopes > 8%	1.00
		Shrink-swell (LEP 3-6)	0.50	Slopes > 15%	1.00	Shrink-swell (LEP 3-6)	0.50
		Bedrock (hard) from 20 to 40"	0.29	Shrink-swell (LEP 3-6)	0.50	Bedrock (hard) from 20 to 40"	0.29

The interpretation for dwellings without basements evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, subsidence of organic soils, shrink-swell potential expressed as linear extensibility percent (LEP), organic Unified classes for low soil strength (PT, OL, and OH), depth to hard or soft bedrock, depth to a thick or thin cemented pan, and fragments greater than 3 inches in size.

The interpretation for dwellings with basements evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, subsidence of organic soils, shrink-swell potential expressed as linear extensibility percent (LEP), organic Unified classes for low strength (PT, OL, and OH), depth to hard or soft bedrock, depth to a thick or thin cemented pan, and fragments greater than 3 inches in size.

The interpretation for small commercial buildings evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, subsidence of organic soils, shrink-swell potential expressed as linear extensibility percent (LEP), depth to hard or soft bedrock, depth to a thick or thin cemented pan, and fragments greater than 3 inches in size.

Table 11b.--Building Site Development (Part 2)

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The rating is based on the limitation with the highest value. Only the three highest-value limitations are listed. There may be more limitations. Fine-earth fractions and coarse fragments are reported on the basis of weight. An explanation of the rating criteria and of the abbreviations used in describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
100:					
Riverwash	90	Limitations		Limitations	
		Flooding >= occasional	1.00	Saturation < 2.5' depth	1.00
		Saturation from 12 to 30" depth	0.60	Caving potential	1.00
				Frequent or occasional flooding	0.50
102:					
Fluvents	75	Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 2.5' depth	1.00
		Flooding >= occasional	1.00	Caving potential	1.00
				Frequent or occasional flooding	0.50
110:					
Weott	85	Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 12" depth	1.00	Saturation < 2.5' depth	1.00
		Flooding >= occasional	1.00	Frequent or occasional flooding	0.50
116:					
Swainslough	90	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Saturation < 2.5' depth	1.00
		Saturation < 12" depth	1.00	Frequent or occasional flooding	0.50
119:					
Arlynda	85	Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 12" depth	1.00	Saturation < 2.5' depth	1.00
		Flooding >= occasional	1.00	Frequent or occasional flooding	0.50
126:					
Loleta	85	Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 2.5' depth	1.00
		Shrink-swell (LEP 3-6)	0.01	Caving potential is low	0.10
155:					
Samoa	50	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
155:					
Clambeach	30	Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 12" depth	1.00	Saturation < 2.5' depth	1.00
				Caving potential	1.00
Dune land	15	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
157:					
Beaches	35	Limitations		Limitations	
		Flooding >= occasional	1.00	Caving potential	1.00
		Slopes 8 to 15%	0.16	Frequent or occasional flooding	0.50
				Slopes 8 to 15%	0.16
Samoa	35	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
Dune land	25	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
171:					
Worswick	40	Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Flooding >= occasional	1.00	Saturation < 2.5' depth	1.00
		Saturation from 12 to 30" depth	0.83	Caving potential	1.00
Arlynda	35	Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 12" depth	1.00	Saturation < 2.5' depth	1.00
		Flooding >= occasional	1.00	Frequent or occasional flooding	0.50
172:					
Bigriver, fine sandy loam	80	Limitations		Limitations	
		Flooding >= occasional	1.00	Caving potential	1.00
				Frequent or occasional flooding	0.50
173:					
Bigriver, silt loam	55	Limitations		Limitations	
		Flooding >= occasional	1.00	Caving potential	1.00
				Frequent or occasional flooding	0.50

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
173:					
Ferndale	20	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Saturation < 2.5' depth	0.99
		Flooding = rare	0.50	Caving potential is low	0.10
Russ	15	Limitations		Limitations	
		Flooding >= occasional	1.00	Caving potential	1.00
				Saturation from 2.5' to 6' depth	0.56
				Frequent or occasional flooding	0.50
174:					
Bigtree	50	Limitations		Limitations	
		Flooding = rare	0.50	Caving potential is low	0.10
Mystery	25	Limitations		Limitations	
		Flooding >= occasional	1.00	Saturation < 2.5' depth	0.99
				Frequent or occasional flooding	0.50
				Caving potential is low	0.10
177:					
Battery, dry	75	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
178:					
Battery	85	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
191:					
Talawa	85	Limitations		Limitations	
		Saturation from 12 to 30" depth	0.83	Saturation < 2.5' depth	1.00
				Caving potential	1.00
192:					
Aubell	85	Limitations		Limitations	
		Saturation < 12" depth	1.00	Saturation < 2.5' depth	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential	1.00
		Shrink-swell (LEP 3-6)	0.50		
194:					
Tsunami	85	No limitations		Limitations	
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
220:					
Ferndale	85	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Saturation from 2.5' to 6' depth	0.35
		Shrink-swell (LEP 3-6)	0.50	Caving potential is low	0.10
		Flooding = rare	0.50		
222:					
Ferndale, moderately well drained	75	Limitations		Limitations	
		Saturation from 12 to 30" depth	0.90	Saturation < 2.5' depth	1.00
		Frost action possible	0.50	Caving potential	1.00
		Flooding = rare	0.50		
251:					
Surpur	75	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Caving potential is low	0.10
289:					
Espa	80	No limitations		Limitations	
				Caving potential is low	0.10
290:					
Surpur	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential is low	0.10
Mettah	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Clay from 40 to 60%	0.50
				Caving potential is low	0.10
291:					
Ossagon	65	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.22	Caving potential is low	0.10
Squashan	20	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
292:					
Ossagon	65	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.78	Caving potential is low	0.10
Squashan	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
293:					
Ossagon	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential is low	0.10
Goldbluffs	25	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
Squashan	15	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
294:					
Ossagon	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.22	Caving potential is low	0.10
Goldbluffs	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Squashan	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
462:					
Mooncreek	35	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
		Frost action possible	0.50	Slopes > 15%	1.00
Noisy	25	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
		Frost action possible	0.50	Slopes > 15%	1.00
Tossup	15	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
		Frost action possible	0.50	Slopes > 15%	1.00
				Clay from 40 to 60%	0.50
463:					
Mooncreek	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
463:					
Noisy	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
Sidehill	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.68	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
464:					
Mooncreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
Tossup	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential is low	0.10
Noisy	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
465:					
Sidehill	35	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Frost action possible	0.50	Slopes > 15%	1.00
		Bedrock (hard) from 20 to 40"	0.50	Caving potential	1.00
Oakside	25	Limitations		Limitations	
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential is low	0.10
Darkwoods	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
473:					
Highoaks	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Noisy	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
473:					
Mudhorse	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Saturation < 2.5' depth	1.00
		Saturation from 12 to 30" depth	0.56	Clay from 40 to 60%	0.50
480:					
Dolason	50	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
		Frost action possible	0.50	Slopes > 15%	1.00
Countshill	25	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
		Frost action possible	0.50	Slopes > 15%	1.00
				Bedrock (soft) from 20 to 40"	0.61
Airstrip	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.77	Caving potential	1.00
		Frost action possible	0.50	Slopes > 15%	1.00
481:					
Dolason	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Airstrip	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
				Bedrock (hard) < 40" depth	0.99
Countshill	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.08	Slopes > 15%	1.00
				Caving potential	1.00
482:					
Dolason	55	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
Countshill	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
				Bedrock (soft) from 20 to 40"	0.50

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
483:					
Doolyville	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Saturation from 12 to 30" depth	0.95	Saturation < 2.5' depth	1.00
		Shrink-swell (LEP 3-6)	0.50	Caving potential	1.00
Pasturerock	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
484:					
Elkcamp	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
				Saturation from 2.5' to 6' depth	0.56
Dolason	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
Airstrip	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Frost action possible	0.50	Slopes > 15%	1.00
		Bedrock (hard) from 20 to 40"	0.32	Caving potential	1.00
485:					
Pasturerock	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Caving potential	1.00
Coyoterock	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Frost action possible	0.50	Saturation < 2.5' depth	1.00
		AASHTO GI 5-8 (soil strength)	0.22	Caving potential	1.00
Maneze	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.82	Caving potential	1.00
		Frost action possible	0.50	Fragments (>3") 25 to 50%	0.82
531:					
Atwell	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.78	Caving potential	1.00
				Saturation < 2.5' depth	0.99

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
531:					
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Saturation from 2.5' to 6' depth	0.13
				Caving potential is low	0.10
532:					
Atwell	75	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.78	Caving potential	1.00
				Saturation < 2.5' depth	0.99
Ladybird	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Saturation from 2.5' to 6' depth	0.64
533:					
Coppercreek	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Ahpah	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Bedrock (hard) from 40 to 60"	0.92
534:					
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Ahpah	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Bedrock (soft) from 20 to 40"	0.01
Lackscreek	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.08	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.01	Caving potential	1.00
535:					
Wiregrass	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
535:					
Scaath	25	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.03	Slopes > 15%	1.00
				Caving potential	1.00
536:					
Coppercreek	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Ahpah	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Bedrock (soft) from 20 to 40"	0.13
Lackscreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.95	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.01	Caving potential	1.00
537:					
Wiregrass	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Scaath	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.03	Slopes > 15%	1.00
				Caving potential	1.00
538:					
Wiregrass	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Pittplace	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential	1.00
		Shrink-swell (LEP 3-6)	0.50		
539:					
Wiregrass	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
539:					
Scaath	30	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.42	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.03	Caving potential	1.00
541:					
Wiregrass	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Rockysaddle	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
542:					
Coppercreek	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Slidecreek, gravelly loam	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Lackscreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.26	Slopes > 15%	1.00
				Caving potential	1.00
543:					
Wiregrass	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Rockysaddle	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Scaath	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.02	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.01	Caving potential	1.00
544:					
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
544:					
Tectah	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential is low	0.10
		Shrink-swell (LEP 3-6)	0.50		
Lackscreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.26	Slopes > 15%	1.00
				Caving potential	1.00
545:					
Devilscreek	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Saturation < 2.5' depth	0.99
Panthercreek	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Saturation from 2.5' to 6' depth	0.95
Coppercreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
546:					
Lackscreek	65	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.57	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.05	Caving potential	1.00
Coppercreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
549:					
Scaath	40	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.98	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.03	Caving potential	1.00
Rockysaddle	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
549:					
Wiregrass	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
550:					
Scaath	40	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.03	Slopes > 15%	1.00
				Caving potential	1.00
Rockysaddle	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Wiregrass	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
553:					
Ladybird	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Stonehill	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.26	Slopes > 15%	1.00
				Caving potential	1.00
554:					
Ladybird	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Trailhead	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Clay from 40 to 60%	0.88
				Caving potential is low	0.10
555:					
Panthercreek	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Coppercreek	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
555:					
Devilscreek	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Saturation from 2.5' to 6' depth	0.96
556:					
Rodgerpeak	50	Limitations		Limitations	
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00
				Caving potential is low	0.10
Wiregrass	30	Limitations		Limitations	
		Slopes 8 to 15%	0.01	Caving potential	1.00
				Slopes 8 to 15%	0.01
557:					
Ustic Palehumults	90	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.89	Caving potential	1.00
				Fragments (>3") 25 to 50%	0.89
558:					
Tectah	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.22	Caving potential is low	0.10
Coppercreek	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.78	Caving potential is low	0.10
Trailhead	15	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Clay from 40 to 60%	0.88
				Caving potential is low	0.10
559:					
Trailhead	85	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Clay from 40 to 60%	0.88
				Caving potential is low	0.10
560:					
Trailhead	80	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Clay from 40 to 60%	0.88
				Caving potential is low	0.10

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
561:					
Trailhead	75	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Clay from 40 to 60%	0.88
				Caving potential is low	0.10
562:					
Trailhead	65	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.78	Clay from 40 to 60%	0.88
				Caving potential is low	0.10
Fortyfour	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Shrink-swell (LEP 3-6)	0.50	Caving potential	1.00
				Clay from 40 to 60%	0.08
563:					
Trailhead	65	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Clay from 40 to 60%	0.88
				Caving potential is low	0.10
Fortyfour	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Bedrock (soft) from 20 to 40"	0.32
580:					
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.78	Caving potential is low	0.10
Tectah	30	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Caving potential is low	0.10
				Clay from 40 to 60%	0.02
Slidecreek	20	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
581:					
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential is low	0.10

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
581:					
Slidecreek	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Tectah	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential	1.00
		Shrink-swell (LEP 3-6)	0.50	Clay from 40 to 60%	0.04
582:					
Slidecreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Lackscreek	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Bedrock (hard) < 40" depth	0.99
Coppercreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
583:					
Trailhead	65	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
				Clay from 40 to 60%	0.02
Wiregrass	25	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
		AASHTO GI 5-8 (soil strength)	0.78	Slopes > 15%	1.00
584:					
Wiregrass	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.22	Caving potential is low	0.10
Pittplace	25	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Caving potential	1.00
		Slopes 8 to 15%	0.63	Slopes 8 to 15%	0.63
		Shrink-swell (LEP 3-6)	0.50		

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
584:					
Scaath	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.01	Slopes > 15%	1.00
				Caving potential is low	0.10
585:					
Wiregrass	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.78	Caving potential is low	0.10
Rockysaddle	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
586:					
Wiregrass	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential is low	0.10
Rockysaddle	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Trailhead	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Clay from 40 to 60%	0.02
587:					
Childshill	65	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
588:					
Surpur	75	Limitations		Limitations	
		AASHTO GI 5-8 (soil strength)	0.22	Caving potential is low	0.10
		Slopes 8 to 15%	0.04	Slopes 8 to 15%	0.04
590:					
Sasquatch	45	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Slopes 8 to 15%	0.16
		Slopes 8 to 15%	0.16	Caving potential is low	0.10

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
590:					
Yeti	20	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Caving potential	1.00
		Shrink-swell (LEP 3-6)	0.50	Slopes 8 to 15%	0.16
		Slopes 8 to 15%	0.16	Clay from 40 to 60%	0.12
Footstep	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.32	Caving potential	1.00
				Slopes > 15%	1.00
591:					
Sasquatch	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Sisterrocks	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Ladybird	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
592:					
Sisterrocks	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Ladybird	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Footstep	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.68	Slopes > 15%	1.00
				Caving potential	1.00
593:					
Sasquatch	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential is low	0.10
Yeti	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential is low	0.10
		Shrink-swell (LEP 3-6)	0.50		

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
593:					
Sisterrocks	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
594:					
Sisterrocks	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Sasquatch	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI 5-8 (soil strength)	0.22	Caving potential	1.00
Houda	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
				Saturation < 2.5' depth	0.99
595:					
Battery	50	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
Catchings	30	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
				Slopes > 15%	1.00
596:					
Flintrock	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
Highprairie	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00
597:					
Tarquin	70	Limitations		Limitations	
		Slopes > 15%	1.00	Saturation < 2.5' depth	1.00
		AASHTO GI >8 (low soil strength)	1.00	Slopes > 15%	1.00
		Saturation from 12 to 30" depth	0.02	Caving potential is low	0.10
598:					
Ladybird	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
				Caving potential	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
598:					
Stonehill	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.26	Slopes > 15%	1.00
				Caving potential	1.00
659:					
Raingage	65	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Saturation from 12 to 30" depth	0.10	Saturation < 2.5' depth	1.00
				Caving potential	1.00
Pigpen	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Saturation from 12 to 30" depth	0.96	Saturation < 2.5' depth	1.00
				Caving potential	1.00
756:					
Oragran	40	Limitations		Limitations	
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential is low	0.10
Weitchpec	25	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.10	Slopes > 15%	1.00
				Caving potential	1.00
759:					
Jayel, extremely stony	35	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Shrink-swell (LEP 3-6)	0.50	Caving potential is low	0.10
Walnett, extremely stony	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Fragments (>3") 25 to 50%	0.53	Caving potential	1.00
		Shrink-swell (LEP 3-6)	0.50	Fragments (>3") 25 to 50%	0.53
Oragran	20	Limitations		Limitations	
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential is low	0.10

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations	
		Limitation	Value	Limitation	Value
760:					
Jayel, extremely stony	30	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00
		Shrink-swell (LEP 3-6)	0.50	Caving potential is low	0.10
Oragran	25	Limitations		Limitations	
		Bedrock (hard) < 20" depth	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00
		AASHTO GI >8 (low soil strength)	1.00	Caving potential is low	0.10
Walnett, extremely stony	25	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
		Fragments (>3") 25 to 50%	0.53	Slopes > 15%	1.00
		Shrink-swell (LEP 3-6)	0.50	Fragments (>3") 25 to 50%	0.53
761:					
Gasquet, extremely stony	30	Limitations		Limitations	
		AASHTO GI >8 (low soil strength)	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Caving potential is low	0.10
		Shrink-swell (LEP 3-6)	0.50	Fragments (>3") 25 to 50%	0.05
Walnett, extremely stony	25	Limitations		Limitations	
		Slopes > 15%	1.00	Caving potential	1.00
		Fragments (>3") 25 to 50%	0.53	Slopes > 15%	1.00
		Shrink-swell (LEP 3-6)	0.50	Fragments (>3") 25 to 50%	0.53
Jayel	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		AASHTO GI >8 (low soil strength)	1.00	Slopes > 15%	1.00
		Shrink-swell (LEP 3-6)	0.50	Caving potential is low	0.10

The interpretation for local roads and streets evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, organic Unified classes for low soil strength (PT, OL, and OH), amount of clay, depth to hard or soft bedrock, depth to a thick or thin cemented pan, fragments greater than 3 inches in size, soil bulk density, and the potential of the soil to cave.

The interpretation for shallow excavation evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, subsidence of organic soils, shrink-swell potential expressed as linear extensibility percent (LEP), potential frost action, depth to hard or soft bedrock, depth to a thick or thin cemented pan, fragments greater than 3 inches in size, and soil strength expressed as an AASHTO group index number (AASHTO GI).

Table 12a.--Sanitary Facilities (Part 1)

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The rating is based on the limitation with the highest value. Only the three highest-value limitations are listed. There may be more limitations. Fine-earth fractions and coarse fragments are reported on the basis of weight. An explanation of the rating criteria and of the abbreviations used in describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
100:					
Riverwash	90	Limitations		Limitations	
		Flooding	1.00	Flooding >= occasional	1.00
		Saturation < 4' depth	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability > 6"/hr in 24-60" (seepage and poor filter)	1.00	Fragments (>3") 20-35%	0.68
102:					
Fluvents	75	Limitations		Limitations	
		Flooding	1.00	Flooding >= occasional	1.00
		Saturation < 4' depth	1.00	Permeability > 2"/hr (seepage)	1.00
		Seepage in bottom layer	1.00	Saturation from 3.5 to 5' depth	0.48
110:					
Weott	85	Limitations		Limitations	
		Flooding	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Flooding >= occasional	1.00
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00
116:					
Swainslough	90	Limitations		Limitations	
		Flooding	1.00	Saturation at < 3.5' depth	1.00
		Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 4' depth	1.00	Flooding >= occasional	1.00
119:					
Arlynda	85	Limitations		Limitations	
		Flooding	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Flooding >= occasional	1.00
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00
126:					
Loleta	85	Limitations		Limitations	
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.68	Permeability .6-2"/hr (some seepage)	0.50

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
155:					
Samoa	50	Limitations		Limitations	
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability > 6"/hr in 24-60" (seepage and poor filter)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Clambeach	30	Limitations		Limitations	
		Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 4' depth	1.00	Permeability > 2"/hr (seepage)	1.00
		Seepage in bottom layer	1.00		
Dune land	15	Limitations		Limitations	
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability > 6"/hr in 24-60" (seepage and poor filter)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
157:					
Beaches	35	Limitations		Limitations	
		Flooding	1.00	Flooding >= occasional	1.00
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability > 6"/hr in 24-60" (seepage and poor filter)	1.00	Slopes > 8%	1.00
Samoa	35	Limitations		Limitations	
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability > 6"/hr in 24-60" (seepage and poor filter)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Dune land	25	Limitations		Limitations	
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability > 6"/hr in 24-60" (seepage and poor filter)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
171:					
Worswick	40	Limitations		Limitations	
		Flooding	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Flooding >= occasional	1.00
		Saturation < 4' depth	1.00	Permeability > 2"/hr (seepage)	1.00
Arlynda	35	Limitations		Limitations	
		Flooding	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Flooding >= occasional	1.00
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
172:					
Bigriver, fine sandy loam	80	Limitations		Limitations	
		Flooding	1.00	Flooding >= occasional	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 8%	0.33
173:					
Bigriver, silt loam	55	Limitations		Limitations	
		Flooding	1.00	Flooding >= occasional	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 8%	0.33
Ferndale	20	Limitations		Limitations	
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
		Rare flooding	0.40	Flooding = rare	0.50
Russ	15	Limitations		Limitations	
		Flooding	1.00	Flooding >= occasional	1.00
		Saturation from 4 to 6' depth	0.99	Permeability > 2"/hr (seepage)	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Saturation from 3.5 to 5' depth	0.60
174:					
Bigtree	50	Limitations		Limitations	
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
		Rare flooding	0.40	Flooding = rare	0.50
				Slopes 2 to 8%	0.17
Mystery	25	Limitations		Limitations	
		Flooding	1.00	Flooding >= occasional	1.00
		Saturation < 4' depth	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Saturation at < 3.5' depth	1.00
177:					
Battery, dry	75	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
178:					
Battery	85	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
191:					
Talawa	85	Limitations		Limitations	
		Saturation < 4' depth	1.00	Permeability > 2"/hr (seepage)	1.00
		Seepage in bottom layer	1.00		
192:					
Aubell	85	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Saturation at < 3.5' depth	1.00
				Slopes 2 to 8%	0.33
		Saturation < 4' depth	1.00		
194:					
Tsunami	85	Limitations		Limitations	
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 8%	0.33
220:					
Ferndale	85	Limitations		Limitations	
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Saturation from 4 to 6' depth	0.84	Flooding = rare	0.50
		Permeability ranges .6 - 2"/hr (slow perc)	0.72	Saturation from 3.5 to 5' depth	0.17
222:					
Ferndale, moderately well drained	75	Limitations		Limitations	
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
		Rare flooding	0.40	Flooding = rare	0.50
251:					
Surpur	75	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	0.99	Slopes 2 to 8%	0.67
				Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
289:					
Espa	80	Limitations		Limitations	
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 8%	0.50
290:					
Surpur	50	Limitations		Limitations	
		Seepage in bottom layer	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
		Slopes > 15%	1.00		
Mettah	35	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
291:					
Ossagon	65	Limitations		Limitations	
		Seepage in bottom layer	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability > 2"/hr (seepage)	1.00
		Slopes > 15%	1.00		
Squashan	20	Limitations		Limitations	
		Seepage in bottom layer	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability > 2"/hr (seepage)	1.00
292:					
Ossagon	65	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46		
Squashan	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
293:					
Ossagon	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.85	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
293:					
Goldbluffs	25	Limitations		Limitations	
		Seepage in bottom layer	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability > 2"/hr (seepage)	1.00
Squashan	15	Limitations		Limitations	
		Seepage in bottom layer	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.85		
294:					
Ossagon	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Goldbluffs	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46		
Squashan	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46		
462:					
Mooncreek	35	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability .6-2"/hr (some seepage)	0.50
Noisy	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.50	Permeability .6-2"/hr (some seepage)	0.50
Tossup	15	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
463:					
Mooncreek	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Noisy	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.50	Permeability .6-2"/hr (some seepage)	0.50
				Fragments (>3") 20-35%	0.02
Sidehill	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Seepage in bottom layer	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Permeability > 2"/hr (seepage)	1.00
464:					
Mooncreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.02
Tossup	20	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Noisy	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.50	Permeability .6-2"/hr (some seepage)	0.50
465:					
Sidehill	35	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.50	Permeability .6-2"/hr (some seepage)	0.50
Oakside	25	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Restricted permeability due to bedrock or hardpan	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
465:					
Darkwoods	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
473:					
Highoaks	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Noisy	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.50
Mudhorse	15	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Saturation at < 3.5' depth	1.00
		Saturation < 4' depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
480:					
Dolason	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
Countshill	25	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (soft) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
Airstrip	20	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
481:					
Dolason	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
481:					
Airstrip	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Depth to bedrock 40 - 72"	0.99	Bedrock (hard) < 40" depth	0.99
				Permeability .6-2"/hr (some seepage)	0.53
Countshill	20	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Bedrock (soft) < 40" depth	1.00
		Restricted permeability due to bedrock or hardpan	1.00	Slopes > 8%	1.00
482:					
Dolason	55	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
Countshill	30	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (soft) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
483:					
Doolyville	40	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Saturation at < 3.5' depth	1.00
				Slopes > 8%	1.00
		Saturation < 4' depth	1.00		
		Slopes > 15%	1.00		
Pasturerock	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
484:					
Elkcamp	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	0.99	Saturation from 3.5 to 5' depth	0.60
		Saturation from 4 to 6' depth	0.99	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
484:					
Dolason	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
Airstrip	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
485:					
Pasturerock	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Coyoterock	25	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Saturation at < 3.5' depth	1.00
		Saturation < 4' depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Maneze	15	Limitations		Limitations	
		Saturation < 4' depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Saturation from 3.5 to 5' depth	0.94
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Fragments (>3") 20-35%	0.57
531:					
Atwell	45	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Saturation at < 3.5' depth	1.00
		Saturation < 4' depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.01
		Saturation from 4 to 6' depth	0.34		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
532:					
Atwell	75	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Saturation at < 3.5' depth	1.00
				Slopes > 8%	1.00
		Saturation < 4' depth	1.00		
		Slopes > 15%	1.00		
Ladybird	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Saturation from 3.5 to 5' depth	0.78
		Saturation < 4' depth	0.99		
533:					
Coppercreek	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Ahpah	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (soft) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Bedrock (hard) from 40 to 60"	0.92
534:					
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Ahpah	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (soft) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
Lackscreek	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
				Fragments (>3") 20-35%	0.03
		Depth to bedrock < 40"	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
535:					
Wiregrass	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Scaath	25	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Permeability .6-2"/hr (some seepage)	0.53
536:					
Coppercreek	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Ahpah	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (soft) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Lackscreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Restricted permeability due to bedrock or hardpan	1.00	Fragments (>3") 20-35%	0.56
537:					
Wiregrass	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Scaath	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Permeability .6-2"/hr (some seepage)	0.53
538:					
Wiregrass	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
538:					
Pittplace	15	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
539:					
Wiregrass	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Scaath	30	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Fragments (>3") 20-35%	0.01
541:					
Wiregrass	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Rockysaddle	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
542:					
Coppercreek	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Slidecreek, gravelly loam	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Lackscreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
543:					
Wiregrass	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Rockysaddle	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Scaath	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00		
544:					
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Tectah	20	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Lackscreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Permeability .6-2"/hr (some seepage)	0.53
545:					
Devilscreek	45	Limitations		Limitations	
		Saturation < 4' depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Saturation at < 3.5' depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Panthercreek	20	Limitations		Limitations	
		Saturation < 4' depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability > 2"/hr (seepage)	1.00
		Seepage in bottom layer	1.00	Saturation from 3.5 to 5' depth	0.48

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
545:					
Coppercreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
546:					
Lackscreek	65	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.85	Fragments (>3") 20-35%	0.89
Coppercreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
549:					
Scaath	40	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Restricted permeability due to bedrock or hardpan	1.00	Fragments (>3") 20-35%	0.43
Rockysaddle	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Wiregrass	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
550:					
Scaath	40	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Permeability .6-2"/hr (some seepage)	0.53
Rockysaddle	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
550:					
Wiregrass	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
553:					
Ladybird	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Stonehill	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Permeability .6-2"/hr (some seepage)	0.53
554:					
Ladybird	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Trailhead	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
555:					
Panthercreek	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Seepage in bottom layer	1.00	Permeability > 2"/hr (seepage)	1.00
Coppercreek	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Devilscreek	20	Limitations		Limitations	
		Saturation < 4' depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Saturation at < 3.5' depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
556:					
Rodgerpeak	50	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Restricted permeability due to bedrock or hardpan	1.00	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 8%	0.17
Wiregrass	30	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes 8 to 15%	0.01	Permeability .6-2"/hr (some seepage)	0.53
557:					
Ustic Palehumults	90	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Fragments (>3") 20-35%	0.93
		Fragments (>3") 25 to 50%	0.89	Permeability .6-2"/hr (some seepage)	0.53
558:					
Tectah	45	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Coppercreek	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Trailhead	15	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes 2 to 8%	0.50
559:					
Trailhead	85	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes 2 to 8%	0.50
560:					
Trailhead	80	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
561:					
Trailhead	75	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
562:					
Trailhead	65	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Fortyfour	15	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Bedrock (soft) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00		
563:					
Trailhead	65	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Fortyfour	15	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Bedrock (soft) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00		
580:					
Coppercreek	40	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Tectah	30	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Slidecreek	20	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
581:					
Coppercreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Slidecreek	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Tectah	15	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
582:					
Slidecreek	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Lackscreek	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Bedrock (hard) < 40" depth	0.99
		Depth to bedrock 40 - 72"	0.99		
Coppercreek	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
583:					
Trailhead	65	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Wiregrass	25	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
584:					
Wiregrass	40	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
		Slopes > 15%	1.00		
Pittplace	25	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes 8 to 15%	0.63		
Scaath	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00		
585:					
Wiregrass	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Rockysaddle	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
586:					
Wiregrass	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Rockysaddle	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Trailhead	15	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
587:					
Childshill	65	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
588:					
Surpur	75	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes 8 to 15%	0.04	Permeability .6-2"/hr (some seepage)	0.53
590:					
Sasquatch	45	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes 8 to 15%	0.16	Permeability .6-2"/hr (some seepage)	0.53
Yeti	20	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes 8 to 15%	0.16	Permeability .6-2"/hr (some seepage)	0.53
Footstep	15	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability .6-2"/hr (some seepage)	0.53
591:					
Sasquatch	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Sisterrocks	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Ladybird	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
592:					
Sisterrocks	35	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	0.99	Permeability .6-2"/hr (some seepage)	0.53
Ladybird	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Footstep	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00	Permeability .6-2"/hr (some seepage)	0.53
593:					
Sasquatch	50	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Yeti	20	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Sisterrocks	15	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
594:					
Sisterrocks	45	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Sasquatch	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
594:					
Houda	20	Limitations		Limitations	
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
595:					
Battery	50	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00		
Catchings	30	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability > 2"/hr (seepage)	1.00
		Seepage in bottom layer	1.00		
596:					
Flintrock	40	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
Highprairie	30	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
597:					
Tarquin	70	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Saturation at < 3.5' depth	1.00
		Saturation < 4' depth	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability .6-2"/hr (some seepage)	0.53
598:					
Ladybird	60	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
598:					
Stonehill	20	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Depth to bedrock < 40"	1.00		
659:					
Raingage	65	Limitations		Limitations	
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Permeability .6-2"/hr (some seepage)	0.53
Pigpen	20	Limitations		Limitations	
		Saturation < 4' depth	1.00	Saturation at < 3.5' depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00		
756:					
Oragran	40	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Restricted permeability due to bedrock or hardpan	1.00	Permeability .6-2"/hr (some seepage)	0.53
Weitchpec	25	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Permeability ranges .6 - 2"/hr (slow perc)	0.46	Permeability .6-2"/hr (some seepage)	0.53
759:					
Jayel, extremely stony	35	Limitations		Limitations	
		Slopes > 15%	1.00	Bedrock (hard) < 40" depth	1.00
		Depth to bedrock < 40"	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Fragments (>3") 20-35%	0.64
Walnett, extremely stony	20	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Fragments (>3") > 35%	1.00
		Fragments (>3") 25 to 50%	0.53		

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Limitation	Value	Limitation	Value
759:					
Oragran	20	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Restricted permeability due to bedrock or hardpan	1.00	Fragments (>3") 20-35%	0.58
760:					
Jayel, extremely stony	30	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Fragments (>3") 20-35%	0.64
Oragran	25	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Restricted permeability due to bedrock or hardpan	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Permeability .6-2"/hr (some seepage)	0.53
Walnett, extremely stony	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Fragments (>3") > 35%	1.00
		Fragments (>3") 25 to 50%	0.53		
761:					
Gasquet, extremely stony	30	Limitations		Limitations	
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Slopes > 8%	1.00
		Slopes > 15%	1.00	Fragments (>3") 20-35%	0.55
		Depth to bedrock 40 - 72"	0.22		
Walnett, extremely stony	25	Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability < .6"/hr in 24-60" (slow perc)	1.00	Fragments (>3") > 35%	1.00
		Fragments (>3") 25 to 50%	0.53		
Jayel	20	Limitations		Limitations	
		Depth to bedrock < 40"	1.00	Bedrock (hard) < 40" depth	1.00
		Slopes > 15%	1.00	Slopes > 8%	1.00

The interpretation for septic tank absorption fields evaluates the following soil properties at varying depths in the soil: flooding; ponding; wetness; slope; subsidence of organic soils; depth to hard or soft bedrock; depth to a cemented pan; permeability that is too fast, allowing seepage; permeability that is too slow; and an impermeable layer at a shallow depth.

The interpretation for sewage lagoons evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, organic Unified classes for low strength (PT, OL, and OH), depth to hard or soft bedrock, depth to a cemented pan, fragments greater than 3 inches in size, and permeability that is too fast, allowing seepage.

Table 12b.--Sanitary Facilities (Part 2)

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The rating is based on the limitation with the highest value. Only the three highest-value limitations are listed. There may be more limitations. Fine-earth fractions and coarse fragments are reported on the basis of weight. An explanation of the rating criteria and of the abbreviations used in describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
100:							
Riverwash	90	Not rated		Not rated		Not rated	
102:							
Fluvents	75	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Saturation < 5' depth	1.00	Ponded (any duration)	1.00
		Saturation < 6' depth	1.00	Seepage in 20-40" depth	1.00	Texture is s, fs, cos, sg	1.00
		Seepage in bottom layer	1.00	Frequent flooding	0.80		
110:							
Weott	85	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Ponded (any duration)	1.00	Occasional flooding	0.60		
116:							
Swainslough	90	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Ponded (any duration)	1.00	Occasional flooding	0.60	Silt or clay textures from 10-60"	0.50
119:							
Arlynda	85	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Ponded (any duration)	1.00	Occasional flooding	0.60	Silt or clay textures from 10-60"	0.50
126:							
Loleta	85	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
155:							
Samoa	50	Limitations		Limitations		Limitations	
		Sandy textures (cos, s, fs, lcos, or vfs)	1.00	Seepage in 20-40" depth	1.00	Texture is s, fs, cos, sg	1.00
		Seepage in bottom layer	1.00	Slopes > 15%	1.00	Permeability > 2.0 in/hr	1.00
		Slopes > 15%	1.00			Slopes > 15%	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
155:							
Clambeach	30	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Ponded (any duration)	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Sandy textures (cos, s, fs, lcos, or vfs)	1.00	Seepage in 20-40" depth	1.00	Texture is s, fs, cos, sg	1.00
Dune land	15	Not rated		Not rated		Not rated	
157:							
Beaches	35	Not rated		Not rated		Not rated	
Samoa	35	Limitations		Limitations		Limitations	
		Sandy textures (cos, s, fs, lcos, or vfs)	1.00	Seepage in 20-40" depth	1.00	Texture is s, fs, cos, sg	1.00
		Seepage in bottom layer	1.00	Slopes > 15%	1.00	Permeability > 2.0 in/hr	1.00
		Slopes > 15%	1.00			Slopes > 15%	1.00
Dune land	25	Not rated		Not rated		Not rated	
171:							
Worswick	40	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Ponded (any duration)	1.00	Seepage in 20-40" depth	1.00	Permeability > 2.0 in/hr	0.21
Arlynda	35	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Ponded (any duration)	1.00	Ponded (any duration)	1.00
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Ponded (any duration)	1.00	Occasional flooding	0.60		
172:							
Bigriver, fine sandy loam	80	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Occasional flooding	0.60	Texture is lcos, ls, lfs, vfs	0.50
		Sandy textures (cosl, ls, lfs, or lvfs)	0.50				
173:							
Bigriver, silt loam	55	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Occasional flooding	0.60	Texture is lcos, ls, lfs, vfs	0.50
		Sandy textures (cosl, ls, lfs, or lvfs)	0.50				

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
173:							
Ferndale	20	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation from 18 to 40" depth	0.29
		Flooding = rare	0.50	Rare flooding	0.40		
Russ	15	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Saturation < 5' depth	1.00	Texture is lcos, ls, lfs, vfs	0.50
		Saturation < 6' depth	1.00	Seepage in 20-40" depth	1.00		
		Sandy textures (cosl, ls, lfs, or lvfs)	0.50	Occasional flooding	0.60	Permeability > 2.0 in/hr	0.01
174:							
Bigtree	50	Limitations		Limitations		No Limitations	
		Flooding = rare	0.50	Rare flooding	0.40		
Mystery	25	Limitations		Limitations		Limitations	
		Flooding >= occasional	1.00	Saturation < 5' depth	1.00	Saturation from 18 to 40" depth	0.44
		Saturation < 6' depth	1.00	Seepage in 20-40" depth	1.00		
				Occasional flooding	0.60		
177:							
Battery, dry	75	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
178:							
Battery	85	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.58
						Silt or clay textures from 10-60"	0.50
191:							
Talawa	80	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Texture is lcos, ls, lfs, vfs	0.50
		Seepage in bottom layer	1.00	Seepage in 20-40" depth	1.00		
		Sandy textures (cosl, ls, lfs, or lvfs)	0.50			Saturation from 18 to 40" depth	0.29

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
192:							
Aubell	80	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
194:							
Tsunami	85	No limitations		No limitations		Limitations	
						Fragments (<75mm) 25-50%	0.12
220:							
Ferndale	85	Limitations		Limitations		No Limitations	
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00		
		Seepage in bottom layer	1.00	Rare flooding	0.40		
		Flooding = rare	0.50				
222:							
Ferndale, moderately well drained	75	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Flooding = rare	0.50	Rare flooding	0.40		
251:							
Surpur	75	Limitations		No limitations		Limitations	
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
289:							
Espa	80	No limitations		No limitations		No Limitations	
290:							
Surpur	50	Limitations		Limitations		Limitations	
		Seepage in bottom layer	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00			Silt or clay textures from 10-60"	0.50
		Clay loam, silty clay, silty clay loam	0.50			Clay loam, silty clay, silty clay loam	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
290:							
Mettah	35	Limitations		Limitations		Limitations	
		Clay or silty clay	1.00	Slopes > 15%	1.00	Silty clay or clay 10-60"	1.00
		Slopes > 15%	1.00			Clay or silty clay	1.00
						Slopes > 15%	1.00
291:							
Ossagon	65	Limitations		Limitations		Limitations	
		Seepage in bottom layer	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00			Silt or clay textures from 10-60"	0.50
		Clay loam, silty clay, silty clay loam	0.50			Clay loam, silty clay, silty clay loam	0.50
Squashan	20	Limitations		Limitations		Limitations	
		Sandy textures (cos, s, fs, lcos, or vfs)	1.00	Seepage in 20-40" depth	1.00	Fragments (<75mm) > 50%	1.00
		Seepage in bottom layer	1.00	Slopes > 15%	1.00	Texture is s, fs, cos, sg	1.00
		Slopes > 15%	1.00			Permeability > 2.0 in/hr	1.00
292:							
Ossagon	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Seepage in bottom layer	1.00	Seepage in 20-40" depth	1.00	Permeability > 2.0 in/hr	1.00
Squashan	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
						Slopes > 15%	1.00
293:							
Ossagon	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
Goldbluffs	25	Limitations		Limitations		Limitations	
		Seepage in bottom layer	1.00	Seepage in 20-40" depth	1.00	Fragments (<75mm) > 50%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
						Permeability > 2.0 in/hr	0.52
Squashan	15	Limitations		Limitations		Limitations	
		Seepage in bottom layer	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Slopes > 15%	1.00			Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
294:							
Ossagon	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Seepage in bottom layer	1.00			Silt or clay textures from 10-60"	0.50
		Clay loam, silty clay, silty clay loam	0.50			Clay loam, silty clay, silty clay loam	0.50
Goldbluffs	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Seepage in bottom layer	1.00	Seepage in 20-40" depth	1.00	Slopes > 15%	1.00
Squashan	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Seepage in bottom layer	1.00	Seepage in 20-40" depth	1.00	Slopes > 15%	1.00
462:							
Mooncreek	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Noisy	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
						Slopes > 15%	1.00
Tossup	15	Limitations		Limitations		Limitations	
		Clay or silty clay	1.00	Slopes > 15%	1.00	Silty clay or clay 10-60"	1.00
		Slopes > 15%	1.00			Clay or silty clay	1.00
						Slopes > 15%	1.00
463:							
Mooncreek	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Noisy	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Fragments (3-10") 15-35%	0.12			Slopes > 15%	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
463:							
Sidehill	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
						Fragments (<75mm) > 50%	0.99
464:							
Mooncreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Tossup	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
Noisy	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
						Slopes > 15%	1.00
465:							
Sidehill	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
						Fragments (<75mm) 25-50%	0.88
Oakside	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
		Fragments (3-10") 15-35%	0.50			Fragments (<75mm) 25-50%	0.31
Darkwoods	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Seepage in bottom layer	1.00			Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Permeability > 2.0 in/hr	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
473:							
Highoaks	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Noisy	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Mudhorse	15	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Saturation < 18" depth	0.99
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
480:							
Dolason	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
						Fragments (<75mm) 25-50%	0.55
Countshill	25	Limitations		Limitations		Limitations	
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
Airstrip	20	Limitations		Limitations		Limitations	
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
						Fragments (<75mm) 25-50%	0.73
481:							
Dolason	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Clay loam, silty clay, silty clay loam	0.50
						Fragments (<75mm) 25-50%	0.01

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
481:							
Airstrip	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	0.99	Depth to bedrock from 40-60"	0.99
		Fragments (3-10") 15-35%	0.04			Fragments (<75mm) 25-50%	0.89
Countshill	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
482:							
Dolason	55	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
						Fragments (<75mm) 25-50%	0.93
Countshill	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
483:							
Doolyville	40	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
						Fragments (<75mm) 25-50%	0.25
Pasturerock	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
484:							
Elkcamp	50	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Silt or clay textures from 10-60"	0.50
		Clay loam, silty clay, silty clay loam	0.50			Clay loam, silty clay, silty clay loam	0.50
Dolason	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
						Fragments (<75mm) 25-50%	0.93

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
484:							
Airstrip	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Fragments (3-10") 15-35%	0.10			Fragments (<75mm) 25-50%	0.88
485:							
Pasturerock	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
						Fragments (<75mm) 25-50%	0.83
						Silt or clay textures from 10-60"	0.50
Coyoterock	25	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Silty clay or clay 10-60"	1.00
		Clay or silty clay	1.00			Clay or silty clay	1.00
Maneze	15	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Silt or clay textures from 10-60"	0.50
		Fragments (3-10") 15-35%	0.92			Clay loam, silty clay, silty clay loam	0.50
531:							
Atwell	45	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Saturation from 18 to 40" depth	0.50
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
Coppercreek	40	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00			Silt or clay textures from 10-60"	0.50
		Clay loam, silty clay, silty clay loam	0.50			Clay loam, silty clay, silty clay loam	0.50
532:							
Atwell	75	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Silty clay or clay 10-60"	1.00
		Clay or silty clay	1.00			Clay or silty clay	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
532:							
Ladybird----------	15	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Fragments (<75mm) > 50%	0.99
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
533:							
Coppercreek--------	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.97
						Silt or clay textures from 10-60"	0.50
Ahpah----------	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
						Fragments (<75mm) 25-50%	0.95
534:							
Coppercreek--------	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Ahpah----------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
						Fragments (<75mm) 25-50%	0.46
Lackscreek---------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Fragments (3-10") 15-35%	0.68			Silt or clay textures from 10-60"	0.50
535:							
Wiregrass----------	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.63
						Silt or clay textures from 10-60"	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
535:							
Scaath	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.62
536:							
Coppercreek	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.84
						Silt or clay textures from 10-60"	0.50
Ahpah	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.67
Lackscreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Fragments (3-10") 15-35%	0.66			Fragments (<75mm) 25-50%	0.99
537:							
Wiregrass	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Scaath	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.57

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
538:							
Wiregrass	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.94
						Silt or clay textures from 10-60"	0.50
Pittplace	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
539:							
Wiregrass	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Scaath	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Fragments (3-10") 15-35%	0.74			Fragments (<75mm) 25-50%	0.94
541:							
Wiregrass	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.92
						Silt or clay textures from 10-60"	0.50
Rockysaddle	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
542:							
Coppercreek	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
542:							
Slidecreek, gravelly loam---	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Lackscreek---	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.55
543:							
Wiregrass---	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.82
						Silt or clay textures from 10-60"	0.50
Rockysaddle---	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Scaath---	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Fragments (3-10") 15-35%	0.64			Fragments (<75mm) 25-50%	0.71
544:							
Coppercreek---	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.62
						Silt or clay textures from 10-60"	0.50
Tectah---	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
544:							
Lackscreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.55
545:							
Devilscreek	45	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Fragments (<75mm) 25-50%	0.54
						Saturation from 18 to 40" depth	0.50
Panthercreek	20	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Slopes > 15%	1.00
		Seepage in bottom layer	1.00	Seepage in 20-40" depth	1.00	Permeability > 2.0 in/hr	0.52
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.57
						Silt or clay textures from 10-60"	0.50
546:							
Lackscreek	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Fragments (3-10") 15-35%	0.81			Fragments (<75mm) 25-50%	0.98
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.86
						Silt or clay textures from 10-60"	0.50
549:							
Scaath	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Fragments (3-10") 15-35%	0.74			Fragments (<75mm) 25-50%	0.77

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
549:							
Rockysaddle--------	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Wiregrass----------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.73
						Silt or clay textures from 10-60"	0.50
550:							
Scaath------------	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.64
Rockysaddle--------	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Wiregrass----------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
553:							
Ladybird----------	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.97
						Silt or clay textures from 10-60"	0.50
Stonehill----------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Fragments (3-10") 15-35%	0.01				

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
554:							
Ladybird	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.80
						Silt or clay textures from 10-60"	0.50
Trailhead	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
555:							
Panthercreek	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Seepage in bottom layer	1.00	Seepage in 20-40" depth	1.00	Slopes > 15%	1.00
						Permeability > 2.0 in/hr	0.52
Coppercreek	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.56
						Silt or clay textures from 10-60"	0.50
Devilscreek	20	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Fragments (<75mm) 25-50%	0.56
		Fragments (3-10") 15-35%	0.02			Silt or clay textures from 10-60"	0.50
556:							
Rodgerpeak	50	Limitations		Limitations		Limitations	
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
						Fragments (<75mm) 25-50%	0.57
Wiregrass	30	Limitations		Limitations		Limitations	
		Clay loam, silty clay, silty clay loam	0.50	Slopes 8 to 15%	0.01	Silt or clay textures from 10-60"	0.50
		Slopes 8 to 15%	0.01			Clay loam, silty clay, silty clay loam	0.50
						Fragments (<75mm) 25-50%	0.32

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
557:							
Ustic Palehumults--	90	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Fragments (3-10") > 35%	1.00			Fragments (>3") > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
558:							
Tectah----------	45	Limitations		Limitations		Limitations	
		Clay or silty clay	1.00	Slopes 8 to 15%	0.16	Silty clay or clay 10-60"	1.00
		Slopes 8 to 15%	0.16			Clay or silty clay	1.00
						Slopes 8 to 15%	0.16
Coppercreek--------	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Trailhead----------	15	Limitations		No limitations		Limitations	
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
559:							
Trailhead----------	85	Limitations		No limitations		Limitations	
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
560:							
Trailhead----------	80	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
561:							
Trailhead----------	75	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
562:							
Trailhead----------	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
562:							
Fortyfour	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Silty clay or clay 10-60"	1.00
		Clay or silty clay	1.00			Clay or silty clay	1.00
563:							
Trailhead	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
Fortyfour	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Silty clay or clay 10-60"	1.00
		Clay or silty clay	1.00			Clay or silty clay	1.00
580:							
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Tectah	30	Limitations		Limitations		Limitations	
		Clay or silty clay	1.00	Slopes > 15%	1.00	Silty clay or clay 10-60"	1.00
		Slopes > 15%	1.00			Clay or silty clay	1.00
						Slopes > 15%	1.00
Slidecreek	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
581:							
Coppercreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
581:							
Slidecreek	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Tectah	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
582:							
Slidecreek	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Lackscreek	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	0.99	Slopes > 15%	1.00
		Fragments (3-10") 15-35%	0.22			Depth to bedrock from 40-60"	0.99
Coppercreek	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.95
						Silt or clay textures from 10-60"	0.50
583:							
Trailhead	55	Limitations		Limitations		Limitations	
		Clay or silty clay	1.00	Slopes > 15%	1.00	Silty clay or clay 10-60"	1.00
		Slopes > 15%	1.00			Clay or silty clay	1.00
						Slopes > 15%	1.00
Wiregrass	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
584:							
Wiregrass----------	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Pittplace----------	25	Limitations		Limitations		Limitations	
		Slopes 8 to 15%	0.63	Slopes 8 to 15%	0.63	Slopes 8 to 15%	0.63
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Scaath------------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.93
585:							
Wiregrass----------	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Rockysaddle--------	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.89
		Fragments (3-10") 15-35%	0.28			Silt or clay textures from 10-60"	0.50
586:							
Wiregrass----------	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
586:							
Rockysaddle--------	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Trailhead----------	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00
						Clay or silty clay	1.00
587:							
Childshill---------	65	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
		Fragments (3-10") 15-35%	0.11			Clay loam, silty clay, silty clay loam	0.50
588:							
Surpur-------------	75	Limitations		Limitations		Limitations	
		Clay loam, silty clay, silty clay loam	0.50	Slopes 8 to 15%	0.04	Silt or clay textures from 10-60"	0.50
		Slopes 8 to 15%	0.04			Clay loam, silty clay, silty clay loam	0.50
						Slopes 8 to 15%	0.04
590:							
Sasquatch----------	45	Limitations		Limitations		Limitations	
		Clay loam, silty clay, silty clay loam	0.50	Slopes 8 to 15%	0.16	Silt or clay textures from 10-60"	0.50
		Slopes 8 to 15%	0.16			Clay loam, silty clay, silty clay loam	0.50
						Slopes 8 to 15%	0.16
Yeti---------------	20	Limitations		Limitations		Limitations	
		Clay loam, silty clay, silty clay loam	0.50	Slopes 8 to 15%	0.16	Silt or clay textures from 10-60"	0.50
		Slopes 8 to 15%	0.16			Clay loam, silty clay, silty clay loam	0.50
						Slopes 8 to 15%	0.16

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
590:							
Footstep	15	Limitations		Limitations		Limitations	
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) > 50%	0.99
591:							
Sasquatch	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Sisterrocks	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Ladybird	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.62
						Silt or clay textures from 10-60"	0.50
592:							
Sisterrocks	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Ladybird	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.70
						Silt or clay textures from 10-60"	0.50
Footstep	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Depth to bedrock < 40"	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
593:							
Sasquatch	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Yeti	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Sisterrocks	15	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
594:							
Sisterrocks	45	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Sasquatch	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Houda	20	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Saturation from 18 to 40" depth	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
595:							
Battery	50	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
Catchings	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Seepage in bottom layer	1.00			Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
596:							
Flintrock	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Slopes > 15%	1.00
						Silt or clay textures from 10-60"	0.50
Highprairie	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
						Clay loam, silty clay, silty clay loam	0.50
597:							
Tarquin	70	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Saturation < 5' depth	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Saturation from 18 to 40" depth	0.65
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
598:							
Ladybird	60	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.88
						Silt or clay textures from 10-60"	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
598:							
Stonehill----------	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
659:							
Raingage----------	65	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Saturation from 18 to 40" depth	0.78
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
Pigpen----------	20	Limitations		Limitations		Limitations	
		Saturation < 6' depth	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Slopes > 15%	1.00	Saturation < 5' depth	1.00	Saturation < 18" depth	1.00
		Clay loam, silty clay, silty clay loam	0.50			Fragments (<75mm) 25-50%	0.68
756:							
Oragran----------	40	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
						Fragments (>3") 25-50%	0.05
Weitchpec----------	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Fragments (<75mm) > 50%	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
						Depth to bedrock < 40"	1.00
759:							
Jayel, extremely stony----------	35	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
		Clay or silty clay	1.00			Silty clay or clay 10-60"	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
759:							
Walnett, extremely stony	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00			Fragments (<75mm) 25-50%	0.90
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
Oragran	20	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Depth to bedrock < 40"	1.00
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Slopes > 15%	1.00
						Fragments (>3") 25-50%	0.06
760:							
Jayel, extremely stony	30	Limitations		Limitations		Limitations	
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay or silty clay	1.00	Slopes > 15%	1.00	Silty clay or clay 10-60"	1.00
		Slopes > 15%	1.00			Packing (OL, OH, CH or MH)	1.00
Oragran	25	Limitations		Limitations		Limitations	
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
						Fragments (>3") 25-50%	0.05
Walnett, extremely stony	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00			Fragments (<75mm) 25-50%	0.90
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
761:							
Gasquet, extremely stony	30	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Packing (OL, OH, CH or MH)	1.00
		Lithic or paralithic bedrock < 72"	1.00			Slopes > 15%	1.00
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench type sanitary landfill		Area type sanitary landfill		Daily cover for landfill	
		Limitation	Value	Limitation	Value	Limitation	Value
761:							
Walnett, extremely stony	25	Limitations		Limitations		Limitations	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 15%	1.00
		Lithic or paralithic bedrock < 72"	1.00			Fragments (<75mm) 25-50%	0.78
		Clay loam, silty clay, silty clay loam	0.50			Silt or clay textures from 10-60"	0.50
Jayel	20	Limitations		Limitations		Limitations	
		Lithic or paralithic bedrock < 72"	1.00	Bedrock depth < 40"	1.00	Depth to bedrock < 40"	1.00
		Clay or silty clay	1.00	Slopes > 15%	1.00	Silty clay or clay 10-60"	1.00
		Slopes > 15%	1.00			Packing (OL, OH, CH or MH)	1.00

Abbreviations for textures: cos, coarse sand; cosl, coarse sandy loam; fs, fine sand; lcos, loamy coarse sand; lfs, loamy fine sand; ls, loamy sand; lvfs loamy very fine sand; s, sand; sg, sand and gravel; and vfs, very fine sand.

The interpretation for trench sanitary landfills evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, depth to hard or soft bedrock, depth to a thick or thin cemented pan, fragments 3 to 10 inches in size, sodium content (SAR), pH, clayey or sandy textures, and permeability that is too high, allowing seepage in some climates.

The interpretation for area sanitary landfills evaluates the following soil properties at varying depths in the soil: flooding, ponding, wetness, slope, depth to bedrock, depth to a cemented pan, and permeability that is too high, allowing seepage in some climates.

The interpretation for daily cover for landfill evaluates the following soil properties at varying depths in the soil: ponding, wetness, slope, depth to bedrock, depth to a cemented pan, fragments greater than or less than 3 inches in size, Unified class for peat (PT), Unified classes for packing (OL, OH, CH, and MH), sandy or clayey textures, pH, carbonates, sodium content (SAR), salinity (EC), soil climate, kaolinitic mineralogy, and permeability that is too high, allowing seepage.

Table 13a.--Construction Materials (Part 1)

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The closer the value is to 0, the greater the potential limitation. Values of 0 are absolute limitations based on the soil property criteria used to develop the interpretation. Values closer to 1.0 have less of a limitation. Limiting features with values equal to 1.0 have absolutely no limitation. Rating classes are determined by the most limiting value. Fine-earth fractions and fragment limiting features are reported on the basis of weight. A brief summary of the rating criteria and of the abbreviations used in the describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100:							
Riverwash	90	Not Rated		Not Rated		Not rated	
102:							
Fluvents	75	Fair source		Fair source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible source	0.08	Saturation < 1' depth	0.00
						Hard to reclaim	0.00
		Bottom layer possible source	0.15	Bottom layer is a possible source	0.10	Sand fractions 75-85%	0.15
110:							
Weott	85	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Saturation < 1' depth	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		
116:							
Swainslough	90	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Saturation < 1' depth	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.18
119:							
Arlynda	85	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Saturation < 1' depth	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.98
126:							
Loleta	85	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Saturation < 1' depth	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.01		

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
155:							
Samoa	50	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Bottom layer is a possible source	0.93	Sand fractions > 85%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible	0.93	Slope > 15%	0.00
Clambeach	30	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Bottom layer is a possible source	0.93	Sand fractions > 85%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible source	0.93	Saturation < 1' depth	0.00
Dune land	15	Not Rated		Not Rated		Not rated	
157:							
Beaches	35	Not Rated		Not Rated		Not rated	
Samoa	35	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Bottom layer is a possible source	0.93	Sand fractions > 85%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible source	0.93	Slope > 15%	0.00
Dune land	25	Not Rated		Not Rated		Not rated	
171:							
Worswick	40	Poor source		Fair source		Fair source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Saturation from 1 to 3'	0.09
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.07		
Arlynda	35	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Saturation < 1' depth	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		
172:							
Bigriver, fine sandy loam	80	Poor source		Poor source		Good source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00		
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
173:							
Bigriver, silt loam-	55	Poor source		Poor source		Good source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00		
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		
Ferndale----------	20	Poor source		Poor source		Fair source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Saturation from 1 to 3'	0.96
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		
Russ----------	15	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Bottom layer is a possible source	0.06	Sand fractions > 85%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible source	0.10		
174:							
Bigtree----------	50	Poor source		Poor source		Good source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00		
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		
Mystery----------	25	Poor source		Fair source		Fair source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Saturation from 1 to 3'	0.91
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible source	0.01		
177:							
Battery, dry--------	75	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Hard to reclaim	0.80
						Clay 27 to 40%	0.82
178:							
Battery----------	85	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Hard to reclaim	0.00
						Clay 27 to 40%	0.92

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
191:							
Talawa	85	Poor source		Fair source		Fair source	
		Bottom layer not a source	0.00	Thickest layer possible source	0.07	Saturation from 1 to 3'	0.09
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.26	Sand fractions 75-85%	0.56
192:							
Aubell	85	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Saturation < 1' depth	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.32			Clay 27 to 40%	0.32
						pH between 4.5 - 6.5	0.95
194:							
Tsunami	85	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Hard to reclaim	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.09			pH between 4.5 - 6.5	0.95
220:							
Ferndale	85	Poor source		Poor source		Good source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00		
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.00		
222:							
Ferndale, moderately well drained	75	Poor source		Poor source		Fair source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Saturation from 1 to 3'	0.06
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		
251:							
Surpur	75	Poor source		Poor source		Fair source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Rock fragment content	0.12
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.98
289:							
Espa	80	Poor source		Fair source		Fair source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.88
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.03		

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
290:							
Surpur	50	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.09	Rock fragment content	0.50
						Clay 27 to 40%	0.92
						pH between 4.5 - 6.5	0.98
Mettah	35	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay > 40%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
291:							
Ossagon	65	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.04	pH between 4.5 - 6.5	0.76
Squashan	20	Fair source		Fair source		Poor source	
		Thickest layer possible source	0.22	Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.53	Bottom layer is a possible source	0.38	Rock fragment content	0.00
						Slope > 15%	0.00
						pH between 4.5 - 6.5	0.95
292:							
Ossagon	65	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.03	pH between 4.5 - 6.5	0.76
Squashan	20	Fair source		Poor source		Poor source	
		Bottom layer possible source	0.25	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer possible source	0.32	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.95
293:							
Ossagon	50	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.02	pH between 4.5 - 6.5	0.76

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
293:							
Goldbluffs	25	Fair source		Fair source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Hard to reclaim	0.00
				Bottom layer is a possible source	0.04	Rock fragment content	0.00
		Bottom layer possible source	0.35			Slope > 15%	0.00
						pH between 4.5 - 6.5	0.88
Squashan	15	Fair source		Fair source		Poor source	
		Thickest layer possible source	0.25	Thickest layer not a source	0.00	Hard to reclaim	0.00
				Bottom layer is a possible source	0.03	Rock fragment content	0.00
		Bottom layer possible source	0.38			Slope > 15%	0.00
294:							
Ossagon	35	Poor source		Fair source		Poor source	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer is a possible source	0.04	pH between 4.5 - 6.5	0.76
Goldbluffs	20	Fair source		Fair source		Poor source	
		Thickest layer possible source	0.15	Thickest layer not a source	0.00	Slope > 15%	0.00
				Bottom layer is a possible source	0.04	Hard to reclaim	0.00
		Bottom layer possible source	0.35			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.92
Squashan	15	Fair source		Fair source		Poor source	
		Thickest layer possible source	0.22	Thickest layer not a source	0.00	Slope > 15%	0.00
				Bottom layer is a possible source	0.38	Hard to reclaim	0.00
		Bottom layer possible source	0.50			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.95
462:							
Mooncreek	35	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Rock fragment content	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
						pH between 4.5 - 6.5	0.88
						Clay 27 to 40%	0.92
Noisy	25	Good source		Poor source		Poor source	
		Thickest layer possible source	0.50	Bottom layer not a source	0.00	Hard to reclaim	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
						Slope > 15%	0.00
						pH between 4.5 - 6.5	0.59

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
462:							
Tossup	15	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Hard to reclaim	0.00
				Thickest layer not a source	0.00	Clay > 40%	0.00
		Bottom layer not a source	0.00			Slope > 15%	0.00
						Rock fragment content	0.01
						pH between 4.5 - 6.5	0.76
463:							
Mooncreek	25	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.82
Noisy	20	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.40			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.76
						Clay 27 to 40%	0.92
Sidehill	20	Fair source		Fair source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
				Bottom layer is a possible source	0.04	Rock fragment content	0.00
		Bottom layer possible source	0.47			Depth to bedrock 20 to 40"	0.40
						pH between 4.5 - 6.5	0.76
464:							
Mooncreek	40	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.82
						pH between 4.5 - 6.5	0.95
Tossup	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.18
						Rock fragment content	0.98
Noisy	15	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.22			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.76

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
465:							
Sidehill	35	Fair source		Poor source		Poor source	
		Bottom layer possible source	0.10	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer possible source	0.10	Thickest layer not a source	0.00	Rock fragment content	0.00
						Depth to bedrock 20 to 40"	0.50
						pH between 4.5 - 6.5	0.76
Oakside	25	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Depth to bedrock < 20"	0.00
						Rock fragment content	0.00
Darkwoods	20	Fair source		Fair source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
				Bottom layer is a possible source	0.10	Rock fragment content	0.00
		Bottom layer possible source	0.38			Hard to reclaim	0.00
473:							
Highoaks	30	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.76
						pH between 4.5 - 6.5	0.76
Noisy	25	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.22	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.88			Rock fragment content	0.00
						Clay 27 to 40%	0.50
						pH between 4.5 - 6.5	0.88
Mudhorse	15	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						Saturation from 1 to 3'	0.24
						pH between 4.5 - 6.5	0.95
480:							
Dolason	50	Poor source		Fair source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
				Bottom layer is a possible source	0.02	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.20
						pH between 4.5 - 6.5	0.95

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
480:							
Countshill	25	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Depth to bedrock 20 to 40"	0.44
		Bottom layer not a source	0.00			Rock fragment content	0.92
						pH between 4.5 - 6.5	0.98
Airstrip	20	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Rock fragment content	0.00
				Thickest layer not a source	0.00	Slope > 15%	0.00
		Bottom layer possible source	0.23			Depth to bedrock 20 to 40"	0.34
						pH between 4.5 - 6.5	0.88
481:							
Dolason	45	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.41
						Hard to reclaim	0.84
						pH between 4.5 - 6.5	0.95
Airstrip	25	Fair source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer possible source	0.28	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.88
Countshill	20	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Depth to bedrock 20 to 40"	0.18
		Bottom layer not a source	0.00			Rock fragment content	0.92
						pH between 4.5 - 6.5	0.98
482:							
Dolason	55	Fair source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer possible source	0.03	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.95
Countshill	30	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Depth to bedrock 20 to 40"	0.50
		Bottom layer not a source	0.00			Rock fragment content	0.92
						pH between 4.5 - 6.5	0.98

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
483:							
Doolyville	40	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Saturation from 1 to 3'	0.03
						Hard to reclaim	0.03
Pasturerock	35	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Hard to reclaim	0.12
						Clay 27 to 40%	0.68
484:							
Elkcamp	50	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Hard to reclaim	0.01
						Rock fragment content	0.18
						pH between 4.5 - 6.5	0.98
Dolason	30	Fair source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer possible source	0.03	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.95
Airstrip	15	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.20	Bottom layer not a source	0.00	Slope > 15%	0.00
		Bottom layer possible source	0.30	Thickest layer not a source	0.00	Rock fragment content	0.00
						Depth to bedrock 20 to 40"	0.60
						pH between 4.5 - 6.5	0.98
485:							
Pasturerock	40	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Hard to reclaim	0.00
						Clay 27 to 40%	0.68
Coyoterock	25	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.04
						Clay 27 to 40%	0.50
						Saturation from 1 to 3'	0.84
						Hard to reclaim	0.92
						pH between 4.5 - 6.5	0.98

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
485:							
Maneze	15	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.03			Hard to reclaim	0.00
531:							
Atwell	45	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Saturation from 1 to 3'	0.88
						Rock fragment content	0.88
						pH between 4.5 - 6.5	0.95
						Hard to reclaim	0.97
Coppercreek	40	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.82
						pH between 4.5 - 6.5	0.98
532:							
Atwell	75	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Saturation from 1 to 3'	0.88
						Rock fragment content	0.88
						pH between 4.5 - 6.5	0.95
Ladybird	15	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.03			Hard to reclaim	0.00
						Clay 27 to 40%	0.68
						pH between 4.5 - 6.5	0.88
533:							
Coppercreek	60	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer not a source	0.00			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.98
Ahpah	15	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.18			Depth to bedrock 20 to 40"	0.62

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
534:							
Coppercreek	40	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.00
						pH between 4.5 - 6.5	0.88
						Clay 27 to 40%	0.92
Ahpah	20	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.02
		Bottom layer possible source	0.05			Depth to bedrock 20 to 40"	0.92
Lackscreek	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Depth to bedrock 20 to 40"	0.80
535:							
Wiregrass	60	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.00
						pH between 4.5 - 6.5	0.88
Scaath	25	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Depth to bedrock 20 to 40"	0.88
						pH between 4.5 - 6.5	0.98
536:							
Coppercreek	45	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.05
						Clay 27 to 40%	0.92
						pH between 4.5 - 6.5	0.98
Ahpah	20	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.18			Depth to bedrock 20 to 40"	0.74
						pH > 6.5 or is NULL	1.00

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
536:							
Lackscreek	15	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.25			Depth to bedrock 20 to 40"	0.16
537:							
Wiregrass	50	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.00
						pH between 4.5 - 6.5	0.88
						Clay 27 to 40%	0.92
Scaath	20	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Depth to bedrock 20 to 40"	0.88
						pH between 4.5 - 6.5	0.98
538:							
Wiregrass	60	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.03
						Clay 27 to 40%	0.92
						pH between 4.5 - 6.5	0.98
Pittplace	15	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.32
						Rock fragment content	0.50
						pH between 4.5 - 6.5	0.50
						Hard to reclaim	0.68
539:							
Wiregrass	50	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.88
						Clay 27 to 40%	0.92

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
539:							
Scaath	30	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Depth to bedrock 20 to 40"	0.54
541:							
Wiregrass	60	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.88
Rockysaddle	20	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.28	Bottom layer not a source	0.00	Slope > 15%	0.00
		Bottom layer possible source	0.37	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						Clay 27 to 40%	0.68
542:							
Coppercreek	45	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.00
						pH between 4.5 - 6.5	0.88
						Clay 27 to 40%	0.92
Slidecreek, gravelly loam	30	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.28	Bottom layer not a source	0.00	Slope > 15%	0.00
		Bottom layer possible source	0.37	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						Clay 27 to 40%	0.92
Lackscreek	15	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Depth to bedrock 20 to 40"	0.64
						pH between 4.5 - 6.5	0.98

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
543:							
Wiregrass	40	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.00
						pH between 4.5 - 6.5	0.88
						Clay 27 to 40%	0.92
Rockysaddle	30	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.28	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.37			Rock fragment content	0.00
						Clay 27 to 40%	0.92
Scaath	15	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Depth to bedrock 20 to 40"	0.90
544:							
Coppercreek	40	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.00
						pH between 4.5 - 6.5	0.88
Tectah	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						pH between 4.5 - 6.5	0.68
						Rock fragment content	0.95
Lackscreek	15	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Depth to bedrock 20 to 40"	0.64
						pH between 4.5 - 6.5	0.98

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
545:							
Devilscreek	45	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.07			Rock fragment content	0.12
						Saturation from 1 to 3'	0.88
						pH between 4.5 - 6.5	0.95
Panthercreek	20	Fair source		Fair source		Poor source	
		Bottom layer possible source	0.12	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer possible source	0.01	Hard to reclaim	0.00
		Thickest layer possible source	0.25			Rock fragment content	0.00
Coppercreek	15	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.03
						pH between 4.5 - 6.5	0.88
546:							
Lackscreek	65	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.22			Depth to bedrock 20 to 40"	0.46
Coppercreek	15	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.03
						Clay 27 to 40%	0.92
						pH between 4.5 - 6.5	0.98
549:							
Scaath	40	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Depth to bedrock 20 to 40"	0.10

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
549:							
Rockysaddle---------	25	Fair source		Poor source		Poor source	
		Bottom layer possible source	0.29	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Thickest layer possible source	0.35			Rock fragment content	0.00
						Clay 27 to 40%	0.92
Wiregrass----------	20	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.00
						pH between 4.5 - 6.5	0.88
550:							
Scaath-------------	40	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Depth to bedrock 20 to 40"	0.88
Rockysaddle---------	30	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.28	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.37			Rock fragment content	0.00
						Clay 27 to 40%	0.92
Wiregrass----------	20	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.74
						pH between 4.5 - 6.5	0.88
						Clay 27 to 40%	0.92
553:							
Ladybird-----------	60	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer not a source	0.00			Rock fragment content	0.00
						Clay 27 to 40%	0.82
						pH between 4.5 - 6.5	0.88

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
553:							
Stonehill	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.02
						Depth to bedrock 20 to 40"	0.64
						pH between 4.5 - 6.5	0.68
554:							
Ladybird	50	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.61
						pH between 4.5 - 6.5	0.98
Trailhead	25	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		
555:							
Panthercreek	35	Fair source		Poor source		Poor source	
		Bottom layer possible source	0.12	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Thickest layer possible source	0.30			Rock fragment content	0.00
Coppercreek	20	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.08
						pH between 4.5 - 6.5	0.88
Devilscreek	20	Fair source		Poor source		Poor source	
		Bottom layer possible source	0.07	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Thickest layer possible source	0.10			Rock fragment content	0.12
						pH between 4.5 - 6.5	0.95
556:							
Rodgerpeak	50	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Depth to bedrock < 20"	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
556:							
Wiregrass	30	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Rock fragment content	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Hard to reclaim	0.39
						pH between 4.5 - 6.5	0.88
557:							
Ustic Palehumults	90	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Hard to reclaim	0.00
558:							
Tectah	45	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.88
						Rock fragment content	0.92
Coppercreek	25	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.68
						Rock fragment content	0.82
						pH between 4.5 - 6.5	0.88
Trailhead	15	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay > 40%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.88
559:							
Trailhead	85	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay > 40%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.88
560:							
Trailhead	80	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						pH between 4.5 - 6.5	0.88

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
561:							
Trailhead	75	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						pH between 4.5 - 6.5	0.88
562:							
Trailhead	65	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.02
						pH between 4.5 - 6.5	0.95
Fortyfour	15	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.95
						Depth to bedrock 20 to 40"	0.98
563:							
Trailhead	65	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						pH between 4.5 - 6.5	0.88
Fortyfour	15	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						Rock fragment content	0.00
						Depth to bedrock 20 to 40"	0.60
						pH between 4.5 - 6.5	0.95
580:							
Coppercreek	40	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.50
						pH between 4.5 - 6.5	0.50
						Rock fragment content	0.68
Tectah	30	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.18
						pH between 4.5 - 6.5	0.68
						Rock fragment content	0.95

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
580:							
Slidecreek----------	20	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.25	Bottom layer not a source	0.00	Hard to reclaim	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.37			Slope > 15%	0.00
						pH between 4.5 - 6.5	0.50
						Clay 27 to 40%	0.68
581:							
Coppercreek---------	40	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.68
						Clay 27 to 40%	0.82
Slidecreek----------	30	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.12	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.51			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.59
						Clay 27 to 40%	0.82
Tectah--------------	15	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Clay > 40%	0.00
						pH between 4.5 - 6.5	0.50
						Hard to reclaim	0.92
582:							
Slidecreek----------	40	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.05	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.57			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.59
						Clay 27 to 40%	0.82
Lackscreek----------	25	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
Coppercreek---------	15	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer not a source	0.00			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.68

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
583:							
Trailhead	65	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay > 40%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.50
Wiregrass	25	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Hard to reclaim	0.26
						Rock fragment content	0.50
						pH between 4.5 - 6.5	0.68
						Clay 27 to 40%	0.82
584:							
Wiregrass	40	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.59
Pittplace	25	Poor source		Poor source		Fair source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay 27 to 40%	0.32
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope 12 to 15%	0.37
						Rock fragment content	0.50
						pH between 4.5 - 6.5	0.50
						Hard to reclaim	0.68
Scaath	20	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						pH between 4.5 - 6.5	0.50
						Clay 27 to 40%	0.92
						Depth to bedrock 20 to 40"	0.96
585:							
Wiregrass	45	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.59
						Clay 27 to 40%	0.98
Rockysaddle	40	Fair source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer possible source	0.12	Thickest layer not a source	0.00	Hard to reclaim	0.00
						Rock fragment content	0.00
						pH between 4.5 - 6.5	0.50
						Clay 27 to 40%	0.68

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
586:							
Wiregrass	40	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.24
		Bottom layer not a source	0.00			Clay 27 to 40%	0.92
						pH between 4.5 - 6.5	0.95
Rockysaddle	30	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.22	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.28			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.50
						Clay 27 to 40%	0.68
Trailhead	15	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						Hard to reclaim	0.54
						pH between 4.5 - 6.5	0.68
						Rock fragment content	0.76
587:							
Childshill	65	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Hard to reclaim	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Slope > 15%	0.00
						pH between 4.5 - 6.5	0.76
588:							
Surpur	75	Poor source		Poor source		Fair source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	pH between 4.5 - 6.5	0.76
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.92
						Slope 8 to 12%	0.96
						Clay 27 to 40%	0.98
590:							
Sasquatch	45	Poor source		Poor source		Fair source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay 27 to 40%	0.82
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope 8 to 12%	0.84
						pH between 4.5 - 6.5	0.88

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
590:							
Yeti	20	Poor source		Poor source		Fair source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay 27 to 40%	0.18
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Hard to reclaim	0.61
						pH between 4.5 - 6.5	0.68
						Slope 8 to 12%	0.84
						Rock fragment content	0.95
Footstep	15	Fair source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Rock fragment content	0.00
				Thickest layer not a source	0.00	Slope > 15%	0.00
		Bottom layer possible source	0.40			Depth to bedrock 20 to 40"	0.60
						pH between 4.5 - 6.5	0.82
591:							
Sasquatch	45	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Hard to reclaim	0.16
						Clay 27 to 40%	0.82
						pH between 4.5 - 6.5	0.88
Sisterrocks	25	Fair source		Poor source		Poor source	
		Bottom layer possible source	0.05	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Thickest layer possible source	0.12			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.68
						Clay 27 to 40%	0.82
Ladybird	15	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.74
						Clay 27 to 40%	0.82
						pH between 4.5 - 6.5	0.88
592:							
Sisterrocks	35	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.51	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.51			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.59
						Clay 27 to 40%	0.92

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
592:							
Ladybird	30	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.74
						Clay 27 to 40%	0.82
						pH between 4.5 - 6.5	0.88
Footstep	20	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.07	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.38			Depth to bedrock 20 to 40"	0.40
						pH between 4.5 - 6.5	0.68
593:							
Sasquatch	50	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	pH between 4.5 - 6.5	0.95
Yeti	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.18
						pH between 4.5 - 6.5	0.59
						Rock fragment content	0.95
Sisterrocks	15	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.10	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.37			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.59
						Clay 27 to 40%	0.68
594:							
Sisterrocks	45	Fair source		Poor source		Poor source	
		Bottom layer possible source	0.12	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Thickest layer possible source	0.35			Rock fragment content	0.00
						pH between 4.5 - 6.5	0.59
						Clay 27 to 40%	0.98

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
594:							
Sasquatch	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Hard to reclaim	0.39
						Rock fragment content	0.50
						pH between 4.5 - 6.5	0.68
						Clay 27 to 40%	0.82
Houda	20	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.12	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.47			Hard to reclaim	0.00
						Saturation from 1 to 3'	0.88
595:							
Battery	50	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Rock fragment content	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
						Hard to reclaim	0.80
						Clay 27 to 40%	0.82
Catchings	30	Fair source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Rock fragment content	0.00
		Thickest layer possible source	0.25	Thickest layer not a source	0.00	Slope > 15%	0.00
						pH between 4.5 - 6.5	0.82
						Not hard to reclaim	1.00
596:							
Flintrock	40	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.47	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.77			Rock fragment content	0.00
						Clay 27 to 40%	0.98
Highprairie	30	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.50
						Hard to reclaim	0.84
597:							
Tarquin	70	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Saturation from 1 to 3'	0.78
						pH between 4.5 - 6.5	0.88

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
598:							
Ladybird	60	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer not a source	0.00			Rock fragment content	0.00
						Clay 27 to 40%	0.82
						pH between 4.5 - 6.5	0.88
Stonehill	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.00
						Depth to bedrock 20 to 40"	0.64
						pH between 4.5 - 6.5	0.68
659:							
Raingage	65	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragment content	0.41
						Saturation from 1 to 3'	0.65
						Hard to reclaim	0.88
Pigpen	20	Poor source		Poor source		Poor source	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer not a source	0.00			Hard to reclaim	0.00
						Saturation from 1 to 3'	0.02
						Clay 27 to 40%	0.82
						pH between 4.5 - 6.5	0.98
756:							
Oragran	40	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Depth to bedrock < 20"	0.00
Weitchpec	25	Fair source		Fair source		Poor source	
		Thickest layer possible source	0.37	Bottom layer is a possible source	0.04	Slope > 15%	0.00
		Bottom layer possible source	0.38	Thickest layer possible source	0.04	Rock fragment content	0.00
						Depth to bedrock 20 to 40"	0.78

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
759:							
Jayel, extremely stony	35	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay > 40%	0.00
						Rock fragment content	0.12
						Depth to bedrock 20 to 40"	0.62
Walnett, extremely stony	20	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.28	Bottom layer not a source	0.00	Slope > 15%	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.43			Rock fragment content	0.00
						Clay 27 to 40%	0.92
Oragran	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Depth to bedrock < 20"	0.00
760:							
Jayel, extremely stony	30	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay > 40%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
						Rock fragment content	0.12
						Depth to bedrock 20 to 40"	0.62
Oragran	25	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Depth to bedrock < 20"	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
Walnett, extremely stony	25	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.28	Bottom layer not a source	0.00	Hard to reclaim	0.00
				Thickest layer not a source	0.00	Rock fragment content	0.00
		Bottom layer possible source	0.43			Slope > 15%	0.00
						Clay 27 to 40%	0.92

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
761:							
Gasquet, extremely stony	30	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope > 15%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Clay 27 to 40%	0.02
Walnett, extremely stony	25	Fair source		Poor source		Poor source	
		Thickest layer possible source	0.28	Bottom layer not a source	0.00	Rock fragment content	0.00
				Thickest layer not a source	0.00	Hard to reclaim	0.00
		Bottom layer possible source	0.46			Slope > 15%	0.00
						Clay 27 to 40%	0.92
Jayel	20	Poor source		Poor source		Poor source	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Clay > 40%	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope > 15%	0.00
						Rock fragment content	0.41
						Depth to bedrock 20 to 40"	0.62

The interpretation for gravel source evaluates coarse fragments greater than 0.2 inches in size in the bottom layer or in the thickest layer of the soil.

The interpretation for sand source evaluates the amount of sand and fine gravel in the thickest layer or in the bottom layer of the soil. Organic soil layers that have the Unified engineering class for peat (PT) are also evaluated.

The interpretation for topsoil source evaluates the following soil properties at varying depths: calcium carbonate content, clay content, soil bulk density, sand content, soil wetness, coarse fragments 0.2 to 3 inches in size, fragments greater than 3 inches in size, content of organic matter (OM), sodium content expressed as the sodium adsorption ratio (SAR), salinity expressed as dS/m of electrical conductivity (EC), depth to bedrock, slope, and pH.

Table 13b.--Construction Materials (Part 2)

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The closer the value is to 0, the greater the potential limitation. Values of 0 are absolute limitations based on the soil property criteria used to develop the interpretation. Values closer to 1.0 have less of a limitation. Limiting features with values equal to 1.0 have absolutely no limitation and are not shown in this report. Rating classes are determined by the most limiting value. Fine-earth fractions and fragment limiting features are reported on the basis of weight. A brief summary of the rating criteria and of the abbreviations used in the describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100:					
Riverwash	90	Not rated		Not rated	
102:					
Fluvents	75	Fair source		Poor source	
		Sand fractions 75 to 85%	0.34	Saturation < 1' depth	0.00
		AWC 3 - 6" to 60" depth	0.45		
		pH is between 4 and 6.5 above 40"	0.84		
110:					
Weott	85	Fair source		Poor source	
		K-factor .10 -.35	0.68	Saturation < 1' depth	0.00
				AASHTO GI > 8 (low soil strength)	0.00
				LEP 3 to 9	0.78
116:					
Swainslough	90	Fair source		Poor source	
		Clay 27 to 40%	0.18	Saturation < 1' depth	0.00
				AASHTO GI > 8 (low soil strength)	0.00
				LEP 3 to 9	0.67
119:					
Arlynda	85	Fair source		Poor source	
		Clay 27 to 40%	0.98	Saturation < 1' depth	0.00
				AASHTO GI > 8 (low soil strength)	0.00
				LEP 3 to 9	0.75
126:					
Loleta	85	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.60	Saturation < 1' depth	0.00
		K-factor < .10 or is NULL	0.99		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
155:					
Samoa	50	Poor source		Poor source	
		Sand fractions > 85%	0.00	Slopes > 25%	0.00
		WEG = 1 or 2	0.00		
		OM < .5%	0.00		
		AWC 3 - 6" to 60" depth	0.22		
		pH is between 4 and 6.5 above 40"	0.80		
Clambeach	30	Poor source		Poor source	
		Sand fractions > 85%	0.00	Saturation < 1' depth	0.00
		WEG = 1 or 2	0.00		
		OM < .5%	0.00		
		AWC 3 - 6" to 60" depth	0.16		
		pH is between 4 and 6.5 above 40"	0.80		
Dune land	15	Not rated		Not rated	
157:					
Beaches	35	Not rated		Not rated	
Samoa	35	Poor source		Poor source	
		Sand fractions > 85%	0.00	Slopes > 25%	0.00
		WEG = 1 or 2	0.00		
		OM < .5%	0.00		
		AWC 3 - 6" to 60" depth	0.16		
Dune land	25	Not rated		Not rated	
171:					
Worswick	40	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Saturation from 1 to 3'	0.09
				LEP 3 to 9	0.98
Arlynda	35	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Saturation < 1' depth	0.00
172:					
Bigriver, fine sandy loam	80	Poor source		Good source	
		OM < .5%	0.00		
		K-factor .10 -.35	0.37		
		pH is between 4 and 6.5 above 40"	0.84		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
173:					
Bigriver, silt loam	55	Poor source		Good source	
		OM < .5%	0.00		
		K-factor .10 -.35	0.37		
		pH is between 4 and 6.5 above 40"	0.84		
Ferndale	20	Fair source		Poor source	
		K-factor .10 -.35	0.68	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.80	Saturation from 1 to 3'	0.96
Russ	15	Poor source		Good source	
		Sand fractions > 85%	0.00		
		OM is .5 to 1%	0.50		
		pH is between 4 and 6.5 above 40"	0.80		
174:					
Bigtree	50	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.48		
Mystery	25	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.52	Saturation from 1 to 3'	0.91
177:					
Battery, dry	75	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.40	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
178:					
Battery	85	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.40	Slopes 15 to 25%	0.50
		Clay 27 to 40%	0.92		
191:					
Talawa	85	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.48	Saturation from 1 to 3'	0.09
		Sand fractions 75 to 85%	0.92		
192:					
Aubell	85	Fair source		Poor source	
		Clay 27 to 40%	0.32	Saturation < 1' depth	0.00
		pH is between 4 and 6.5 above 40"	0.40	LEP 3 to 9	0.75
194:					
Tsunami	85	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.48		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
220:					
Ferndale	85	Fair source		Poor source	
		K-factor .10 -.35	0.37	AASHTO GI > 8 (low soil strength)	0.00
				LEP 3 to 9	0.84
222:					
Ferndale, moderately well drained	75	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.56	Saturation from 1 to 3'	0.06
		K-factor .10 -.35	0.68		
251:					
Surpur	75	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI > 8 (low soil strength)	0.00
289:					
Espa	80	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.20		
290:					
Surpur	50	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.20		
		Clay 27 to 40%	0.92		
Mettah	35	Poor source		Poor source	
		Clay > 40%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.20		
291:					
Ossagon	65	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.50
				AASHTO GI 5 to 8 (soil strength)	0.78
Squashan	20	Fair source		Fair source	
		AWC 3 - 6" to 60" depth	0.19	Slopes 15 to 25%	0.50
		pH is between 4 and 6.5 above 40"	0.20		
292:					
Ossagon	65	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.28	Slopes > 25%	0.00
Squashan	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
293:					
Ossagon	50	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.20		
Goldbluffs	25	Poor source		Good source	
		OM < .5%	0.00		
		AWC 3 - 6" to 60" depth	0.08		
		pH is between 4 and 6.5 above 40"	0.40		
Squashan	15	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.20		
294:					
Ossagon	35	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
				AASHTO GI 5 to 8 (soil strength)	0.78
Goldbluffs	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.76		
Squashan	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	1.00		
462:					
Mooncreek	35	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.24	Slopes > 25%	0.00
		OM is .5 to 1%	0.68		
		Clay 27 to 40%	0.92		
Noisy	25	Fair source		Good source	
		AWC 3 - 6" to 60" depth	0.02		
		OM is .5 to 1%	0.08		
		pH is between 4 and 6.5 above 40"	0.24		
Tossup	15	Poor source		Good source	
		Clay > 40%	0.00		
		OM is .5 to 1%	0.08		
		pH is between 4 and 6.5 above 40"	0.24		
463:					
Mooncreek	25	Poor source		Poor source	
		OM < .5%	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.48		
		Clay 27 to 40%	0.82		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
463:					
Noisy	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.24	Slopes > 25%	0.00
		OM is .5 to 1%	0.68		
		Clay 27 to 40%	0.92		
Sidehill	20	Poor source		Poor source	
		OM < .5%	0.00	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.14	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.32		
464:					
Mooncreek	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Slopes > 25%	0.00
		OM is .5 to 1%	0.50		
		Clay 27 to 40%	0.82		
Tossup	20	Poor source		Poor source	
		OM < .5%	0.00	Slopes > 25%	0.00
		Clay 27 to 40%	0.18		
		pH is between 4 and 6.5 above 40"	0.56		
Noisy	15	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.19	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.24		
		OM is .5 to 1%	0.68		
465:					
Sidehill	35	Poor source		Poor source	
		OM < .5%	0.00	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.03	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.32		
Oakside	25	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.64	Slopes > 25%	0.00
		Fragments 3-10" are 25 to 50%	0.98		
Darkwoods	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Slopes > 25%	0.00
		OM is .5 to 1%	0.68		
473:					
Highoaks	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.32	Slopes > 25%	0.00
				AASHTO GI > 8 (low soil strength)	0.00

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
473:					
Noisy	25	Fair source		Poor source	
		OM is .5 to 1%	0.08	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.40		
		Clay 27 to 40%	0.50		
		AWC 3 - 6" to 60" depth	0.89		
Mudhorse	15	Poor source		Poor source	
		OM < .5%	0.00	Slopes > 25%	0.00
		Clay > 40%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.48	Saturation from 1 to 3'	0.24
480:					
Dolason	50	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.48		
Countshill	25	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.82		
Airstrip	20	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.30	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.40		
481:					
Dolason	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Slopes > 25%	0.00
Airstrip	25	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.68	Depth to bedrock 40 to 60"	0.00
Countshill	20	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.40	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.48	Slopes > 25%	0.00
482:					
Dolason	55	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Slopes > 25%	0.00
Countshill	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.93	Slopes > 25%	0.00

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
483:					
Doolyville	40	Poor source		Poor source	
		OM < .5%	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.60	Saturation from 1 to 3'	0.03
				LEP 3 to 9	0.83
Pasturerock	35	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.68	Slopes > 25%	0.00
		Clay 27 to 40%	0.68		
484:					
Elkcamp	50	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.40	Slopes > 25%	0.00
Dolason	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Slopes > 25%	0.00
Airstrip	15	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.12	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.52	Slopes > 25%	0.00
485:					
Pasturerock	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.68	Slopes > 25%	0.00
		Clay 27 to 40%	0.68		
Coyoterock	25	Fair source		Poor source	
		Clay 27 to 40%	0.50	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.52	AASHTO GI 5 to 8 (soil strength)	0.22
				Saturation from 1 to 3'	0.84
				LEP 3 to 9	0.97
Maneze	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Slopes > 25%	0.00
		Fragments 3-10" are 25 to 50%	0.88	Fragments >3" are 25 to 50%	0.18
531:					
Atwell	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.48	Slopes > 25%	0.00
				AASHTO GI 5 to 8 (soil strength)	0.22
				Saturation from 1 to 3'	0.88
				LEP 3 to 9	0.95
Coppercreek	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		OM is .5 to 1%	0.50		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
532:					
Atwell	75	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
				AASHTO GI > 8 (low soil strength)	0.00
				Saturation from 1 to 3'	0.88
				LEP 3 to 9	0.89
Ladybird	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.68		
533:					
Coppercreek	60	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.82
Ahpah	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.35	Slopes 15 to 25%	0.82
534:					
Coppercreek	40	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.08
		Clay 27 to 40%	0.92		
Ahpah	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.94	Slopes 15 to 25%	0.08
Lackscreek	20	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.15	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.08
		Fragments 3-10" are 25 to 50%	0.99		
535:					
Wiregrass	60	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.08
Scaath	25	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.53	Slopes 15 to 25%	0.08
536:					
Coppercreek	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.92		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
536:					
Ahpah	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.80	Slopes > 25%	0.00
Lackscreek	15	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		Fragments 3-10" < 25% or NULL data	0.99		
537:					
Wiregrass	50	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.08
		Clay 27 to 40%	0.92		
Scaath	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.53	Slopes 15 to 25%	0.08
538:					
Wiregrass	60	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.82
		Clay 27 to 40%	0.92		
Pittplace	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI > 8 (low soil strength)	0.00
		Clay 27 to 40%	0.32	LEP 3 to 9	0.75
				Slopes 15 to 25%	0.92
539:					
Wiregrass	50	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.92		
Scaath	30	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		Fragments 3-10" are 25 to 50%	0.97		
541:					
Wiregrass	60	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
541:					
Rockysaddle	20	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Slopes > 25%	0.00
		OM < .5%	0.00		
		pH is between 4 and 6.5 above 40"	0.20		
		Clay 27 to 40%	0.68		
542:					
Coppercreek	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.92		
Slidecreek, gravelly loam	30	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.12	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20		
		Clay 27 to 40%	0.92		
Lackscreek	15	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.20	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
543:					
Wiregrass	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.40	Slopes > 25%	0.00
		Clay 27 to 40%	0.92		
Rockysaddle	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.46		
		Clay 27 to 40%	0.92		
Scaath	15	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.06	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		Fragments 3-10" < 25% or NULL data	0.99	Fragments >3" < 25% or NULL data	1.00
544:					
Coppercreek	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
Tectah	20	Poor source		Poor source	
		Clay > 40%	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI > 8 (low soil strength)	0.00
				LEP 3 to 9	0.77

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
544:					
Lackscreek	15	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.20	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
545:					
Devilscreek	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
				Saturation from 1 to 3'	0.88
Panthercreek	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
Coppercreek	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
546:					
Lackscreek	65	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		Fragments 3-10" are 25 to 50%	0.95		
Coppercreek	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.92		
549:					
Scaath	40	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		Fragments 3-10" are 25 to 50%	0.98		
Rockysaddle	25	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.85		
		Clay 27 to 40%	0.92		
Wiregrass	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
550:					
Scaath	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.45	Depth to bedrock < 40"	0.00

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
550:					
Rockysaddle	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.65		
		Clay 27 to 40%	0.92		
Wiregrass	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.92		
553:					
Ladybird	60	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
Stonehill	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
				Depth to bedrock < 40"	0.00
554:					
Ladybird	50	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.82
Trailhead	25	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI > 8 (low soil strength)	0.00
				Slopes 15 to 25%	0.82
555:					
Panthercreek	35	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
Coppercreek	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
Devilscreek	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
556:					
Rodgerpeak	50	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.20		
Wiregrass	30	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.20		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
557:					
Ustic Palehumults	90	Poor source		Poor source	
		Fragments >10" are > 15%	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	Fragments >3" are 25 to 50%	0.92
		Fragments 3-10" are 25 to 50%	0.68		
558:					
Tectah	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI > 8 (low soil strength)	0.00
				LEP 3 to 9	0.91
Coppercreek	25	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI 5 to 8 (soil strength)	0.22
		Clay 27 to 40%	0.68	Slopes 15 to 25%	0.82
Trailhead	15	Poor source		Poor source	
		Clay > 40%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.40		
		OM is .5 to 1%	0.50		
559:					
Trailhead	85	Poor source		Poor source	
		Clay > 40%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.20		
		OM is .5 to 1%	0.50		
560:					
Trailhead	80	Poor source		Poor source	
		Clay > 40%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.82
		OM is .5 to 1%	0.50		
561:					
Trailhead	75	Poor source		Poor source	
		Clay > 40%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.82
		OM is .5 to 1%	0.50		
562:					
Trailhead	65	Fair source		Poor source	
		Clay 27 to 40%	0.02	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI > 8 (low soil strength)	0.00

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
562:					
Fortyfour	15	Poor source		Poor source	
		Clay > 40%	0.00	Slopes > 25%	0.00
		OM < .5%	0.00	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.20	LEP 3 to 9	0.79
		AWC 3 - 6" to 60" depth	1.00		
563:					
Trailhead	65	Poor source		Poor source	
		Clay > 40%	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.40	AASHTO GI > 8 (low soil strength)	0.00
		OM is .5 to 1%	0.50		
Fortyfour	15	Poor source		Poor source	
		Clay > 40%	0.00	Slopes > 25%	0.00
		OM < .5%	0.00	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.36		
		AWC 3 - 6" to 60" depth	0.90		
580:					
Coppercreek	40	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI 5 to 8 (soil strength)	0.22
		Clay 27 to 40%	0.50		
Tectah	30	Fair source		Poor source	
		Clay 27 to 40%	0.18	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.20	LEP 3 to 9	0.85
Slidecreek	20	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.50
		Clay 27 to 40%	0.68		
581:					
Coppercreek	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
Slidecreek	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
Tectah	15	Poor source		Poor source	
		Clay > 40%	0.00	Slopes > 25%	0.00
		OM < .5%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.20	LEP 3 to 9	0.75

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
582:					
Slidecreek	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
		AWC 3 - 6" to 60" depth	0.98		
Lackscreek	25	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.52	Depth to bedrock 40 to 60"	0.00
Coppercreek	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
583:					
Trailhead	65	Poor source		Good source	
		Clay > 40%	0.00		
		pH is between 4 and 6.5 above 40"	0.20		
Wiregrass	25	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.20		
		Clay 27 to 40%	0.82		
584:					
Wiregrass	40	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI 5 to 8 (soil strength)	0.78
Pittplace	25	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI > 8 (low soil strength)	0.00
		Clay 27 to 40%	0.32	LEP 3 to 9	0.75
Scaath	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.28	Slopes > 25%	0.00
		Clay 27 to 40%	0.92		
585:					
Wiregrass	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.98	AASHTO GI 5 to 8 (soil strength)	0.78
Rockysaddle	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.12	Slopes > 25%	0.00
		Clay 27 to 40%	0.68		
		AWC 3 - 6" to 60" depth	0.88		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
586:					
Wiregrass	40	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.40	Slopes > 25%	0.00
		Clay 27 to 40%	0.92	AASHTO GI > 8 (low soil strength)	0.00
Rockysaddle	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.68		
		AWC 3 - 6" to 60" depth	1.00		
Trailhead	15	Poor source		Poor source	
		Clay > 40%	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.20		
		OM is .5 to 1%	0.50		
587:					
Childshill	65	Fair source		Good source	
		pH is between 4 and 6.5 above 40"	0.20		
588:					
Surpur	75	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.32	AASHTO GI 5 to 8 (soil strength)	0.78
		Clay 27 to 40%	0.98		
590:					
Sasquatch	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.40	AASHTO GI > 8 (low soil strength)	0.00
		Clay 27 to 40%	0.82		
Yeti	20	Fair source		Poor source	
		Clay 27 to 40%	0.18	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.28	LEP 3 to 9	0.81
Footstep	15	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.15	Depth to bedrock < 40"	0.00
		pH is between 4 and 6.5 above 40"	0.28		
591:					
Sasquatch	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
Sisterrocks	25	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
591:					
Ladybird	15	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.40	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
592:					
Sisterrocks	35	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.06	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.24		
		Clay 27 to 40%	0.92		
Ladybird	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
Footstep	20	Poor source		Poor source	
		AWC < 3" to 60" depth	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.28	Depth to bedrock < 40"	0.00
593:					
Sasquatch	50	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.28	AASHTO GI > 8 (low soil strength)	0.00
				Slopes 15 to 25%	0.08
Yeti	20	Fair source		Poor source	
		Clay 27 to 40%	0.18	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.20	Slopes 15 to 25%	0.08
				LEP 3 to 9	0.81
Sisterrocks	15	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.24	Slopes 15 to 25%	0.08
		Clay 27 to 40%	0.68		
594:					
Sisterrocks	45	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.94		
		Clay 27 to 40%	0.98		
Sasquatch	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
Houda	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.40	Slopes > 25%	0.00
				Saturation from 1 to 3'	0.88

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
595:					
Battery	50	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.40	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
Catchings	30	Fair source		Fair source	
		pH is between 4 and 6.5 above 40"	0.28	Slopes 15 to 25%	0.50
		AWC 3 - 6" to 60" depth	0.96		
596:					
Flintrock	40	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.71	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.80		
		Clay 27 to 40%	0.98		
Highprairie	30	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.64	Slopes > 25%	0.00
597:					
Tarquin	70	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	AASHTO GI > 8 (low soil strength)	0.00
				Saturation from 1 to 3'	0.78
				LEP 3 to 9	0.96
598:					
Ladybird	60	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		Clay 27 to 40%	0.82		
Stonehill	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.20	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.97	Depth to bedrock < 40"	0.00
659:					
Raingage	65	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.56	Slopes > 25%	0.00
				Saturation from 1 to 3'	0.65
Pigpen	20	Fair source		Poor source	
		pH is between 4 and 6.5 above 40"	0.52	Slopes > 25%	0.00
		Clay 27 to 40%	0.82	Saturation from 1 to 3'	0.02

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
756:					
Oragran	40	Poor source		Poor source	
		Fragments >10" are > 15%	0.00	Depth to bedrock < 40"	0.00
		AWC < 3" to 60" depth	0.00	Slopes > 25%	0.00
		OM < .5%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.52		
Weitchpec	25	Fair source		Poor source	
		AWC 3 - 6" to 60" depth	0.01	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.72	Depth to bedrock < 40"	0.00
759:					
Jayel, extremely stony	35	Poor source		Poor source	
		Fragments >10" are > 15%	0.00	Depth to bedrock < 40"	0.00
		Clay > 40%	0.00	Slopes > 25%	0.00
		AWC 3 - 6" to 60" depth	0.07	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.52	LEP 3 to 9	0.75
Walnett, extremely stony	20	Fair source		Poor source	
		Fragments >10" are 5-15%	0.01	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.52	LEP 3 to 9	0.91
		AWC 3 - 6" to 60" depth	0.79		
		Clay 27 to 40%	0.92		
Oragran	20	Poor source		Poor source	
		Fragments >10" are > 15%	0.00	Depth to bedrock < 40"	0.00
		OM < .5%	0.00	Slopes > 25%	0.00
		AWC < 3" to 60" depth	0.00	AASHTO GI > 8 (low soil strength)	0.00
		pH is between 4 and 6.5 above 40"	0.52	LEP 3 to 9	0.75
760:					
Jayel, extremely stony	30	Poor source		Poor source	
		Clay > 40%	0.00	Depth to bedrock < 40"	0.00
		Fragments >10" are > 15%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		AWC 3 - 6" to 60" depth	0.07	Slopes 15 to 25%	0.50
		pH is between 4 and 6.5 above 40"	0.52	LEP 3 to 9	0.75
Oragran	25	Poor source		Poor source	
		Fragments >10" are > 15%	0.00	Depth to bedrock < 40"	0.00
		AWC < 3" to 60" depth	0.00	AASHTO GI > 8 (low soil strength)	0.00
		OM < .5%	0.00	Slopes 15 to 25%	0.50
		pH is between 4 and 6.5 above 40"	0.52		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
760:					
Walnett, extremely stony----	25	Fair source		Fair source	
		Fragments >10" are 5-15%	0.01	Slopes 15 to 25%	0.50
		pH is between 4 and 6.5 above 40"	0.52	LEP 3 to 9	0.91
		AWC 3 - 6" to 60" depth	0.79		
		Clay 27 to 40%	0.92		
761:					
Gasquet, extremely stony----	30	Poor source		Poor source	
		Fragments >10" are > 15%	0.00	AASHTO GI > 8 (low soil strength)	0.00
		Clay 27 to 40%	0.02	Slopes 15 to 25%	0.50
		pH is between 4 and 6.5 above 40"	0.52	LEP 3 to 9	0.75
Walnett, extremely stony----	25	Poor source		Poor source	
		Fragments >10" are > 15%	0.00	Slopes > 25%	0.00
		pH is between 4 and 6.5 above 40"	0.52	LEP 3 to 9	0.91
		AWC 3 - 6" to 60" depth	0.79		
		Clay 27 to 40%	0.92		
Jayel----------	20	Poor source		Poor source	
		Clay > 40%	0.00	Depth to bedrock < 40"	0.00
		AWC 3 - 6" to 60" depth	0.07	Slopes > 25%	0.00
				AASHTO GI > 8 (low soil strength)	0.00
				LEP 3 to 9	0.75

The interpretation for reclamation material source evaluates the following soil properties at varying depths in the soil: the content of sand, clay, fragments, and organic matter (OM); the wind erodibility group (WEG); available water capacity (AWC); pH; salinity (EC); amount of sodium (SAR); carbonates; and the susceptibility of the soil to erosion by water (K-factor).

The interpretation for roadfill source evaluates the following soil properties at varying depths in the soil: shrink-swell potential expressed as linear extensibility percent (LEP), depth to rock or a cemented pan, wetness, slope, soil strength expressed as AASHTO Group Index (AASHTO GI), and content of rock fragments.

Table 14.--Water Management

[The information in this table is based on interpretations developed by the Pacific Southwest MLRA Office. The information indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The rating is based on the limitation with the highest value. Only the three highest-value limitations are listed. There may be more limitations. Fine-earth fractions and coarse fragments are reported on the basis of weight. An explanation of the rating criteria and of the abbreviations used in describing the limitations is given at the end of the table]

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
100:					
Riverwash	90	Limitations		Limitations	
		Saturation < 2' depth	1.00	Permeability > 2"/hr (seepage)	1.00
		Seepage problem	1.00		
		Fragments (>3") 15-35%	0.10		
102:					
Fluvents	75	Limitations		Limitations	
		Saturation < 2' depth	1.00	Permeability > 2"/hr (seepage)	1.00
				Slopes 2 to 7%	0.08
110:					
Weott	85	Limitations		Limitations	
		Ponded (any duration)	1.00	Permeability .6-2"/hr (some seepage)	0.50
		Saturation < 2' depth	1.00		
		Very high piping potential	1.00		
116:					
Swainslough	90	Limitations		No limitations	
		Ponded (any duration)	1.00		
		Saturation < 2' depth	1.00		
		High piping potential	0.83		
119:					
Arlynda	85	Limitations		No limitations	
		Ponded (any duration)	1.00		
		Saturation < 2' depth	1.00		
		High piping potential	0.91		
126:					
Loleta	85	Limitations		Limitations	
		Saturation < 2' depth	1.00	Permeability .6-2"/hr (some seepage)	0.50
		Very high piping potential	1.00		
155:					
Samoa	50	Limitations		Limitations	
		Seepage problem	1.00	Permeability > 2"/hr (seepage)	1.00
				Slopes > 7%	1.00
Clambeach	30	Limitations		Limitations	
		Ponded (any duration)	1.00	Permeability > 2"/hr (seepage)	1.00
		Saturation < 2' depth	1.00		
		Seepage problem	1.00		
Dune land	15	Limitations		Limitations	
		Seepage problem	1.00	Permeability > 2"/hr (seepage)	1.00
				Slopes > 7%	1.00
157:					
Beaches	35	Limitations		Limitations	
		EC > 16 dS/m	1.00	Permeability > 2"/hr (seepage)	1.00
		Seepage problem	1.00	Slopes > 7%	1.00

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
157:					
Samoa	35	Limitations		Limitations	
		Seepage problem	1.00	Permeability > 2"/hr (seepage)	1.00
				Slopes > 7%	1.00
Dune land	25	Limitations		Limitations	
		Seepage problem	1.00	Permeability > 2"/hr (seepage)	1.00
				Slopes > 7%	1.00
171:					
Worswick	40	Limitations		Limitations	
		Ponded (any duration)	1.00	Permeability > 2"/hr (seepage)	1.00
		Saturation < 2' depth	1.00		
		Very high piping potential	1.00		
Arlynda	35	Limitations		Limitations	
		Ponded (any duration)	1.00	Permeability .6-2"/hr (some seepage)	0.53
		Saturation < 2' depth	1.00		
		Very high piping potential	1.00		
172:					
Bigriver, fine sandy loam	80	Limitations		Limitations	
		Very high piping potential	1.00	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 7%	0.08
173:					
Bigriver, silt loam	55	Limitations		Limitations	
		Very high piping potential	1.00	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 7%	0.08
Ferndale	20	Limitations		Limitations	
		Very high piping potential	1.00	Permeability .6-2"/hr (some seepage)	0.53
		Saturation between 2-4'	0.73	Slopes 2 to 7%	0.08
Russ	15	No limitations		Limitations	
				Permeability > 2"/hr (seepage)	1.00
				Slopes 2 to 7%	0.08
174:					
Bigtree	50	Limitations		Limitations	
		Very high piping potential	1.00	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 7%	0.01
Mystery	25	Limitations		Limitations	
		Very high piping potential	1.00	Permeability > 2"/hr (seepage)	1.00
		Saturation between 2-4'	0.84	Slopes 2 to 7%	0.66
177:					
Battery, dry	75	No limitations		Limitations	
				Slopes > 7%	1.00
178:					
Battery	85	No limitations		Limitations	
				Slopes > 7%	1.00
191:					
Talawa	85	Limitations		Limitations	
		Saturation < 2' depth	1.00	Permeability > 2"/hr (seepage)	1.00
		Possible seepage problem	0.50		

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
192:					
Aubell	85	Limitations		Limitations	
		Saturation < 2' depth	1.00	Slopes 2 to 7%	0.08
		High piping potential	0.65		
		Shrink-swell (LEP 3-6)	0.50		
194:					
Tsunami	85	No limitations		Limitations	
				Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 7%	0.08
220:					
Ferndale	85	Limitations		Limitations	
		Very high piping potential	1.00	Permeability > 2"/hr (seepage)	1.00
		Shrink-swell (LEP 3-6)	0.50		
222:					
Ferndale, moderately well drained	75	Limitations		Limitations	
		Saturation < 2' depth	1.00	Permeability .6-2"/hr (some seepage)	0.53
		Very high piping potential	1.00	Slopes 2 to 7%	0.01
251:					
Surpur	75	Limitations		Limitations	
		High piping potential	0.99	Slopes 2 to 7%	0.66
				Permeability .6-2"/hr (some seepage)	0.53
289:					
Espa	80	Limitations		Limitations	
		Very high piping potential	1.00	Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 7%	0.31
290:					
Surpur	50	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Mettah	35	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
291:					
Ossagon	65	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
Squashan	20	Limitations		Limitations	
		Seepage problem	1.00	Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
292:					
Ossagon	65	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
		Slight seepage problem	0.10	Permeability > 2"/hr (seepage)	1.00
Squashan	20	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
293:					
Ossagon	50	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
293:					
Goldbluffs	25	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
Squashan	15	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
294:					
Ossagon	35	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
Goldbluffs	20	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
Squashan	15	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
462:					
Mooncreek	35	Limitations		Limitations	
		High piping potential	0.82	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.05	Permeability .6-2"/hr (some seepage)	0.50
Noisy	25	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.50
Tossup	15	No limitations		Limitations	
				Slopes > 7%	1.00
463:					
Mooncreek	25	Limitations		Limitations	
		High piping potential	0.80	Slopes > 7%	1.00
Noisy	20	Limitations		Limitations	
		Fragments (>3") 15-35%	0.26	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.50
Sidehill	20	Limitations		Limitations	
		Thin layer	0.92	Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
				Depth to bedrock from 20-60"	0.92
464:					
Mooncreek	40	Limitations		Limitations	
		High piping potential	0.90	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.02
Tossup	20	Limitations		Limitations	
		High piping potential	0.45	Slopes > 7%	1.00
Noisy	15	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.50

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
465:					
Sidehill----------	35	Limitations		Limitations	
		Thin layer	0.87	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.87
				Permeability .6-2"/hr (some seepage)	0.50
Oakside----------	25	Limitations		Limitations	
		Thin layer	1.00	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.73	Depth to bedrock < 20"	1.00
Darkwoods---------	20	No limitations		Limitations	
		Slight seepage problem	0.10	Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
473:					
Highoaks----------	30	Limitations		Limitations	
		High piping potential	0.89	Slopes > 7%	1.00
Noisy------------	25	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.50
Mudhorse----------	15	Limitations		Limitations	
		Saturation < 2' depth	1.00	Slopes > 7%	1.00
		MH or CH Unified; PI <40%	0.50		
		High piping potential	0.11		
480:					
Dolason----------	50	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Countshill--------	25	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
		Thin layer	0.90	Depth to bedrock from 20-60"	0.90
				Permeability .6-2"/hr (some seepage)	0.53
Airstrip----------	20	Limitations		Limitations	
		Thin layer	0.94	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.94
				Permeability .6-2"/hr (some seepage)	0.53
481:					
Dolason----------	45	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Airstrip----------	25	Limitations		Limitations	
		Thin layer	0.46	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.03	Permeability .6-2"/hr (some seepage)	0.53
				Depth to bedrock from 20-60"	0.46
Countshill--------	20	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
		Thin layer	0.98	Depth to bedrock from 20-60"	0.98
				Permeability .6-2"/hr (some seepage)	0.53
482:					
Dolason----------	55	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
482:					
Countshill	30	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
		Thin layer	0.87	Depth to bedrock from 20-60"	0.87
				Permeability .6-2"/hr (some seepage)	0.53
483:					
Doolyville	40	Limitations		Limitations	
		Saturation < 2' depth	1.00	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
Pasturerock	35	No limitations		Limitations	
				Slopes > 7%	1.00
484:					
Elkcamp	50	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Dolason	30	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Airstrip	15	Limitations		Limitations	
		Thin layer	0.82	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.10	Depth to bedrock from 20-60"	0.82
				Permeability .6-2"/hr (some seepage)	0.53
485:					
Pasturerock	40	No limitations		Limitations	
				Slopes > 7%	1.00
Coyoterock	25	Limitations		Limitations	
		Saturation between 2-4'	0.90	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
		High piping potential	0.44		
Maneze	15	Limitations		Limitations	
		Fragments (>3") > 35%	1.00	Slopes > 7%	1.00
		Saturation between 2-4'	0.03	Permeability .6-2"/hr (some seepage)	0.15
531:					
Atwell	45	Limitations		Limitations	
		Saturation between 2-4'	0.87	Slopes > 7%	1.00
		High piping potential	0.65		
		Shrink-swell (LEP 3-6)	0.50		
Coppercreek	40	Limitations		Limitations	
		High piping potential	0.82	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.01
532:					
Atwell	75	Limitations		Limitations	
		Saturation between 2-4'	0.87	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
		High piping potential	0.38		
Ladybird	15	No limitations		Limitations	
				Slopes > 7%	1.00

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
533:					
Coppercreek-------	60	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Ahpah------------	15	Limitations		Limitations	
		Thin layer	0.81	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.81
				Permeability .6-2"/hr (some seepage)	0.53
534:					
Coppercreek-------	40	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Ahpah------------	20	Limitations		Limitations	
		Thin layer	0.58	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.58
				Permeability .6-2"/hr (some seepage)	0.53
Lackscreek--------	20	Limitations		Limitations	
		Fragments (>3") 15-35%	0.68	Slopes > 7%	1.00
		Thin layer	0.68	Depth to bedrock from 20-60"	0.68
535:					
Wiregrass---------	60	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Scaath------------	25	Limitations		Limitations	
		Thin layer	0.61	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.04	Depth to bedrock from 20-60"	0.61
				Permeability .6-2"/hr (some seepage)	0.53
536:					
Coppercreek-------	45	No limitations		Limitations	
				Slopes > 7%	1.00
Ahpah------------	20	Limitations		Limitations	
		Thin layer	0.73	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.73
				Permeability .6-2"/hr (some seepage)	0.53
Lackscreek--------	15	Limitations		Limitations	
		Thin layer	0.99	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.66	Depth to bedrock from 20-60"	0.99
				Permeability .6-2"/hr (some seepage)	0.15
537:					
Wiregrass---------	50	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Scaath------------	20	Limitations		Limitations	
		Thin layer	0.61	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.04	Depth to bedrock from 20-60"	0.61
				Permeability .6-2"/hr (some seepage)	0.53
538:					
Wiregrass---------	60	No limitations		Limitations	
				Slopes > 7%	1.00

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
538:					
Pittplace	15	Limitations		Limitations	
		High piping potential	0.54	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
539:					
Wiregrass	50	No limitations		Limitations	
				Slopes > 7%	1.00
Scaath	30	Limitations		Limitations	
		Thin layer	0.85	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.74	Depth to bedrock from 20-60"	0.85
541:					
Wiregrass	60	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Rockysaddle	20	No limitations		Limitations	
				Slopes > 7%	1.00
542:					
Coppercreek	45	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Slidecreek, gravelly loam	30	No limitations		Limitations	
				Slopes > 7%	1.00
Lackscreek	15	Limitations		Limitations	
		Thin layer	0.79	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.06	Depth to bedrock from 20-60"	0.79
				Permeability .6-2"/hr (some seepage)	0.53
543:					
Wiregrass	40	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Rockysaddle	30	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Scaath	15	Limitations		Limitations	
		Fragments (>3") 15-35%	0.64	Slopes > 7%	1.00
		Thin layer	0.59	Depth to bedrock from 20-60"	0.59
544:					
Coppercreek	40	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Tectah	20	Limitations		Limitations	
		Shrink-swell (LEP 3-6)	0.50	Slopes > 7%	1.00
		High piping potential	0.43		
Lackscreek	15	Limitations		Limitations	
		Thin layer	0.79	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.06	Depth to bedrock from 20-60"	0.79
				Permeability .6-2"/hr (some seepage)	0.53

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
545:					
Devilscreek-------	45	Limitations		Limitations	
		Saturation between 2-4'	0.87	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Panthercreek------	20	Limitations		Limitations	
		Saturation between 2-4'	0.46	Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
Coppercreek-------	15	No limitations		Limitations	
				Slopes > 7%	1.00
546:					
Lackscreek--------	65	Limitations		Limitations	
		Thin layer	0.89	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.81	Depth to bedrock from 20-60"	0.89
				Permeability .6-2"/hr (some seepage)	0.15
Coppercreek-------	15	No limitations		Limitations	
				Slopes > 7%	1.00
549:					
Scaath------------	40	Limitations		Limitations	
		Thin layer	0.99	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.74	Depth to bedrock < 20"	0.99
Rockysaddle-------	25	No limitations		Limitations	
				Slopes > 7%	1.00
Wiregrass---------	20	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
550:					
Scaath------------	40	Limitations		Limitations	
		Thin layer	0.61	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.03	Depth to bedrock from 20-60"	0.61
				Permeability .6-2"/hr (some seepage)	0.53
Rockysaddle-------	30	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Wiregrass---------	20	No limitations		Limitations	
				Slopes > 7%	1.00
553:					
Ladybird----------	60	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Stonehill---------	20	Limitations		Limitations	
		Thin layer	0.79	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.01	Depth to bedrock from 20-60"	0.79
				Permeability .6-2"/hr (some seepage)	0.53
554:					
Ladybird----------	50	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Trailhead---------	25	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
555:					
Panthercreek------	35	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
Coppercreek-------	20	No limitations		Limitations	
				Slopes > 7%	1.00
Devilscreek-------	20	Limitations		Limitations	
		Saturation between 2-4'	0.50	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.01	Permeability .6-2"/hr (some seepage)	0.53
556:					
Rodgerpeak--------	50	Limitations		Limitations	
		Thin layer	1.00	Depth to bedrock < 20"	1.00
				Permeability .6-2"/hr (some seepage)	0.53
				Slopes 2 to 7%	0.01
Wiregrass---------	30	No limitations		Limitations	
				Slopes > 7%	0.99
				Permeability .6-2"/hr (some seepage)	0.53
557:					
Ustic Palehumults-	90	Limitations		Limitations	
		Fragments (>3") > 35%	1.00	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
558:					
Tectah------------	45	Limitations		Limitations	
		High piping potential	0.68	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
Coppercreek-------	25	Limitations		Limitations	
		High piping potential	0.84	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Trailhead---------	15	Limitations		Limitations	
		High piping potential	0.97	Slopes 2 to 7%	0.31
559:					
Trailhead---------	85	Limitations		Limitations	
		Very high piping potential	0.99	Slopes 2 to 7%	0.31
560:					
Trailhead---------	80	Limitations		Limitations	
		Very high piping potential	0.99	Slopes > 7%	1.00
561:					
Trailhead---------	75	Limitations		Limitations	
		High piping potential	0.97	Slopes > 7%	1.00
562:					
Trailhead---------	65	Limitations		Limitations	
		High piping potential	0.99	Slopes > 7%	1.00
Fortyfour---------	15	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
		Thin layer	0.52	Depth to bedrock from 20-60"	0.52
		Shrink-swell (LEP 3-6)	0.50		
563:					
Trailhead---------	65	Limitations		Limitations	
		High piping potential	0.99	Slopes > 7%	1.00

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
563:					
Fortyfour	15	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
		Thin layer	0.82	Depth to bedrock from 20-60"	0.82
580:					
Coppercreek	40	Limitations		Limitations	
		High piping potential	0.80	Slopes > 7%	1.00
Tectah	30	Limitations		Limitations	
		Shrink-swell (LEP 3-6)	0.50	Slopes > 7%	1.00
		High piping potential	0.27		
Slidecreek	20	No limitations		Limitations	
				Slopes > 7%	1.00
581:					
Coppercreek	40	Limitations		Limitations	
		High piping potential	0.80	Slopes > 7%	1.00
Slidecreek	30	No limitations		Limitations	
				Slopes > 7%	1.00
Tectah	15	Limitations		Limitations	
		Shrink-swell (LEP 3-6)	0.50	Slopes > 7%	1.00
		High piping potential	0.11		
582:					
Slidecreek	40	No limitations		Limitations	
				Slopes > 7%	1.00
Lackscreek	25	Limitations		Limitations	
		Thin layer	0.46	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.25	Depth to bedrock from 20-60"	0.46
Coppercreek	15	No limitations		Limitations	
				Slopes > 7%	1.00
583:					
Trailhead	65	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
Wiregrass	25	Limitations		Limitations	
		High piping potential	0.74	Slopes > 7%	1.00
584:					
Wiregrass	40	Limitations		Limitations	
		High piping potential	0.94	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Pittplace	25	Limitations		Limitations	
		High piping potential	0.54	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
Scaath	20	Limitations		Limitations	
		Thin layer	0.54	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.54
585:					
Wiregrass	45	Limitations		Limitations	
		High piping potential	0.89	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
585:					
Rockysaddle	40	No limitations		Limitations	
				Slopes > 7%	1.00
586:					
Wiregrass	40	Limitations		Limitations	
		High piping potential	0.82	Slopes > 7%	1.00
Rockysaddle	30	No limitations		Limitations	
				Slopes > 7%	1.00
Trailhead	15	No limitations		Limitations	
				Slopes > 7%	1.00
587:					
Childshill	65	No limitations		Limitations	
				Slopes > 7%	1.00
588:					
Surpur	75	Limitations		Limitations	
		High piping potential	0.98	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
590:					
Sasquatch	45	Limitations		Limitations	
		High piping potential	0.80	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Yeti	20	Limitations		Limitations	
		Shrink-swell (LEP 3-6)	0.50	Slopes > 7%	1.00
		High piping potential	0.41	Permeability .6-2"/hr (some seepage)	0.53
Footstep	15	Limitations		Limitations	
		Thin layer	0.82	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.82
				Permeability .6-2"/hr (some seepage)	0.53
591:					
Sasquatch	45	Limitations		Limitations	
		High piping potential	0.84	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Sisterrocks	25	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Ladybird	15	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
592:					
Sisterrocks	35	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Ladybird	30	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Footstep	20	Limitations		Limitations	
		Thin layer	0.92	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.92
				Permeability .6-2"/hr (some seepage)	0.53

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
593:					
Sasquatch	50	Limitations		Limitations	
		High piping potential	0.93	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Yeti	20	Limitations		Limitations	
		High piping potential	0.53	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
Sisterrocks	15	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
594:					
Sisterrocks	45	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Sasquatch	20	Limitations		Limitations	
		High piping potential	0.73	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Houda	20	Limitations		Limitations	
		Saturation between 2-4'	0.87	Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
595:					
Battery	50	No limitations		Limitations	
				Slopes > 7%	1.00
Catchings	30	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability > 2"/hr (seepage)	1.00
596:					
Flintrock	40	No limitations		Limitations	
				Slopes > 7%	1.00
Highprairie	30	Limitations		Limitations	
		High piping potential	0.78	Slopes > 7%	1.00
597:					
Tarquin	70	Limitations		Limitations	
		Saturation between 2-4'	0.94	Slopes > 7%	1.00
		High piping potential	0.86	Permeability .6-2"/hr (some seepage)	0.53
		Shrink-swell (LEP 3-6)	0.50		
598:					
Ladybird	60	No limitations		Limitations	
				Slopes > 7%	1.00
				Permeability .6-2"/hr (some seepage)	0.53
Stonehill	20	Limitations		Limitations	
		Very high piping potential	1.00	Slopes > 7%	1.00
		Thin layer	0.79	Depth to bedrock from 20-60"	0.79
659:					
Raingage	65	Limitations		Limitations	
		Saturation between 2-4'	0.99	Slopes > 7%	1.00
		High piping potential	0.94	Permeability .6-2"/hr (some seepage)	0.53

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
659:					
Pigpen	20	Limitations		Limitations	
		Saturation < 2' depth	1.00	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.02		
756:					
Oragran	40	Limitations		Limitations	
		Thin layer	1.00	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.82	Depth to bedrock < 20"	1.00
		High piping potential	0.39	Permeability .6-2"/hr (some seepage)	0.53
Weitchpec	25	Limitations		Limitations	
		Thin layer	0.70	Slopes > 7%	1.00
				Depth to bedrock from 20-60"	0.70
				Permeability .6-2"/hr (some seepage)	0.53
759:					
Jayel, extremely stony	35	Limitations		Limitations	
		Fragments (>3") 15-35%	0.87	Slopes > 7%	1.00
		Thin layer	0.81	Depth to bedrock from 20-60"	0.81
		Shrink-swell (LEP 3-6)	0.50		
Walnett, extremely stony	20	Limitations		Limitations	
		Fragments (>3") > 35%	1.00	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
Oragran	20	Limitations		Limitations	
		Thin layer	1.00	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.84	Depth to bedrock < 20"	1.00
		Shrink-swell (LEP 3-6)	0.50	Permeability .6-2"/hr (some seepage)	0.53
760:					
Jayel, extremely stony	30	Limitations		Limitations	
		Fragments (>3") 15-35%	0.87	Slopes > 7%	1.00
		Thin layer	0.81	Depth to bedrock from 20-60"	0.81
		Shrink-swell (LEP 3-6)	0.50		
Oragran	25	Limitations		Limitations	
		Thin layer	1.00	Slopes > 7%	1.00
		Fragments (>3") 15-35%	0.82	Depth to bedrock < 20"	1.00
		High piping potential	0.39	Permeability .6-2"/hr (some seepage)	0.53
Walnett, extremely stony	25	Limitations		Limitations	
		Fragments (>3") > 35%	1.00	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
761:					
Gasquet, extremely stony	30	Limitations		Limitations	
		Fragments (>3") 15-35%	0.82	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
		MH or CH Unified; PI <40%	0.50		

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Embankments, dikes, and levees		Pond reservoir areas	
		Limitation	Value	Limitation	Value
761:					
Walnett, extremely stony--	25	Limitations		Limitations	
		Fragments (>3") > 35%	1.00	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50		
Jayel----------	20	Limitations		Limitations	
		Thin layer	0.81	Slopes > 7%	1.00
		Shrink-swell (LEP 3-6)	0.50	Depth to bedrock from 20-60"	0.81
		MH or CH Unified; PI <40%	0.50		

The interpretation for embankments, dikes, and levees evaluates the following soil properties at varying depths in the soil: ponding; wetness; depth to a restrictive layer; fragments greater than 3 inches in size; salinity (EC); Unified classes for high content of organic matter (PT, OL, and OH); Unified classes that are hard to pack (MH and CH); permeability that is too high, allowing seepage; piping as determined by Atterberg limits of liquid limit (LL) and plasticity index (PI); sodium content (SAR); and gypsum content.

The interpretation for pond reservoir areas evaluates the following soil properties at varying depths in the soil: slope, depth to hard or soft bedrock, depth to a cemented pan, marly textures, gypsum content, and permeability that is too high, allowing seepage.

Table 15.--Engineering Properties

[Absence of an entry indicates that the data were not estimated]

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
100:												
Riverwash-------	0-20	Extremely gravelly sand	GW, GP	A-1-a	0	29-35	28-45	13-38	10-29	1-3	7-8	NP
	20-79	Stratified extremely gravelly coarse sand to very gravelly sand	SP, GP, GW	A-1-a, A-1-b	0	0-21	15-61	7-52	6-40	0-3	7-8	NP
102:												
Fluvents--------	0-2	Fine sandy loam	SM, CL-ML	A-4	0	0	94-100	90-100	78-97	37-51	12-20	NP-4
	2-9	Loam, fine sandy loam, very fine sandy loam	ML, CL-ML	A-4	0	0	94-100	90-100	74-90	52-65	16-23	2-6
	9-37	Loamy sand, sand	SM, SC-SM	A-2-4	0	0	95-100	91-100	69-81	24-31	7-12	NP
	37-60	Extremely gravelly loamy coarse sand, very gravelly loamy coarse sand, very gravelly loamy sand, very gravelly coarse sand	GP-GM, GM, GW-GM	A-1-b, A-1-a	0-8	5-16	37-50	24-50	13-31	5-14	7-12	NP
110:												
Weott-----------	0-12	Silt loam	CL, CL-ML	A-4	0	0	100	100	94-100	90-99	23-31	6-10
	12-26	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	94-100	90-100	23-37	6-14
	26-60	Fine sandy loam, loam, silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	89-100	85-100	20-38	4-14
116:												
Swainslough-----	0-3	Peat	PT	A-8	0	0	---	---	---	---	---	---
	3-12	Silty clay loam	CL	A-6, A-4	0	0	100	100	93-100	82-92	31-40	10-16
	12-20	Silty clay, silty clay loam	CL, ML	A-7-6, A-6	0	0	100	100	90-100	79-94	34-48	12-20
	20-29	Silty clay, silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	89-100	78-93	34-48	12-20
	29-38	Silty clay, silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	94-100	84-99	34-48	12-20
	38-65	Silty clay loam, silty clay	CL, ML	A-6, A-7-6	0	0	100	100	99-100	89-100	34-48	12-20

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
119:												
Arlynda	0-3	Peat	PT	A-8	0	0	---	---	---	---	---	---
	3-14	Silty clay loam	CL	A-6, A-4	0	0	100	100	95-100	91-100	31-38	10-14
	14-22	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	100	93-100	89-98	30-38	10-14
	22-63	Clay loam, silt loam, silty clay loam	CL, ML	A-6, A-4	0	0	100	100	89-100	85-100	26-42	8-16
126:												
Loleta	0-4	Loam	CL, CL-ML	A-4	0	0	93-100	91-100	73-90	53-68	20-30	4-10
	4-14	Loam	CL-ML, CL	A-4	0	0	100	95-100	76-90	55-68	20-30	4-10
	14-32	Fine sandy loam, silt loam, loam	CL-ML, CL	A-4	0	0	100	95-100	78-94	56-71	20-31	4-10
	32-50	Loam, fine sandy loam, silt loam	CL-ML, CL	A-4	0	0	100	95-100	80-97	57-72	20-31	4-10
	50-68	Loam, fine sandy loam, clay loam, silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	95-100	82-100	59-81	20-38	4-14
155:												
Samoa	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-6	Sand	SP-SM	A-3, A-2-4	0	0	94-100	92-100	70-81	5-11	7-12	NP
	6-18	Sand, fine sand	SP-SM	A-3	0	0	94-100	92-100	70-77	5-7	7-8	NP
	18-63	Sand, fine sand, gravelly sand	SP-SM, SP	A-3, A-1-b	0	0	67-100	59-100	45-77	3-7	7-8	NP
Clambeach	0-9	Sand	SP-SM	A-3, A-2-4	0	0	94-100	92-100	70-81	5-11	7-12	NP
	9-20	Sand, fine sand	SP-SM	A-3	0	0	94-100	92-100	70-77	5-7	7-8	NP
	20-63	Sand, fine sand, gravelly sand	SP, SP-SM	A-3, A-1-b	0	0	67-100	59-100	45-77	3-7	7-8	NP
Dune land	0-72	Sand, fine sand, gravelly sand	SP-SM, SP	A-3, A-1-b	0	0	67-100	59-100	45-77	3-7	7-8	NP
157:												
Beaches	0-72	Coarse sand, sand, very gravelly coarse sand, gravelly coarse sand, fine sand	SP-SM, GP	A-3, A-1-a	0	0	42-100	38-100	29-77	2-6	7-7	NP
Samoa	0-17	Sand	SP-SM	A-3	0	0	94-100	92-100	70-77	5-7	7-8	NP
	17-63	Sand, fine sand, gravelly sand	SP-SM, SP	A-3, A-1-b	0	0	67-100	59-100	45-77	3-7	7-8	NP
Dune land	0-72	Sand, fine sand, gravelly sand	SP-SM, SP	A-3, A-1-b	0	0	67-100	59-100	45-77	3-7	7-8	NP

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
171:												
Worswick	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-17	Silt loam	CL-ML, CL	A-4	0	0	100	100	87-97	72-82	20-30	4-10
	17-27	Fine sandy loam, very fine sandy loam, loam	CL-ML, ML	A-4	0	0	100	100	81-89	57-65	16-23	2-6
	27-58	Gravelly loam, loam, fine sandy loam, silt loam, silty clay loam	SM, CL	A-2-4, A-4, A-6	0	0	78-100	63-100	49-98	34-74	16-34	2-12
	58-62	Gravelly loamy sand, gravelly fine sandy loam	SC, SM	A-1-b, A-6, A-2-4	0	0	78-100	63-100	50-94	19-45	12-25	NP-12
Arlynda	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-2	Silt loam	CL, CL-ML	A-4	0	0	81-100	80-100	70-97	57-81	20-30	4-10
	2-15	Loam	CL, SC-SM	A-4	0	0	82-100	82-100	65-90	46-66	20-30	4-10
	15-35	Silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0	83-100	83-100	70-94	52-73	25-34	7-12
	35-60	Loam, clay loam, sandy loam	CL, SM	A-6, A-4	0	0	84-100	83-100	63-96	44-73	16-34	2-12
172:												
Bigriver, fine sandy loam	0-4	Fine sandy loam	SM	A-4	0	0	92-100	92-100	81-94	38-47	12-16	NP-2
	4-61	Stratified loamy fine sand to silt loam	CL-ML, ML	A-4	0	0	92-100	92-100	78-98	61-79	12-23	NP-6
173:												
Bigriver, silt loam	0-15	Silt loam	CL-ML, ML	A-4	0	0	92-100	92-100	73-93	61-79	12-23	NP-6
	15-63	Stratified loamy fine sand to silt loam	CL-ML, ML	A-4	0	0	92-100	92-100	81-100	62-80	12-23	NP-6
Ferndale	0-7	Silt loam	CL-ML, ML	A-4	0	0	100	100	94-100	86-96	16-25	2-7
	7-32	Loam, silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	93-100	88-100	23-34	6-12
	32-60	Loam, silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	93-100	88-100	23-34	6-12
Russ	0-10	Loam	CL-ML, ML	A-4	0	0	95-100	95-100	75-89	52-65	16-25	2-7
	10-28	Loam, loamy coarse sand, fine sandy loam	SM, SC-SM	A-1-b, A-2-4	0	0	100	100	49-57	21-29	12-23	2-6
	28-43	Loam, loamy coarse sand, fine sandy loam	SM, SC-SM	A-1-b, A-2-4	0	0	100	100	46-59	18-31	12-23	NP-6
	43-60	Silt loam, loamy fine sand, fine sandy loam	SC-SM, SM	A-4, A-2-4	0	0	100	100	71-84	24-37	12-23	NP-6

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
174:												
Bigtree---------	0-10	Loam	SC-SM, CL, CL-ML	A-4	0	0	84-100	77-100	62-90	50-75	20-30	4-10
	10-47	Loam, gravelly loam, silt loam	SC-SM, CL-ML, CL	A-4	0	0-8	82-100	72-100	61-91	43-67	23-30	6-10
	47-57	Sandy loam, gravelly sandy loam	SM, SC-SM	A-2-4, A-4	0	0-8	92-100	84-100	56-80	29-48	12-23	NP-6
	57-63	Gravelly silt loam, silt loam	GM, CL-ML	A-4, A-2-4	0	0-8	53-100	46-100	38-96	31-80	12-23	NP-6
Mystery---------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-24	Very fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	83-100	77-100	67-96	28-46	16-25	2-7
	24-30	Very fine sandy loam, fine sandy loam, sandy loam, coarse sandy loam	SC-SM, SM	A-2-4, A-4	0	0	95-100	76-100	64-99	26-49	12-25	NP-7
	30-41	Very fine sandy loam, fine sandy loam, sandy loam, coarse sandy loam	SC-SM, SM	A-2-4, A-4	0	0	95-100	76-100	64-99	26-49	12-25	NP-7
	41-60	Sandy loam, gravelly loamy sand, silt loam, coarse sand	SM, CL, CL-ML	A-4	0	0	82-100	73-100	53-94	40-77	7-27	NP-8
177:												
Battery, dry----	0-13	Gravelly clay loam	GC, CL	A-4, A-6	0	0-8	56-70	47-70	44-69	37-59	31-37	10-14
	13-70	Gravelly clay loam	CL, GC	A-2-4, A-6	0	0-9	60-74	52-74	45-69	34-55	31-38	10-14
	70-79	Paragravelly clay loam, gravelly clay loam	CL	A-6, A-4	0	0-9	87-100	81-100	69-93	53-73	31-38	10-14
178:												
Battery---------	0-7	Gravelly loam	GC-GM, GC, CL	A-4, A-2-4	0	0-11	57-70	45-70	40-67	33-56	25-31	7-10
	7-47	Gravelly clay loam	CL, SC, GC	A-2-4, A-6	0	0-17	59-74	48-74	41-70	32-55	31-38	10-14
	47-60	Very gravelly clay loam	GC, CL	A-6, A-2-4	0	0-17	54-100	39-100	35-99	28-79	31-38	10-14
191:												
Talawa----------	0-12	Fine sandy loam	SC-SM	A-2-4, A-4	0	0-4	85-100	84-100	70-87	32-43	20-25	4-7
	12-17	Fine sandy loam	SC-SM	A-2-4, A-4	0	0	87-100	86-100	70-86	32-42	20-25	4-7
	17-39	Fine sandy loam, sandy loam	SC-SM, SM	A-4, A-2-4	0	0	88-100	88-100	68-85	25-36	16-23	2-6
	39-63	Loamy sand, sandy loam	SM	A-2-4	0	0	100	100	82-92	13-23	7-16	NP-2

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
192:												
Aubell----------	0-10	Clay loam	CL	A-6, A-4	0	0	87-100	86-100	75-90	57-70	31-34	10-12
	10-27	Clay loam	CL	A-6, A-7-6	0	0	88-100	88-100	81-97	65-80	38-43	14-17
	27-39	Clay, clay loam, silty clay loam	CL, ML	A-7-6, A-6	0	0	88-100	88-100	81-100	72-92	38-48	14-20
	39-60	Very gravelly clay loam	GC, GM	A-7-6, A-2-6	0	0	29-52	26-50	23-50	18-42	34-48	12-20
194:												
Tsunami---------	0-4	Gravelly loam	CL-ML, CL	A-4	0	0	75-100	74-100	66-95	50-74	23-30	6-10
	4-18	Loam, gravelly loam	GC-GM, CL	A-4	0	0	67-100	65-100	56-95	43-74	23-31	6-10
	18-38	Clay loam, gravelly sandy loam, gravelly loam, loam	GC-GM, CL	A-4, A-6	0	0-9	55-83	53-83	46-80	37-66	23-32	6-11
	38-60	Very gravelly sandy clay loam, clay, extremely gravelly sandy loam, very cobbly loam	GC, CL, GW-GC	A-2-4, A-7-6, A-1-a	0	17-44	11-100	7-100	6-100	5-93	23-43	6-17
220:												
Ferndale--------	0-11	Silt loam	CL-ML, CL	A-4	0	0	100	100	93-100	89-98	23-31	6-10
	11-16	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	97-100	90-100	23-34	6-12
	16-21	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	91-100	23-34	6-12
	21-50	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	93-100	89-100	23-34	6-12
	50-60	Fine sandy loam, silt loam, silty clay loam	CL, SM, CL-ML	A-6, A-4	0	0	100	100	91-100	42-62	16-34	2-12
222:												
Ferndale, Moderately well drained--------	0-13	Loam	CL-ML, ML	A-4	0	0	100	100	85-90	60-65	16-20	2-4
	13-17	Loam, silt loam	ML, CL-ML	A-4	0	0	100	100	83-93	57-67	16-25	2-7
	17-41	Silt loam	CL, CL-ML	A-4	0	0	100	100	89-99	75-85	20-30	4-10
	41-51	Silt loam	CL-ML, CL	A-4	0	0	91-100	83-100	75-99	63-85	22-30	6-10
	51-60	Silt loam, very gravelly sandy loam	CL, GC-GM	A-1-b, A-4	0	0	57-94	50-94	37-78	23-51	20-28	4-8

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
251:												
Surpur----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-14	Loam	CL-ML, CL, SM	A-4	0	0	75-100	67-100	61-100	47-84	18-30	3-10
	14-22	Silt loam, silty clay loam, clay loam	CL, CL-ML	A-4, A-6	0	0	80-100	74-100	69-100	65-100	25-36	7-13
	22-33	Silty clay loam, gravelly clay loam, loam	CL	A-6, A-4	0	0	73-100	64-100	61-100	58-100	30-38	10-14
	33-79	Silty clay loam, gravelly clay loam, loam	CL	A-6, A-4	0	0	73-100	64-100	61-100	58-100	30-38	10-14
289:												
Espa----------	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	3-16	Loam	CL, CL-ML	A-4	0	0	100	100	94-100	69-76	23-30	6-10
	16-47	Clay loam, loam	CL-ML, CL	A-6, A-4	0	0	100	100	82-99	60-77	23-38	6-14
	47-79	Sandy loam, fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	100	100	67-80	30-43	12-23	NP-6
290:												
Surpur----------	0-4	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	4-12	Gravelly loam	SC, SC-SM, CL	A-4	0	0	72-73	53-66	45-61	37-51	23-30	6-10
	12-41	Clay loam, loam, gravelly clay loam	CL, SC	A-6, A-4	0	0	78-100	60-100	53-98	41-77	30-38	10-14
	41-63	Gravelly fine sandy loam, fine sandy loam, loam	SC-SM, CL	A-2-4, A-4	0	0	77-100	64-100	56-96	28-53	20-30	4-10
	63-79	Fine sandy loam, gravelly loamy sand	SC-SM, SM	A-2-4, A-1-b, A-4	0	0	77-100	64-100	50-96	16-43	7-23	NP-6
Mettah----------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-9	Clay loam	CL-ML, ML	A-4	0	0	78-100	72-100	65-95	58-86	25-29	4-6
	9-17	Silty clay loam	ML	A-4	0	0	81-100	76-100	70-99	63-90	29-34	6-8
	17-58	Silty clay, clay	ML	A-7-6, A-7-5, A-4	0	0	81-100	76-100	65-100	62-100	34-49	8-15
	58-79	Clay loam, clay, gravelly clay loam, silty clay loam	ML, GM	A-4	0	0-5	68-100	57-100	49-98	42-88	29-38	6-10

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
291:												
Ossagon---------	0-4	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	4-12	Loam	SC-SM, CL	A-4	0	0	75-100	67-100	57-93	43-72	23-30	6-10
	12-16	Clay loam, loam	CL, CL-ML	A-4, A-6	0	0	80-100	74-100	63-95	50-78	25-34	7-12
	16-48	Clay loam, loam	CL	A-6, A-4	0	0	81-100	75-100	68-97	56-82	30-36	10-13
	48-56	Sandy loam, loamy sand	SC-SM, SM, GW-GM	A-1-a, A-2-4, A-4	0	0	50-100	36-100	24-86	10-47	7-23	NP-6
	56-79	Sandy loam, fine sandy loam	SC-SM, SM, GW-GM	A-1-a, A-2-4, A-4	0	0	50-100	36-100	24-86	10-47	7-23	NP-6
Squashan--------	0-1	Slightly decomposed plant material, gravelly slightly decomposed plant material	PT	A-8	0	0-15	---	---	---	---	12-20	NP
	1-5	Gravelly loam	GC-GM	A-4, A-2-4	0	0	49-60	43-60	38-56	29-43	20-25	4-7
	5-20	Very gravelly loam, very gravelly sandy clay loam, very gravelly sandy loam	GC-GM, GC	A-1-a, A-2-4	0	0	28-45	24-45	21-41	14-30	23-30	6-10
	20-33	Very gravelly loamy sand, extremely gravelly loamy sand, extremely gravelly sandy loam, very gravelly sandy loam	GW, GC-GM, GW-GM	A-1-a, A-1-b	0-10	0-10	24-47	12-47	9-41	3-16	10-20	NP-4
	33-79	Very gravelly loamy sand, extremely gravelly sand, extremely gravelly loamy sand, very gravelly sandy loam	GW, GP-GM, GP	A-1-a, A-1-b	0-10	0-19	22-47	9-47	7-41	1-11	7-16	NP-2
292:												
Ossagon---------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-13	Loam	CL-ML, CL, SC-SM	A-4	0	0	75-100	67-100	59-95	45-74	23-30	6-10
	13-34	Clay loam, loam, silt loam, silty clay loam	CL	A-6, A-4	0	0	81-100	75-100	71-100	63-92	27-34	8-12
	34-54	Fine sandy loam, loam, sandy loam	SM, CL	A-2-4, A-4	0	0	81-100	75-100	57-92	35-64	14-30	1-10
	54-75	Fine sandy loam, sandy loam, gravelly sandy loam, very gravelly sandy loam, loamy sand	SM, GW-GM	A-4, A-2-4, A-1-a	0	0	50-100	36-100	23-75	10-38	7-16	NP-2

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
292:												
Squashan--------	0-2	Slightly decomposed plant material, gravelly slightly decomposed plant material	PT	A-8	0	0-15	---	---	---	---	12-20	NP
	2-12	Gravelly loam	GC-GM	A-4, A-2-4	0	0	49-60	43-60	37-54	27-40	20-25	4-7
	12-43	Very gravelly sandy clay loam, very gravelly sandy loam, very gravelly loam	GC, GP-GC	A-2-4, A-1-a	0	0-6	33-45	23-45	19-40	11-25	23-31	6-10
	43-74	Very gravelly sandy clay loam, very gravelly loamy sand, extremely gravelly sandy loam, very gravelly sandy loam	GC-GM, GW, GC	A-1-a, A-2-4	0-10	0-10	24-47	12-47	8-42	3-23	12-30	NP-10
293:												
Ossagon---------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-15	Loam	CL-ML, CL, SC-SM	A-4	0	0	75-100	67-100	59-95	45-74	23-30	6-10
	15-65	Clay loam, loam	CL, CL-ML	A-6, A-4	0	0	81-100	75-100	65-98	53-83	23-34	6-12
	65-79	Sandy loam, fine sandy loam, gravelly sandy loam, very gravelly sandy loam	SC-SM, GW-GM	A-1-a, A-2-4, A-4	0	0	50-100	36-100	23-81	10-46	7-23	NP-6
Goldbluffs------	0-8	Very gravelly loam	GC, GC-GM	A-2-4, A-1-b	0	0-7	46-50	30-41	26-40	20-31	20-30	4-10
	8-13	Very gravelly loam, very gravelly sandy loam	GC-GM, GC, GM	A-2-4, A-1-b, A-4	0	0-5	50-55	36-48	30-47	23-37	16-30	2-10
	13-25	Very gravelly sandy loam, extremely gravelly loamy sand, very gravelly coarse sandy loam	GP-GM, GM, GC-GM	A-1-b, A-2-4, A-1-a	0	0-5	38-57	25-50	18-44	11-29	9-22	NP-6
	25-60	Very gravelly loamy sand, extremely gravelly loamy sand, extremely gravelly sandy loam, very gravelly sandy loam	GM, GP, GP-GM	A-1-a, A-1-b	0	5-12	29-56	11-48	8-39	4-20	9-16	NP-2

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
293:												
Squashan--------	0-2	Slightly decomposed plant material, gravelly slightly decomposed plant material	PT	A-8	0	0-15	---	---	---	---	12-20	NP
	2-9	Loam	CL, SC-SM	A-4	0	0	79-100	68-100	56-92	43-73	20-30	4-10
	9-17	Gravelly loam	GC, GC-GM	A-4, A-2-4	0	0-12	54-68	45-68	37-63	28-50	20-30	4-10
	17-47	Very gravelly loam, very gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam	GC, GP-GC	A-2-4, A-2-6	0	0-15	20-45	12-45	10-39	6-28	25-34	7-12
	47-65	Very gravelly loamy sand, extremely gravelly loamy sand, extremely gravelly sandy loam, very gravelly sandy loam	GP-GC, GP-GM, GW	A-2-4, A-1-a	0-10	10-19	22-39	9-26	6-22	3-12	10-25	NP-7
	65-79	Very gravelly loamy sand, extremely gravelly loamy sand, extremely gravelly sandy loam, very gravelly sandy loam	GP-GC, GP-GM, GW	A-2-4, A-1-a	0-10	10-34	18-39	6-26	4-22	2-12	10-25	NP-7
294:												
Ossagon---------	0-4	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	4-12	Loam	SC-SM, CL	A-4	0	0	75-100	67-100	57-93	43-72	23-30	6-10
	12-16	Clay loam, loam	CL, CL-ML	A-4, A-6	0	0	80-100	74-100	63-95	50-78	25-34	7-12
	16-48	Clay loam, loam	CL	A-6, A-4	0	0	81-100	75-100	68-97	56-82	30-36	10-13
	48-79	Sandy loam, fine sandy loam	SC-SM, SM, GW-GM	A-1-a, A-2-4, A-4	0	0	50-100	36-100	24-86	10-47	7-23	NP-6

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
294:												
Goldbluffs------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-10	Gravelly loam	CL, GC-GM	A-4, A-2-4	0	0-7	56-68	43-68	38-66	28-51	20-30	4-10
	10-37	Very gravelly sandy loam, very gravelly loam, extremely gravelly sandy loam	GM, GC-GM	A-1-a, A-1-b	0	0-5	40-55	27-48	20-38	13-25	16-22	2-6
	37-47	Very gravelly coarse sandy loam, extremely gravelly loamy sand	GW-GM, GP, GC-GM	A-1-b, A-1-a	0	0-5	31-57	14-50	8-35	4-23	9-22	NP-6
	47-69	Extremely gravelly loamy sand, extremely gravelly sandy loam, very gravelly sandy loam, extremely gravelly coarse sandy loam	GM, GW, GP-GM	A-1-a, A-1-b	0	5-12	28-56	13-48	9-39	4-20	9-16	NP-2
Squashan--------	0-1	Slightly decomposed plant material, gravelly slightly decomposed plant material	PT	A-8	0	0-15	---	---	---	---	12-20	NP
	1-14	Gravelly loam	GC-GM	A-4, A-2-4	0	0	49-68	43-68	38-64	29-49	20-25	4-7
	14-37	Very gravelly loam	GC-GM, GC	A-1-a, A-2-4	0	0	28-45	24-45	21-41	14-30	23-30	6-10
	37-47	Extremely gravelly sandy loam, very gravelly sandy loam	GC-GM, GW-GM, GW	A-1-b, A-1-a	0-10	0-10	24-47	12-47	8-39	4-20	10-20	NP-4
	47-60	Very gravelly loamy sand, extremely gravelly sand, extremely gravelly loamy sand	GP-GM, GW	A-1-a, A-1-b	0-9	0-17	23-49	10-49	7-41	1-10	7-16	NP-2
462:												
Mooncreek-------	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	3-8	Very gravelly loam	GC-GM, GC	A-1-b, A-4	0	0-8	41-53	39-51	34-49	24-36	21-28	5-8
	8-16	Very gravelly loam	GC-GM, GC	A-4, A-1-b	0	8-16	43-56	41-55	34-50	25-37	23-30	6-10
	16-27	Gravelly clay loam	CL, SC	A-6, A-4	0	16-37	79-91	78-90	64-85	49-67	28-38	8-14
	27-37	Cobbly clay loam	CL, GC	A-7-6, A-6	0	16-24	65-91	64-90	54-86	42-69	33-43	12-17
	37-50	Gravelly clay loam	GC, CL	A-7-6, A-6	0	9-17	59-82	58-82	51-77	40-62	37-43	14-17
	50-63	Very paragravelly clay loam	CL, ML	A-6, A-7-6	0	0	100	100	89-94	71-76	38-43	14-17

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
462:												
Noisy----------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	1-6	Very gravelly loam	GC, GC-GM	A-2-4, A-4, A-1-b	0	0	34-53	32-51	26-48	19-36	20-30	4-10
	6-12	Gravelly clay loam	GC-GM, CL	A-6, A-2-4	0	0	53-77	51-76	42-69	31-54	23-32	6-11
	12-24	Extremely gravelly loam	GC-GM, GW-GC, GC	A-2-4, A-1-a	0	0	12-30	9-27	8-26	6-19	23-30	6-10
	24-61	Extremely gravelly loam	GW, GC	A-1-a, A-2-4	0	0	9-30	6-27	5-26	4-20	20-30	4-10
Tossup----------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	1-8	Very gravelly loam	GC-GM, GC	A-1-b, A-4	0	0	37-57	35-55	31-54	22-40	21-30	5-10
	8-21	Gravelly clay loam, gravelly clay	ML, GC	A-6, A-7-6	0	0	57-80	55-79	48-76	38-62	38-48	14-20
	21-37	Gravelly clay, clay	ML, GC, MH	A-7-5, A-6, A-7-6	0	0	66-100	65-100	55-100	44-88	38-56	14-24
	37-48	Silty clay, gravelly silty clay	MH, CL	A-6, A-7-5, A-7-6	0	0	72-100	71-100	60-100	58-100	38-56	14-24
	48-79	Very gravelly clay	GM, GC	A-2-7, A-7-5, A-7-6	0	0	45-55	43-53	38-53	31-47	43-56	17-24
463:												
Mooncreek-------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	2-5	Very gravelly loam	GC, GC-GM	A-2-4	0	0	29-45	27-44	24-41	17-31	25-31	7-10
	5-8	Very gravelly loam	GC, GC-GM	A-2-4	0	0	41-49	39-47	34-44	25-33	25-31	7-10
	8-16	Silty clay loam, clay loam, gravelly clay loam	CL	A-6, A-4	0	0	78-100	77-100	69-97	54-78	31-38	10-14
	16-26	Clay loam, gravelly clay loam	CL	A-6	0	0	100	100	90-97	71-78	32-38	11-14
	26-42	Clay loam, gravelly clay loam	CL	A-7-6, A-6	0	0	100	100	88-98	68-78	34-43	12-17
	42-62	Silty clay loam, very paragravelly clay loam, clay loam	CL	A-7-6, A-6	0	0	100	100	85-95	66-76	34-43	12-17

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
463:												
Noisy----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	2-7	Very gravelly loam	GC-GM, GC, GM	A-2-4, A-1-b, A-4	0	0	43-53	41-51	35-49	24-36	18-28	3-8
	7-12	Gravelly loam	CL, GC-GM	A-4, A-2-4	0	0	53-77	51-76	43-70	31-52	21-28	5-8
	12-23	Extremely cobbly loam	GC-GM, GC	A-4, A-1-b	0	54-59	35-55	32-53	26-48	19-36	23-30	6-10
	23-39	Very gravelly clay loam	GC	A-6, A-2-4	0	8-16	48-56	46-54	40-50	31-39	31-37	10-14
	39-47	Extremely gravelly clay loam	GW, GC, GP-GC	A-2-4, A-2-6	0	0-30	11-30	7-27	6-25	4-20	27-38	8-14
	47-63	Very gravelly loam	GC-GM, GC	A-2-4	0	0	30-34	27-32	24-30	18-22	25-30	7-10
Sidehill--------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	2-6	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	6-10	Extremely gravelly sandy loam	GP-GC, GP-GM, GW	A-1-a	0	0-49	10-29	7-27	5-22	2-12	16-23	2-6
	10-18	Extremely gravelly sandy loam	GP-GC, GW	A-1-a	0	8-37	11-31	8-28	6-23	3-12	16-23	2-6
	18-33	Very gravelly loam, extremely gravelly loam	GC-GM, GP-GM	A-1-a, A-2-4	0	8-42	17-52	14-50	12-46	8-33	16-23	2-6
	33-59	Bedrock	---	---	---	---	---	---	---	---	---	---
464:												
Mooncreek-------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	2-3	Gravelly loam	GC-GM, CL	A-4, A-2-4	0	0	49-74	47-73	42-69	31-51	25-30	7-10
	3-6	Silty clay loam, clay loam, gravelly clay loam, gravelly loam	GC, CL	A-6, A-4	0	0	62-100	61-100	55-100	42-78	30-38	10-14
	6-21	Silty clay loam, clay loam, gravelly clay loam, loam	CL, SC	A-6, A-4	0	0	78-100	77-100	65-94	49-74	30-38	10-14
	21-38	Clay loam, gravelly clay loam, gravelly silty clay loam	CL	A-6, A-4	0	0	100	100	93-100	82-90	31-38	10-14
	38-55	Clay loam, very paragravelly clay loam, gravelly clay loam, gravelly silty clay loam	CL, GC	A-7-6, A-6	0	0	54-100	52-100	52-100	46-99	34-43	12-17
	55-79	Gravelly silty clay loam, clay loam, very paragravelly clay loam	CL, GC	A-6, A-7-6	0	0	54-100	52-100	52-100	46-99	34-43	12-17

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
464:												
Tossup	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	1-4	Clay loam, loam	CL, SC-SM	A-6, A-4	0	0	77-100	76-100	65-93	48-71	25-32	7-11
	4-6	Clay, clay loam	ML, CL	A-7-6, A-6	0	0	76-100	75-100	68-100	53-81	38-48	14-20
	6-12	Clay, clay loam	ML, CL	A-7-6, A-6	0	0	84-100	83-100	75-100	59-81	38-48	14-20
	12-20	Clay, clay loam	ML, CL	A-7-6, A-6	0	0	84-100	83-100	75-100	59-81	38-48	14-20
	20-41	Clay loam, clay	ML, CL	A-7-6, A-6	0	0	84-100	83-100	75-100	59-81	38-48	14-20
	41-61	Clay, clay loam	ML, CL	A-7-6, A-6	0	0	84-100	83-100	75-100	59-81	38-48	14-20
Noisy	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	2-5	Very gravelly loam	GM	A-1-b, A-4	0	0	37-57	35-55	31-52	22-39	21-28	1-3
	5-10	Extremely gravelly loam	GM, GC-GM	A-1-b	0	0	29-33	26-30	23-29	17-22	23-30	1-4
	10-31	Very gravelly clay loam	GM	A-2-4, A-4	0	0	45-55	44-54	39-51	30-41	31-37	4-6
	31-51	Extremely gravelly sandy clay loam	GP-GM, GM	A-1-a, A-1-b	0	0	21-33	18-30	16-28	9-16	27-30	3-4
	51-61	Very gravelly sandy clay loam	GM, GC-GM	A-1-b, A-2-4	0	0	37-56	35-55	29-50	16-28	25-30	2-4
465:												
Sidehill	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	1-7	Gravelly loam	SC-SM, GC-GM, CL	A-4, A-2-4	0	0-8	56-76	54-76	48-72	35-54	23-30	6-10
	7-30	Very gravelly loam	GM, GC, GC-GM	A-2-4, A-1-b, A-4	0	8-23	36-52	34-50	29-50	20-37	16-30	2-10
	30-59	Bedrock	---	---	---	---	---	---	---	---	---	---
Oakside	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	2-6	Extremely gravelly loam	GP-GC, GW, GC-GM	A-1-b, A-1-a	0	7-65	11-35	8-32	6-29	4-21	17-23	2-6
	6-10	Extremely cobbly loam	GW, GC-GM	A-4, A-1-a	0	60-65	11-73	8-72	6-65	4-47	16-23	2-6
	10-59	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
465:												
Darkwoods-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	1-7	Extremely gravelly loam	GC, GW-GC	A-2-4, A-1-a	0	0	12-30	9-28	8-26	6-20	20-30	4-10
	7-15	Very gravelly loam	GC, GC-GM	A-4, A-2-4, A-1-b	0	0	35-55	33-53	28-48	21-37	23-30	6-10
	15-25	Very gravelly clay loam, extremely gravelly clay loam	GC, GP-GC	A-6, A-2-6	0	0	20-55	17-53	15-52	12-41	32-38	11-14
	25-31	Gravelly clay loam	CL, GC-GM	A-6, A-2-4	0	0	55-78	53-78	43-72	32-56	23-34	6-12
	31-44	Gravelly loam	CL, GC, GC-GM	A-4, A-2-4	0	0	55-78	53-78	45-71	34-55	23-30	6-10
	44-52	Very gravelly sandy loam, extremely gravelly sandy loam	GC-GM, GP-GC	A-1-b, A-1-a	0	0	20-55	17-53	13-43	7-25	20-23	4-6
	52-79	Very gravelly loamy sand, extremely gravelly loamy sand	GP, GP-GM, GM	A-1-a, A-1-b	0	0	20-55	17-53	13-43	4-13	12-14	NP-1
473:												
Highoaks--------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	1-9	Gravelly loam	GC-GM, GC, GM	A-2-4, A-4	0	0	44-63	42-61	36-60	26-45	18-30	3-10
	9-20	Silty clay loam	CL	A-6	0	0	76-91	75-91	74-91	66-85	34-38	12-14
	20-31	Gravelly silty clay loam	GC, CL	A-6	0	0	51-69	50-68	49-68	44-64	34-38	12-14
	31-42	Gravelly silty clay	CL, ML	A-7-6	0	0	63-76	61-75	61-75	58-74	43-48	17-20
	42-50	Very paragravelly silty clay loam	CL	A-6	0	0	100	100	95-100	85-90	34-38	12-14
	50-63	Extremely paragravelly silty clay loam	CL	A-6	0	0	100	100	94-99	84-89	34-38	12-14
Noisy-----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	2-5	Very gravelly loam	GC-GM, GC	A-2-4, A-1-b	0	0	34-53	32-51	27-47	19-35	21-28	5-8
	5-9	Very gravelly clay loam	GC, GC-GM	A-2-6, A-6, A-1-b	0	0	34-53	32-51	25-50	19-40	23-38	6-14
	9-24	Very gravelly clay loam	GC	A-6, A-2-4	0	0	47-52	45-50	38-46	29-36	31-38	10-14
	24-39	Very gravelly silty clay loam	GC	A-6, A-2-6, A-2-4	0	0-8	32-53	29-51	25-51	22-46	27-38	8-14
	39-63	Extremely gravelly loam, extremely gravelly silty clay loam	GP-GC, GW-GC, GC	A-2-6, A-2-4	0	0	12-19	9-16	8-16	7-15	25-38	7-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
473:												
Mudhorse	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP-4
	2-5	Gravelly loam	GM, CL	A-4, A-2-4	0	0	57-71	55-70	48-70	34-53	18-30	3-10
	5-12	Loam	CL, CL-ML, SC-SM	A-6, A-4	0	0	76-100	75-100	67-100	49-80	25-38	7-14
	12-20	Clay loam	CL	A-6	0	0	76-100	76-100	68-96	53-77	32-38	11-14
	20-32	Clay	CL, ML	A-7-6, A-6	0	0	76-100	76-100	66-98	53-80	38-48	14-20
	32-51	Clay	MH, ML	A-7-6	0	0	76-100	76-100	66-92	57-81	48-52	20-22
	51-79	Clay	MH, ML	A-7-6	0	0	76-100	76-100	66-92	57-81	48-52	20-22
480:												
Dolason	0-17	Loam	CL, SC-SM, CL-ML	A-4	0	0-4	79-93	72-93	60-87	43-65	20-30	4-10
	17-35	Gravelly loam, loam	GC, GC-GM, CL	A-4, A-2-4	0	0-21	61-93	55-93	45-86	32-64	20-30	4-10
	35-59	Gravelly clay loam, gravelly loam, very gravelly loam	CL, GC, GC-GM	A-2-4, A-6, A-4	0	0-9	56-74	41-74	35-71	26-55	25-34	7-12
	59-77	Very gravelly clay loam, very gravelly loam, very gravelly sandy loam	GC, GW-GC, GC-GM	A-2-6, A-1-b, A-1-a	0	0-17	44-50	30-50	22-45	12-27	20-34	4-12
Countshill	0-7	Loam	CL, SC-SM, CL-ML	A-4, A-2-4	0	0-6	86-100	76-100	56-82	35-69	23-31	6-10
	7-20	Loam, gravelly clay loam, gravelly loam	GC-GM, CL	A-6, A-4	0	0-6	66-100	61-100	47-89	39-76	23-34	6-12
	20-28	Very gravelly loam	GC, GC-GM	A-4, A-2-4	0	0-8	40-50	33-50	25-41	22-37	25-31	7-10
	28-60	Bedrock	---	---	---	---	---	---	---	---	---	---
Airstrip	0-17	Gravelly loam	GC-GM, GC	A-4, A-2-4	0	0-20	62-71	53-71	46-67	33-50	21-29	5-9
	17-26	Extremely gravelly loam, very gravelly loam	GP-GC, GC, GC-GM	A-2-4	0	0-41	33-54	11-47	9-45	7-34	25-30	7-10
	26-60	Bedrock	---	---	---	---	---	---	---	---	---	---
481:												
Dolason	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	3-15	Loam	CL-ML, CL, SC-SM	A-4	0	0-4	79-93	72-93	60-87	43-65	20-30	4-10
	15-34	Loam	CL, SC-SM	A-4	0	0-4	79-93	73-93	58-86	42-65	20-31	4-10
	34-46	Gravelly clay loam, gravelly loam, clay loam	CL, GC, GC-GM	A-6, A-4	0	0-17	65-94	60-94	50-91	39-73	25-36	7-13
	46-78	Gravelly clay loam, gravelly loam, loam	CL, GC, GC-GM	A-6, A-4	0	0-17	66-94	61-94	51-91	39-73	25-36	7-13

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
481:												
Airstrip--------	0-2	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	2-15	Gravelly loam	GC-GM, GC	A-4, A-2-4	0	0-20	62-71	53-71	45-66	32-49	21-29	5-9
	15-41	Extremely gravelly loam, very gravelly loam	GW-GC, GC	A-2-4	0	0-39	33-56	11-49	10-45	7-34	25-30	7-10
	41-60	Bedrock	---	---	---	---	---	---	---	---	---	---
Countshill------	0-7	Loam	CL-ML, CL, SC-SM	A-4, A-2-4	0	0-6	86-100	76-100	56-82	35-69	23-31	6-10
	7-19	Loam, gravelly clay loam, gravelly loam	CL, GC-GM	A-6, A-4	0	0-6	66-100	61-100	47-89	39-76	23-34	6-12
	19-23	Very gravelly loam	GC, GC-GM	A-4, A-2-4	0	0-8	40-50	33-50	25-41	22-37	25-31	7-10
	23-35	Bedrock	---	---	---	---	---	---	---	---	---	---
	35-60	Bedrock	---	---	---	---	---	---	---	---	---	---
482:												
Dolason---------	0-13	Loam	CL-ML, SC-SM, CL	A-4	0	0-4	79-93	72-93	60-87	43-65	20-30	4-10
	13-21	Gravelly loam, loam	CL, GC, GC-GM	A-4, A-2-4	0	0-21	61-93	55-93	45-86	32-64	20-30	4-10
	21-44	Very gravelly clay loam, very gravelly loam	GC, GC-GM	A-2-4, A-2-6	0	0-17	43-49	29-49	25-46	18-35	25-34	7-12
	44-59	Very gravelly clay loam, very gravelly loam	GC, GC-GM	A-2-4, A-6	0	0-17	44-50	30-50	25-47	19-36	25-34	7-12
Countshill------	0-3	Gravelly loam	GC-GM, SC-SM, CL	A-4, A-2-4	0	0-10	58-72	50-72	38-62	30-51	20-30	4-10
	3-24	Loam, gravelly clay loam, gravelly loam	CL, CL-ML, GC-GM	A-4, A-6	0	0-6	66-100	61-100	51-95	42-81	23-34	6-12
	24-30	Very gravelly loam	GC-GM, GC	A-4, A-2-4	0	0-8	40-50	33-50	27-44	23-39	25-31	7-10
	30-60	Bedrock	---	---	---	---	---	---	---	---	---	---
483:												
Doolyville------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-6	Silt loam	CL, CL-ML	A-4	0	0	80-100	74-100	67-97	57-83	25-30	7-10
	6-11	Silty clay loam, gravelly silty clay loam	CL, GC	A-6, A-4	0	0-10	67-94	51-90	46-88	41-79	31-37	10-14
	11-15	Silty clay loam, gravelly silty clay loam	CL, GC	A-6	0	0-9	68-90	52-90	46-85	41-77	34-38	12-14
	15-18	Gravelly silty clay loam	CL, GC	A-6	0	0-9	69-83	53-75	48-71	43-64	34-38	12-14
	18-61	Gravelly silty clay loam, very gravelly silty clay loam, very gravelly loam	CL, GC	A-7-6, A-4, A-2-4	0	0-15	52-77	32-77	28-77	21-63	29-43	9-17

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
483:												
Pasturerock-----	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-8	Loam	CL	A-4	0	0-11	85	78-85	70-80	55-64	27-31	8-10
	8-17	Gravelly clay loam, clay loam	CL, GC, SC	A-6, A-4	0	0-18	65-87	56-87	51-85	40-69	31-38	10-14
	17-55	Clay loam, silty clay loam, gravelly silty clay loam, gravelly clay loam, very gravelly clay loam	GC, CL	A-6, A-2-4	0	0-16	54-91	46-91	40-85	32-70	31-38	10-14
	55-68	Gravelly silty clay loam, gravelly clay loam, very gravelly clay loam	CL, GC	A-6, A-7-6, A-2-6	0	0-8	58-77	51-77	43-71	32-55	34-41	12-16
484:												
Elkcamp---------	0-8	Loam	CL, SC-SM	A-4	0	0	84-100	76-100	65-92	48-69	25-30	7-10
	8-21	Loam, gravelly loam, clay loam	GC, CL, SC	A-4, A-6	0	0-17	66-91	57-91	50-91	38-71	28-38	8-14
	21-37	Gravelly silty clay loam, gravelly clay loam, very gravelly clay loam	SC, CL	A-6, A-4	0	0-15	70-80	55-77	48-75	38-60	31-38	10-14
	37-49	Gravelly silty clay loam, gravelly clay loam, very gravelly clay loam	CL, GC	A-6, A-2-4	0	0-15	57-77	43-77	37-73	28-57	31-38	10-14
	49-65	Very gravelly clay loam, gravelly silty clay loam, gravelly clay loam	CL, GC	A-6, A-2-4	0	0-14	47-78	34-78	30-76	23-61	31-38	10-14
Dolason---------	0-13	Loam	CL-ML, SC-SM, CL	A-4	0	0-4	79-93	72-93	60-87	43-65	20-30	4-10
	13-21	Gravelly loam, loam	GC-GM, GC, CL	A-4, A-2-4	0	0-21	61-93	55-93	45-86	32-64	20-30	4-10
	21-44	Very gravelly clay loam, very gravelly loam	GC, GC-GM	A-2-4, A-2-6	0	0-17	43-49	29-49	25-46	18-35	25-34	7-12
	44-59	Very gravelly clay loam, very gravelly loam	GC, GC-GM	A-6, A-2-4	0	0-17	44-50	30-50	25-47	19-36	25-34	7-12
Airstrip--------	0-14	Gravelly loam	GC, GC-GM	A-2-4, A-4	0	0-20	62-71	53-71	45-66	32-49	21-29	5-9
	14-31	Very gravelly loam, extremely gravelly loam	GC, GP-GC	A-2-4	0	0-41	33-54	11-47	9-43	7-33	25-30	7-10
	31-60	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
485:												
Pasturerock-----	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-5	Loam	CL	A-4	0	0-11	85-93	78-93	70-88	55-70	27-31	8-10
	5-8	Gravelly clay loam, clay loam	GC, CL	A-6, A-4	0	0-18	65-87	56-87	51-85	40-69	31-38	10-14
	8-17	Clay loam, silty clay loam	CL	A-6, A-4	0	0	83-91	79-91	67-85	54-70	31-38	10-14
	17-35	Gravelly silty clay loam, gravelly clay loam, very cobbly clay loam	CL, GC	A-6, A-2-4	0	0-24	60-84	44-76	38-71	30-58	31-38	10-14
	35-48	Clay loam, silty clay loam, gravelly silty clay loam, gravelly clay loam	CL, GC	A-6, A-4	0	0-8	62-88	54-88	46-82	37-68	31-38	10-14
	48-69	Gravelly silty clay loam, very gravelly clay loam, extremely gravelly sandy clay loam	GW-GC, GC, GP-GC	A-7-6, A-2-6, A-2-4	0	0-15	46-77	11-77	9-72	5-45	31-41	10-16
Coyoterock------	0-0.5	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	0.5-8	Cobbly clay loam	CL	A-6, A-4	0	13-19	80-90	70-83	60-74	55-68	31-34	10-12
	8-16	Clay loam, gravelly clay loam	CL	A-6, A-4	0	0-19	80-90	70-84	65-80	56-70	31-34	10-12
	16-29	Gravelly clay loam, gravelly silty clay loam, gravelly clay, cobbly clay loam	CL, SC, ML	A-6, A-7-6	0	0-18	72-85	63-85	55-85	43-70	34-48	12-20
	29-39	Clay, silty clay, gravelly clay, gravelly silty clay loam, very gravelly silty clay loam	ML, SC	A-6, A-7-6	0	0-30	72-87	63-87	55-84	44-69	38-48	14-20
	39-60	Gravelly silty clay, gravelly silty clay loam, gravelly clay, clay, silty clay, very gravelly clay loam	MH, CL, ML	A-7-6, A-6	0	0-29	74-92	57-92	53-92	50-92	38-52	14-22

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
485:												
Maneze----------	0-0.5	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	0.5-11	Loam	SC, CL	A-4	0	0	79-100	73-100	64-92	48-70	27-30	8-10
	11-18	Extremely cobbly loam, very cobbly loam	CL, GP-GC, GC	A-2-4, A-4	0	36-77	26-75	8-75	7-67	5-52	27-30	8-10
	18-44	Extremely cobbly clay loam, very gravelly silty clay loam, extremely gravelly clay loam	GP-GC, GC	A-6, A-2-4	0	33-75	30-69	10-63	9-59	7-47	31-36	10-13
	44-63	Very gravelly silty clay loam, very cobbly clay loam, extremely gravelly silty clay loam	GW-GC, GC	A-2-6, A-6	0	0-72	24-58	9-51	8-51	8-48	32-38	11-14
531:												
Atwell----------	0-10	Silt loam	CL	A-4	0	0	83-94	77-94	72-92	63-80	28-31	8-10
	10-30	Clay loam, gravelly clay loam, gravelly clay	GC, CL	A-6, A-7-6, A-4	0	0	67-95	60-95	56-95	48-88	31-43	10-17
	30-71	Gravelly clay loam, gravelly clay	CL, GC, MH	A-7-6, A-6	0	0	67-95	60-95	55-95	47-90	38-52	14-22
	71-82	Clay, clay loam, gravelly clay	CL, MH	A-7-6, A-6	0	0	68-96	61-96	57-96	50-92	38-52	14-22
Coppercreek-----	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-5	Loam	CL, SC-SM	A-4	0	0	82-94	76-94	66-88	49-67	25-31	7-10
	5-20	Loam, clay loam	CL	A-6, A-4	0	0	83-94	78-94	67-91	52-73	30-38	10-14
	20-61	Loam, clay loam	CL	A-6, A-4	0	0	84-95	80-95	69-92	54-73	30-38	10-14
	61-79	Clay, silty clay	CL, ML, MH	A-7-6	0	0	86-96	82-96	76-96	63-83	43-52	17-22
532:												
Atwell----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-7	Silt loam	CL	A-4	0	0	83-94	77-94	72-92	63-80	28-31	8-10
	7-23	Clay loam, gravelly clay loam, gravelly clay	GC, CL	A-6, A-7-6	0	0	67-95	60-95	58-95	49-88	34-43	12-17
	23-32	Gravelly clay loam, gravelly clay	GC, CL, MH	A-7-6, A-6	0	0	67-95	60-95	55-95	47-90	38-52	14-22
	32-81	Clay, clay loam, gravelly clay	ML, MH, GC	A-7-6, A-6	0	0	68-96	61-96	53-96	42-81	38-52	14-22

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
532:												
Ladybird--------	0-2	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	2-6	Gravelly clay loam	GC	A-2-4, A-4	0	0-11	56-70	47-70	37-54	31-46	31-31	10
	6-22	Gravelly clay loam	GC, CL	A-6, A-2-4	0	0-10	58-72	50-72	40-63	34-55	31-38	10-14
	22-47	Gravelly clay loam	GC, CL	A-6, A-7-6	0	0-9	60-74	52-74	42-67	36-58	34-43	12-17
	47-71	Clay loam, gravelly clay loam, very gravelly clay loam	GC, CL	A-2-6, A-7-6	0	0-9	33-90	26-90	22-84	19-74	34-43	12-17
533:												
Coppercreek-----	0-0.5	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	0.5-3	Gravelly loam	SC	A-4	0	0	73-78	59-67	53-63	41-50	28-31	8-10
	3-13	Gravelly silty clay loam, gravelly loam	CL, SC	A-4, A-6	0	0	72-79	54-69	50-68	41-58	28-34	8-12
	13-41	Gravelly silty clay loam	GC, CL	A-6, A-4	0	0	61-71	45-71	43-71	38-65	31-38	10-14
	41-62	Very gravelly silty clay loam	GC	A-2-4, A-6	0	0	49-56	29-48	27-48	24-43	31-38	10-14
Ahpah-----------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-4	Gravelly clay loam	GC	A-6, A-2-4	0	0-22	60-69	50-69	45-64	35-50	31-34	10-12
	4-19	Gravelly silty clay loam	CL, GC	A-6, A-4	0	0-10	65-72	53-72	51-72	45-64	31-36	10-13
	19-32	Very gravelly loam	GC, GC-GM	A-2-4	0	0-10	43-48	29-41	26-39	21-32	25-31	7-10
	32-43	Bedrock	---	---	---	---	---	---	---	---	---	---
	43-60	Bedrock	---	---	---	---	---	---	---	---	---	---
534:												
Coppercreek-----	0-2	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	2-6	Loam	CL-ML, CL	A-4	0	0	81-100	75-100	57-83	50-73	25-31	7-10
	6-13	Gravelly loam, gravelly silty clay loam, gravelly clay loam	CL, GC	A-6, A-4	0	0-9	68-75	52-70	44-65	38-58	30-38	10-14
	13-41	Gravelly clay loam	CL, GC	A-6, A-4	0	0-16	61-76	53-76	47-73	39-61	31-38	10-14
	41-62	Gravelly clay loam, very gravelly loam, very gravelly clay loam	GC, CL	A-6, A-2-4, A-2-6	0	0-14	41-72	34-72	29-69	22-55	28-38	8-14
Ahpah-----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-11	Gravelly loam	SC, CL, GC-GM	A-4	0	0-18	65-74	57-74	50-71	39-56	25-31	7-10
	11-25	Gravelly loam	GC, CL	A-4	0	0-11	69-77	62-77	54-72	41-56	27-31	8-10
	25-38	Very gravelly loam	GC, GC-GM	A-4, A-2-4	0	0-8	48-54	35-47	31-46	25-37	25-31	7-10
	38-60	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
534:												
Lackscreek------	0-3	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	3-6	Gravelly loam	GC, SC	A-4, A-2-4	0	0-10	58-74	50-65	37-51	30-42	28-31	8-10
	6-27	Very gravelly loam, very gravelly clay loam, extremely gravelly clay loam, very cobbly clay loam	GP-GC, GC	A-2-6, A-6, A-2-4	0	16-31	29-60	15-52	12-46	10-38	30-38	10-14
	27-35	Extremely cobbly clay loam, extremely gravelly clay loam	GW-GC, GC	A-2-6, A-2-4	0	23-47	22-36	8-29	7-28	6-25	31-38	10-14
	35-60	Bedrock	---	---	---	---	---	---	---	---	---	---
535:												
Wiregrass-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Very gravelly silt loam	GC, GC-GM	A-4, A-2-4	0	0-10	56-61	34-46	30-43	28-41	25-31	7-10
	5-11	Gravelly loam, gravelly silty clay loam	GC, CL	A-4, A-6	0	0-13	67-75	55-70	48-67	44-63	30-38	10-14
	11-41	Gravelly clay loam	CL, GC	A-6, A-4	0	0-11	62-76	54-76	44-68	39-61	31-38	10-14
	41-67	Gravelly clay loam, very gravelly loam	CL, GC	A-6, A-2-4	0	0-14	41-72	34-72	27-66	24-60	28-38	8-14
Scaath----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-18	Gravelly loam	GC, SC	A-4, A-2-4	0	0-10	58-73	50-68	37-53	30-44	28-31	8-10
	18-24	Very gravelly loam, very gravelly clay loam, extremely gravelly clay loam, very cobbly clay loam	GC	A-2-6, A-6, A-2-4	0	16-31	32-60	25-55	19-48	15-40	30-38	10-14
	24-37	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-2-4	0	23-47	18-36	9-31	8-30	7-26	31-38	10-14
	37-60	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
536:												
Coppercreek-----	0-5	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	5-10	Gravelly loam	GC-GM, GC	A-2-4, A-4	0	0-12	53-67	43-67	37-62	28-47	25-31	7-10
	10-16	Gravelly clay loam	CL, GC	A-4, A-2-4, A-6	0	0-11	64-69	46-69	41-68	32-54	31-38	10-14
	16-44	Gravelly clay loam	CL, GC	A-6, A-2-4	0	0-10	57-71	49-71	42-67	33-54	31-38	10-14
	44-73	Gravelly loam, gravelly clay loam, very gravelly clay loam, extremely gravelly clay loam	CL, GC	A-2-4, A-6, A-4	0-18	0-18	44-74	28-74	25-73	19-59	30-38	10-14
Ahpah-----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-9	Gravelly clay loam	GC	A-6, A-2-4	0	0-22	60-69	50-69	45-64	35-50	31-34	10-12
	9-28	Gravelly clay loam, gravelly silty clay loam	CL, GC	A-6, A-4	0	0-10	65-72	53-72	51-72	45-64	31-36	10-13
	28-34	Very gravelly loam	GC, GC-GM	A-2-4	0	0-10	43-48	29-41	26-39	21-32	25-31	7-10
	34-60	Bedrock	---	---	---	---	---	---	---	---	---	---
Lackscreek------	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-6	Gravelly loam	GC, SC	A-2-4, A-4	0	0-12	53-69	43-59	32-46	26-38	28-31	8-10
	6-18	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GP-GC, GW-GC	A-2-6, A-2-4	0	27-54	21-32	7-24	6-23	5-20	31-38	10-14
	18-23	Very gravelly loam, extremely gravelly loam	GC, GC-GM	A-2-6, A-2-4	0	10-27	34-52	20-44	17-42	13-32	25-34	7-12
	23-60	Bedrock	---	---	---	---	---	---	---	---	---	---
537:												
Wiregrass-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Loam	CL-ML, CL	A-4	0	0	81-100	75-100	57-83	50-73	25-31	7-10
	5-12	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, CL	A-6, A-4	0	0-5	69-75	53-70	44-65	39-58	30-38	10-14
	12-51	Gravelly clay loam	CL, GC	A-6, A-4	0	0-8	63-76	55-76	49-73	40-61	31-38	10-14
	51-85	Gravelly clay loam, very gravelly loam, very gravelly clay loam	GC, CL	A-6, A-2-4, A-2-6	0	0-10	42-72	36-72	30-69	23-55	28-38	8-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
537:												
Scaath----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-18	Gravelly loam	GC, SC	A-4, A-2-4	0	0-10	58-73	50-68	37-53	30-44	28-31	8-10
	18-24	Extremely gravelly clay loam, very gravelly loam, very gravelly clay loam, very cobbly clay loam	GC	A-2-6, A-6, A-2-4	0	16-31	32-60	25-53	19-47	15-39	30-38	10-14
	24-37	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-2-4	0	23-47	17-36	9-31	8-30	7-26	31-38	10-14
	37-60	Bedrock	---	---	---	---	---	---	---	---	---	---
538:												
Wiregrass-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-2	Gravelly loam	GC, GC-GM	A-2-4, A-4	0	0-8	53-67	44-67	38-62	28-47	25-31	7-10
	2-11	Gravelly clay loam	GC, CL	A-4, A-6, A-2-4	0	0-11	64-69	46-69	41-68	32-54	31-38	10-14
	11-39	Gravelly clay loam, gravelly silty clay loam	GC, CL	A-6, A-2-4	0	0-10	57-71	49-71	42-67	33-54	31-38	10-14
	39-60	Gravelly loam, gravelly clay loam, very gravelly clay loam	GC, CL	A-2-4, A-4, A-6	0-12	0-12	47-74	32-74	28-73	22-59	30-38	10-14
Pittplace-------	0-7	Clay loam	CL	A-4, A-6	0	0	83-100	79-100	71-99	57-80	31-38	10-14
	7-43	Gravelly clay loam, paragravelly silty clay loam, gravelly silty clay loam, clay loam, silty clay	CL, MH	A-6, A-7-6	0	0	78-100	68-100	65-100	60-100	38-52	14-22
	43-56	Gravelly clay loam, clay	ML, SC, MH	A-7-6, A-6	0	0	73-92	53-85	48-85	41-78	38-52	14-22
	56-63	Very gravelly clay loam	GM, GC	A-7-6, A-2-6	0	0-4	63-67	47-53	42-53	33-45	38-52	14-22
539:												
Wiregrass-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Very gravelly loam	GC, GC-GM	A-2-4	0	0-12	52-57	28-40	22-34	19-29	25-31	7-10
	5-33	Gravelly clay loam	CL, GC	A-6, A-2-4	0	0-10	57-71	49-71	38-61	34-55	31-38	10-14
	33-73	Very gravelly clay loam	GC	A-2-6, A-2-4	0	0-10	55-61	33-45	25-38	23-35	31-38	10-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
539:												
Scaath----------	0-0.5	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	0.5-10	Gravelly loam	GC	A-4, A-2-4	0	0-12	53-68	43-62	32-49	26-40	28-31	8-10
	10-30	Extremely cobbly clay loam, extremely gravelly clay loam	GW-GC, GC, GP-GC	A-2-6, A-2-4	0	27-54	16-31	7-26	6-24	5-21	31-38	10-14
	30-60	Bedrock	---	---	---	---	---	---	---	---	---	---
541:												
Wiregrass-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Very gravelly silt loam	GC, GC-GM	A-4, A-2-4	0	0-10	56-61	34-46	30-43	28-41	25-31	7-10
	5-17	Gravelly clay loam, gravelly loam, gravelly silty clay loam	GC, CL	A-6, A-4	0	0-13	67-75	55-70	48-67	44-63	30-38	10-14
	17-41	Very gravelly clay loam, gravelly clay loam	CL, GC	A-6, A-2-4	0	0-8	58-76	44-76	35-68	32-61	31-38	10-14
	41-67	Very gravelly clay loam, very gravelly loam	GC	A-6, A-2-4, A-2-6	0	0-21	51-61	37-55	32-54	24-43	28-38	8-14
Rockysaddle-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-7	Extremely gravelly loam	GC, GP-GC, GW	A-2-4	0	0-9	21-38	5-25	5-23	3-18	25-31	7-10
	7-21	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly clay loam	GC, GP-GC	A-6, A-2-6, A-2-4	0-11	0-15	21-42	12-42	11-41	10-36	31-38	10-14
	21-60	Very cobbly loam, very cobbly clay loam, extremely gravelly silty clay loam, extremely gravelly clay loam	GC, GW-GC	A-6, A-2-6, A-2-4	0-15	15-52	16-43	7-43	6-41	5-36	30-38	10-14
542:												
Coppercreek-----	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-5	Loam	CL-ML, CL	A-4	0	0	81-100	75-100	57-83	50-73	25-31	7-10
	5-12	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, CL	A-6, A-4	0	0-9	68-75	52-70	44-65	38-58	30-38	10-14
	12-51	Gravelly clay loam	CL, GC	A-6, A-4	0	0-16	68-76	60-76	53-73	43-61	31-38	10-14
	51-85	Gravelly clay loam, very gravelly loam, very gravelly clay loam	GC, CL	A-6, A-2-4, A-2-6	0	0-14	41-72	34-72	29-69	22-55	28-38	8-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
542:												
Slidecreek, gravelly loam--	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-9	Extremely gravelly loam	GP-GC, GC, GW	A-2-4	0	0-9	21-38	5-25	5-23	3-18	25-31	7-10
	9-31	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly clay loam	GC, GP-GC	A-6, A-2-6, A-2-4	0-15	0-15	19-42	12-42	11-40	9-36	31-38	10-14
	31-62	Very cobbly loam, very cobbly clay loam, extremely gravelly sandy clay loam, extremely gravelly clay loam	GC, GW-GC	A-6, A-2-6, A-2-4	0-15	15-52	14-43	8-43	6-41	6-36	30-38	10-14
Lackscreek------	0-2	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	2-15	Gravelly loam	GC, SC	A-4, A-2-4	0	0-10	58-74	50-65	37-51	30-42	28-31	8-10
	15-23	Very gravelly loam, very gravelly clay loam, extremely gravelly clay loam, very cobbly clay loam	GP-GC, GC	A-2-6, A-6, A-2-4	0	16-31	29-60	15-52	12-46	10-38	30-38	10-14
	23-32	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-2-4	0	23-47	22-36	8-29	7-28	6-25	31-38	10-14
	32-60	Bedrock	---	---	---	---	---	---	---	---	---	---
543:												
Wiregrass-------	0-7	Gravelly loam	CL, GC, GC-GM	A-2-4, A-4	0	0	54-73	46-68	40-64	32-51	25-31	7-10
	7-18	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, CL	A-6, A-4	0	0-5	69-75	53-70	44-65	39-58	30-38	10-14
	18-39	Gravelly clay loam	GC, CL	A-6, A-4	0	0-8	63-76	55-76	49-73	40-61	31-38	10-14
	39-75	Gravelly clay loam, very gravelly loam, very gravelly clay loam	GC, CL	A-6, A-2-4, A-2-6	0	0-10	42-72	36-72	30-69	23-55	28-38	8-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
543:												
Rockysaddle-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-6	Extremely gravelly loam	GC, GP-GC, GW	A-2-4	0	0-9	21-38	5-25	5-23	3-18	25-31	7-10
	6-14	Very gravelly loam	SC-SM, SC	A-2-4	0	0-9	93-100	27-48	23-45	17-34	25-31	7-10
	14-44	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly clay loam	GC, GP-GC	A-2-6, A-6, A-2-4	0-11	0-15	21-42	12-42	12-42	10-38	31-38	10-14
	44-61	Very cobbly loam, very cobbly clay loam, extremely gravelly silty clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-6, A-2-4	0-15	15-52	16-43	7-43	7-43	6-39	30-38	10-14
Scaath----------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-8	Gravelly loam	GC, SC	A-4, A-2-4	0	0-10	58-73	50-68	37-53	30-44	28-31	8-10
	8-22	Very gravelly loam, very gravelly clay loam, extremely gravelly clay loam, very cobbly clay loam	GC	A-2-6, A-6, A-2-4	0	16-31	32-60	25-53	19-47	15-39	30-38	10-14
	22-37	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-2-4	0	23-47	17-36	9-31	8-30	7-26	31-38	10-14
	37-60	Bedrock	---	---	---	---	---	---	---	---	---	---
544:												
Coppercreek-----	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-5	Very gravelly silt loam	GC, GC-GM	A-4, A-2-4	0	0-10	56-61	34-46	30-43	28-41	25-31	7-10
	5-11	Gravelly loam, gravelly silty clay loam	GC, CL	A-4, A-6	0	0-18	65-75	57-70	49-67	46-63	30-38	10-14
	11-41	Gravelly clay loam	CL, GC	A-6, A-4	0	0-16	68-76	60-76	48-68	43-61	31-38	10-14
	41-67	Gravelly clay loam, very gravelly loam	CL, GC	A-6, A-2-4	0	0-14	41-72	34-72	27-66	24-60	28-38	8-14
Tectah----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-12	Silty clay loam	CL	A-6, A-4	0	0	81-100	76-100	70-100	64-92	31-38	10-14
	12-45	Clay loam, silty clay loam, silty clay	CL, MH	A-7-6, A-6	0	0	83-100	77-100	68-100	62-96	38-52	14-22
	45-73	Clay loam, silty clay loam, silty clay	CL, MH	A-7-6, A-6	0	0	83-100	78-100	72-100	67-100	38-52	14-22

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
544:												
Lackscreek------	0-2	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	2-15	Gravelly loam	GC, SC	A-4, A-2-4	0	0-10	58-74	50-65	37-51	30-42	28-31	8-10
	15-23	Very gravelly loam, very gravelly clay loam, extremely gravelly clay loam, very cobbly clay loam	GP-GC, GC	A-2-6, A-2-4, A-6	0	16-31	29-60	15-52	12-46	10-38	30-38	10-14
	23-32	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-2-4	0	23-47	22-36	8-29	7-28	6-25	31-38	10-14
	32-60	Bedrock	---	---	---	---	---	---	---	---	---	---
545:												
Devilscreek-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-6	Gravelly loam	CL, GC	A-4, A-2-4	0	0-12	53-67	43-67	36-57	32-51	30-31	10
	6-14	Clay loam, gravelly clay loam	CL, GC	A-4, A-6, A-2-4	0	0-12	54-92	45-92	38-87	35-80	31-38	10-14
	14-30	Gravelly clay loam, clay loam, cobbly clay loam	GC, CL	A-4, A-6	0	0-28	69-93	59-93	51-88	48-84	31-38	10-14
	30-37	Very gravelly silt loam	GC-GM, GC	A-2-4, A-4, A-1-b	0	0-18	36-48	29-48	25-47	21-39	20-30	4-10
	37-67	Very gravelly silt loam	GM, GC-GM	A-4, A-2-4, A-1-b	0	0-17	37-49	29-49	26-49	23-43	16-25	2-7
Panthercreek----	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-7	Gravelly loam	GC, GC-GM	A-2-4, A-4	0	0-6	58-72	46-63	33-51	28-44	20-30	4-10
	7-13	Gravelly loam, very gravelly loam, extremely gravelly loam	CL, SC-SM, GP-GC	A-1-a, A-4	0	0-20	32-81	18-71	14-61	12-53	20-30	4-10
	13-36	Very gravelly sandy loam, very gravelly loam, extremely gravelly loam	GW-GM, GM, GC-GM	A-1-a, A-2-4	0	0-18	33-48	20-48	12-35	9-27	14-25	1-7
	36-67	Very gravelly loam, very gravelly sandy loam	GM, GP-GM, GC-GM	A-1-a, A-2-4, A-1-b	0	0-18	33-48	20-48	13-37	9-28	14-25	1-7

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
545:												
Coppercreek-----	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-4	Very gravelly loam	GC, GC-GM	A-2-4	0	0-12	51-57	28-40	22-34	20-30	25-31	7-10
	4-13	Gravelly loam, gravelly clay loam	GC	A-4, A-2-4, A-6	0	0-22	60-70	50-64	40-57	34-49	30-38	10-14
	13-52	Gravelly clay loam	CL, GC	A-6, A-4	0	0-20	63-71	53-71	43-63	38-57	31-38	10-14
	52-67	Gravelly clay loam, very gravelly loam	CL, GC	A-2-4, A-6	0	0-18	36-67	29-67	22-58	19-52	30-38	10-14
546:												
Lackscreek------	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-4	Gravelly loam	GC, SC	A-4, A-2-4	0	0-12	53-69	43-59	32-46	26-38	28-31	8-10
	4-9	Extremely gravelly loam, very gravelly clay loam, very cobbly clay loam	GP-GC, GC	A-2-4, A-2-6	0	20-37	27-55	12-46	10-40	8-33	30-38	10-14
	9-21	Extremely cobbly clay loam, extremely gravelly clay loam	GW-GC, GC, GP-GC	A-2-6, A-2-4	0	27-54	21-32	7-24	6-23	5-20	31-38	10-14
	21-29	Extremely gravelly loam, very gravelly loam, extremely gravelly clay loam	GC, GP-GC, GM	A-2-6, A-2-4	0	10-27	37-52	16-44	14-42	10-32	25-38	7-12
	29-60	Bedrock	---	---	---	---	---	---	---	---	---	---
Coppercreek-----	0-5	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	5-10	Gravelly loam	GC, GC-GM	A-2-4, A-4	0	0-8	47-67	39-67	33-62	25-47	25-31	7-10
	10-16	Gravelly clay loam	GC, CL	A-2-4, A-4, A-6	0	0-11	64-69	46-69	41-68	32-54	31-38	10-14
	16-44	Gravelly clay loam	GC, CL	A-6, A-2-4	0	0-10	57-71	49-71	42-67	33-54	31-38	10-14
	44-73	Gravelly loam, very gravelly clay loam, gravelly clay loam, extremely gravelly clay loam	GC, CL	A-2-4, A-4, A-6	0-18	0-18	44-74	28-74	25-73	19-59	30-38	10-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
549:												
Scaath----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-4	Gravelly loam	GC, SC	A-4, A-2-4	0	0-10	58-73	50-68	37-53	30-44	28-31	8-10
	4-9	Very gravelly loam, extremely gravelly clay loam, very gravelly clay loam, very cobbly clay loam	GC	A-2-6, A-6, A-2-4	0	16-31	32-60	25-53	19-47	15-39	30-38	10-14
	9-22	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-2-4	0	23-47	17-36	9-31	8-30	7-26	31-38	10-14
	22-60	Bedrock	---	---	---	---	---	---	---	---	---	---
Rockysaddle-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-9	Extremely gravelly loam	GP-GC, GC, GW	A-2-4	0	0-10	20-35	5-22	4-21	3-16	25-31	7-10
	9-45	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly clay loam	GC, GP-GC	A-2-6, A-2-4	0-12	0-17	20-38	11-38	10-37	8-33	31-38	10-14
	45-69	Very cobbly loam, very cobbly clay loam, extremely gravelly silty clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-2-4	0-17	17-55	15-40	6-40	5-38	5-33	30-38	10-14
Wiregrass-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-9	Gravelly loam	GC-GM, CL, GC	A-4, A-2-4	0	0	54-73	46-68	40-64	32-51	25-31	7-10
	9-26	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, CL	A-6, A-4	0	0-5	69-75	53-70	44-65	39-58	30-38	10-14
	26-46	Gravelly clay loam	CL, GC	A-6, A-4	0	0-8	63-76	55-76	49-73	40-61	31-38	10-14
	46-71	Gravelly clay loam, very gravelly loam, very gravelly clay loam	GC, CL	A-6, A-2-4, A-2-6	0	0-10	42-72	36-72	30-69	23-55	28-38	8-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
550:												
Scaath----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-11	Gravelly loam	SC, GC	A-4, A-2-4	0	0-10	58-73	50-68	37-53	30-44	28-31	8-10
	11-18	Gravelly clay loam, gravelly loam	GC	A-6, A-2-4	0	0-10	58-73	50-68	43-63	33-50	28-34	8-12
	18-24	Very cobbly clay loam, very gravelly clay loam	GC	A-2-6, A-2-4, A-6	0	23-36	31-67	21-59	19-57	15-46	31-38	10-14
	24-37	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GW-GC	A-2-6, A-2-4	0	23-47	19-36	9-31	8-30	7-26	31-38	10-14
	37-60	Bedrock	---	---	---	---	---	---	---	---	---	---
Rockysaddle-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-14	Extremely gravelly loam	GP-GC, GC, GW	A-2-4	0	0-9	21-38	5-25	5-23	3-18	25-31	7-10
	14-44	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly clay loam	GC, GP-GC	A-6, A-2-6, A-2-4	0-11	0-15	21-42	12-42	11-41	10-36	31-38	10-14
	44-61	Very cobbly loam, very cobbly clay loam, extremely gravelly silty clay loam, extremely gravelly clay loam	GC, GW-GC	A-6, A-2-6, A-2-4	0-15	15-52	16-43	7-43	6-41	5-36	30-38	10-14
Wiregrass-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-7	Gravelly loam	CL, GC, GC-GM	A-4, A-2-4	0	0	54-73	46-68	40-64	32-51	25-31	7-10
	7-13	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, CL	A-6, A-4	0	0-5	69-75	53-70	44-65	39-58	30-38	10-14
	13-63	Gravelly clay loam	CL, GC	A-6, A-4	0	0-8	63-76	55-76	49-73	40-61	31-38	10-14
	63-69	Gravelly clay loam, very gravelly loam, very gravelly clay loam	GC, CL	A-6, A-2-4, A-2-6	0	0-10	42-72	36-72	30-69	23-55	28-38	8-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
553:												
Ladybird--------	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-5	Gravelly loam	GC-GM, GC	A-2-4, A-4	0	0-12	54-68	45-68	31-54	26-46	23-31	6-10
	5-9	Gravelly clay loam	GC-GM, GC, CL	A-2-4, A-6, A-2-6	0	0-12	54-68	45-68	40-66	31-53	31-38	10-14
	9-24	Very gravelly silty clay loam, gravelly silty clay loam, gravelly clay loam, gravelly loam	GC, GC-GM, CL	A-2-6, A-6, A-1-b	0	0-11	46-70	31-70	26-70	23-64	23-38	6-14
	24-51	Gravelly silty clay loam, gravelly clay loam, gravelly loam	GC, SC	A-6, A-2-4	0	0-10	57-73	49-71	36-60	29-49	30-38	10-14
	51-61	Gravelly loam	GC-GM, GC, CL	A-2-4, A-4	0	0-10	57-80	49-75	36-62	29-51	23-31	6-10
	61-76	Very gravelly loam	GC-GM, GC	A-2-4, A-1-a	0	0-20	33-53	26-45	19-37	15-30	23-31	6-10
Stonehill-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	5-20	Cobbly silt loam	SM, CL-ML	A-4	0	23-32	77-86	55-86	48-83	38-67	18-25	3-7
	20-25	Cobbly silty clay loam	SM, CL	A-4, A-6	0	23-32	77-86	55-86	45-86	40-78	18-34	3-12
	25-32	Gravelly silt loam, gravelly silty clay loam	CL, GC	A-4, A-6	0	0-20	64-77	46-71	44-71	39-66	30-38	10-14
	32-60	Bedrock	---	---	---	---	---	---	---	---	---	---
554:												
Ladybird--------	0-6	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	6-28	Gravelly loam	GC-GM, GC	A-4, A-2-4	0	0-12	54-68	45-68	31-54	26-46	23-31	6-10
	28-37	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, GC-GM	A-2-6, A-6, A-1-b	0	0-11	56-70	47-70	31-58	25-50	23-38	6-14
	37-62	Gravelly clay loam, gravelly loam	GC	A-6, A-2-4	0	0-10	57-71	49-71	36-60	29-49	30-38	10-14
	62-67	Very gravelly loam	GC-GM, GC	A-2-4, A-1-a	0	0-20	33-53	26-45	19-37	15-30	23-31	6-10
Trailhead-------	0-5	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	5-24	Silty clay loam	CL-ML, OL	A-4	0	0	80-100	74-100	71-100	64-91	25-29	4-6
	24-30	Silty clay loam	ML	A-4	0	0	80-100	74-100	66-95	61-88	27-31	5-7
	30-38	Silty clay	ML	A-4	0	0	82-100	77-100	67-95	62-91	31-38	7-10
	38-54	Silty clay	ML	A-6, A-7-6, A-4	0	0	83-100	78-100	67-95	64-92	34-42	8-12
	54-66	Clay	ML	A-7-5, A-4	0	0	83-100	78-100	64-100	62-99	34-49	8-15

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
555:												
Panthercreek----	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-7	Gravelly loam	GC, GC-GM	A-2-4, A-4	0	0-6	58-72	46-63	33-51	28-44	20-30	4-10
	7-16	Gravelly loam, very gravelly loam, extremely gravelly loam	CL, GP-GC, SC-SM	A-1-a, A-4	0	0-20	32-81	18-71	14-61	12-53	20-30	4-10
	16-34	Very gravelly sandy loam, very gravelly loam, extremely gravelly loam	GC-GM, GP-GM	A-1-a, A-2-4, A-1-b	0	0-18	36-48	16-48	13-45	9-33	14-25	1-7
	34-89	Very gravelly loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, GC-GM, GP-GM	A-1-b, A-2-4, A-1-a	0	0-18	33-48	20-48	17-46	12-34	14-25	1-7
Coppercreek-----	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-4	Very gravelly loam	GC, GC-GM	A-2-4	0	0-12	51-57	28-40	22-34	20-30	25-31	7-10
	4-13	Gravelly loam, gravelly clay loam	GC	A-4, A-2-4, A-6	0	0-11	64-70	46-64	36-57	31-49	30-38	10-14
	13-52	Gravelly clay loam	CL, GC	A-6, A-4	0	0-20	63-71	53-71	43-63	38-57	31-38	10-14
	52-67	Gravelly clay loam, very gravelly loam	CL, GC	A-6, A-2-4	0	0-18	36-67	29-67	22-58	19-52	30-38	10-14
Devilscreek-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-11	Gravelly loam	CL, GC	A-4, A-2-4	0	0-12	53-67	43-67	36-57	32-51	30-31	10
	11-35	Clay loam, gravelly clay loam, cobbly clay loam	CL, GC	A-6, A-4	0	6-20	63-93	53-93	46-88	43-83	31-38	10-14
	35-67	Very gravelly silt loam	GC, GC-GM	A-2-4, A-1-b, A-4	0	0-18	36-48	29-48	25-47	21-39	20-30	4-10
	67-71	Very gravelly loam	GC-GM, GM	A-1-b, A-2-4, A-4	0	0-17	37-49	29-49	26-49	23-43	16-25	2-7
556:												
Rodgerpeak------	0-0.5	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	0.5-7	Gravelly loam	GC, SC-SM	A-2-4, A-4	0	0-11	65-70	47-70	38-64	26-48	20-31	4-10
	7-18	Loam, gravelly loam, gravelly clay loam, gravelly silty clay loam	GC, CL, SC-SM	A-4, A-6, A-2-4	0	0-9	68-81	51-81	45-80	34-62	25-34	7-12
	18-60	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
556:												
Wiregrass-------	0-0.5	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	0.5-10	Loam	CL-ML, CL	A-4	0	0	78-100	72-100	60-91	50-76	25-31	7-10
	10-14	Gravelly clay loam, gravelly loam	GC, CL	A-4, A-6	0	0	65-71	53-65	45-62	37-52	30-38	10-14
	14-59	Gravelly clay loam, gravelly loam	CL, GC	A-4, A-6	0	0	60-73	52-73	44-69	36-57	30-38	10-14
557:												
Ustic Palehumults----	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	3-7	Very gravelly loam	GC-GM, GC	A-2-4	0-10	0-20	36-47	28-39	24-37	18-28	25-31	7-10
	7-13	Gravelly loam	CL, GC-GM, GC	A-4	0-10	0-20	65-71	59-71	51-67	38-51	25-31	7-10
	13-20	Very gravelly clay loam, very gravelly silt loam, extremely gravelly silt loam	GC, GW-GC, GC-GM	A-1-a, A-6, A-2-4	0-17	9-32	36-68	12-52	11-52	9-46	20-34	4-12
	20-57	Very gravelly clay loam, very cobbly silty clay loam, extremely gravelly clay loam	CL, GC, GP-GC	A-2-4, A-6	0-17	25-45	31-70	8-70	8-70	7-65	31-38	10-14
	57-91	Extremely stony loam, very cobbly clay loam, extremely gravelly silty clay loam	GC, GP-GC	A-2-4, A-6	17-38	17-55	29-61	15-61	13-59	10-46	30-38	10-14
558:												
Tectah----------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-26	Silty clay loam	CL	A-6, A-4	0	0	81-100	76-100	70-100	64-92	31-38	10-14
	26-51	Clay loam, silty clay loam, silty clay	CL, MH	A-7-6, A-6	0	0	83-100	77-100	68-100	62-96	38-52	14-22
	51-63	Clay loam, silty clay loam, silty clay	CL, MH	A-7-6, A-6	0	0	83-100	78-100	72-100	67-100	38-52	14-22
Coppercreek-----	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-14	Loam	CL, CL-ML	A-4	0	0	94-100	84-100	67-86	57-75	25-31	7-10
	14-23	Clay loam	CL	A-6, A-4	0	0	82-100	77-100	63-89	53-77	31-38	10-14
	23-92	Clay loam	CL	A-6, A-4	0	0	84-100	79-100	61-85	54-77	31-38	10-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
558:												
Trailhead-------	0-4	Silty clay loam	CL-ML, OL	A-4	0	0	81-100	76-100	73-100	65-91	25-29	4-6
	4-15	Silty clay loam	ML	A-4	0	0	81-100	76-100	68-95	63-88	27-31	5-7
	15-30	Silty clay	ML	A-7-6, A-6, A-4	0	0	85-100	80-100	69-95	65-92	34-42	8-12
	30-79	Clay	ML	A-4, A-7-5	0	0	85-100	80-100	66-100	63-99	34-49	8-15
559:												
Trailhead-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-7	Silty clay loam	CL-ML, OL	A-4	0	0	80-100	74-100	71-100	64-91	25-29	4-6
	7-18	Silty clay loam	ML	A-4	0	0	80-100	74-100	66-95	61-88	27-31	5-7
	18-37	Silty clay	ML	A-4, A-6, A-7-6	0	0	83-100	78-100	67-95	64-92	34-42	8-12
	37-60	Clay	ML	A-4, A-7-5	0	0	83-100	78-100	64-100	62-99	34-49	8-15
560:												
Trailhead-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-7	Silty clay loam	CL-ML, OL	A-4	0	0	80-100	74-100	71-100	64-91	25-29	4-6
	7-13	Silty clay loam	ML	A-4	0	0	80-100	74-100	66-95	61-88	27-31	5-7
	13-23	Silty clay	ML	A-4	0	0	82-100	77-100	67-95	62-91	31-38	7-10
	23-54	Silty clay	ML	A-7-6, A-6, A-4	0	0	83-100	78-100	67-95	64-92	34-42	8-12
	54-73	Clay	ML	A-4, A-7-5	0	0	83-100	78-100	64-100	62-99	34-49	8-15
561:												
Trailhead-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-3	Loam	CL-ML	A-4	0	0	80-100	74-100	68-93	58-79	24-24	4-6
	3-8	Silty clay loam	ML	A-4	0	0	80-100	74-100	66-95	61-88	27-31	5-7
	8-48	Silty clay	ML	A-7-6, A-6, A-4	0	0	83-100	78-100	67-95	64-92	34-42	8-12
	48-93	Clay	ML	A-4, A-7-5	0	0	83-100	78-100	64-100	62-99	34-49	8-15
562:												
Trailhead-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Clay loam	CL-ML, OL	A-4	0	0	80-100	74-100	71-100	64-91	25-29	4-6
	5-12	Clay loam, silty clay loam	ML	A-4	0	0	80-100	74-100	66-95	61-88	27-31	5-7
	12-27	Clay loam, silty clay	ML	A-4	0	0	82-100	77-100	68-99	54-81	31-38	7-10
	27-36	Clay, silty clay	ML	A-6, A-4, A-7-6	0	0	83-100	78-100	67-95	64-92	34-42	8-12
	36-80	Clay	ML	A-7-5, A-4	0	0	83-100	78-100	64-100	62-99	34-49	8-15

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
562:												
Fortyfour-------	0-0.5	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	0.5-12	Silty clay loam	ML, CL-ML	A-4	0	0	79-93	73-93	63-88	58-81	25-31	4-7
	12-30	Gravelly clay, clay, silty clay	ML	A-4, A-7-6	0	0	77-95	65-94	60-94	55-89	34-42	8-12
	30-39	Clay	ML	A-7-6, A-4	0	0	94-100	75-94	68-94	60-84	34-42	8-12
	39-60	Bedrock	---	---	---	---	---	---	---	---	---	---
563:												
Trailhead-------	0-5	Silty clay loam	CL-ML, OL	A-4	0	0	80-100	74-100	71-100	64-91	25-29	4-6
	5-13	Silty clay loam	ML	A-4	0	0	80-100	74-100	66-95	61-88	27-31	5-7
	13-43	Silty clay	ML	A-6, A-7-6, A-4	0	0	83-100	78-100	67-95	64-92	34-42	8-12
	43-60	Clay	ML	A-7-5, A-4	0	0	83-100	78-100	64-100	62-99	34-49	8-15
Fortyfour-------	0-8	Silty clay loam	CL-ML, ML	A-4	0	0	79-93	73-93	64-89	58-82	25-31	4-7
	8-25	Gravelly clay, clay, silty clay	ML	A-4, A-7-6	0	0	77-95	65-94	60-94	55-89	34-42	8-12
	25-31	Clay	ML	A-7-6, A-4	0	0	94-100	75-94	68-94	60-84	34-42	8-12
	31-60	Bedrock	---	---	---	---	---	---	---	---	---	---
580:												
Coppercreek-----	0-5	Loam	CL, CL-ML	A-4	0	0	93-100	84-100	73-94	59-77	25-31	7-10
	5-16	Clay loam, loam	CL	A-4, A-6	0	0	80-100	74-100	67-100	54-83	30-38	10-14
	16-43	Clay loam	CL	A-4, A-6	0	0	82-100	77-100	66-94	55-79	31-38	10-14
	43-79	Clay loam, paragravelly clay loam	CL	A-6, A-4	0	0	82-100	77-100	67-96	56-81	31-38	10-14
Tectah----------	0-9	Clay loam	CL	A-6, A-4	0	0	81-100	76-100	71-100	61-89	31-38	10-14
	9-15	Clay loam, silty clay loam, silty clay	CL, MH	A-6, A-7-6	0	0	83-100	77-100	71-100	61-94	38-52	14-22
	15-28	Silty clay, clay loam, silty clay loam	CL, MH	A-6, A-7-6	0	0	83-100	77-100	71-100	61-94	38-52	14-22
	28-60	Clay loam, silty clay loam, clay	ML, CL, MH	A-6, A-7-6	0	0	83-100	78-100	68-100	57-89	38-52	14-22

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
580:												
Slidecreek------	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	3-11	Very gravelly loam	GC-GM, GC	A-2-4	0	0-10	38-47	24-39	21-37	15-28	25-31	7-10
	11-15	Very gravelly clay loam, extremely cobbly clay loam, extremely gravelly clay loam	GC	A-2-6, A-2-4, A-6	0	0-17	23-49	16-49	15-48	13-42	31-38	10-14
	15-55	Very gravelly clay loam, extremely cobbly clay loam, extremely gravelly clay loam	GP-GC, GC	A-2-6, A-2-4, A-6	0	0-17	23-49	16-49	14-46	12-40	31-38	10-14
	55-60	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GP-GC, GW	A-2-6, A-2-4, A-2-7	0	17-25	18-27	6-21	5-21	4-18	30-43	10-17
581:												
Coppercreek-----	0-8	Loam	CL-ML, CL	A-4	0	0	79-100	73-100	64-96	50-76	25-31	7-10
	8-15	Clay loam, loam, gravelly clay loam	GC, CL	A-6, A-2-4	0	0-10	57-93	48-93	43-92	35-76	30-38	10-14
	15-55	Clay loam, gravelly clay loam	CL, GC	A-4, A-6	0	0-9	60-100	52-100	45-96	38-82	31-38	10-14
	55-79	Clay loam, paragravelly clay loam, gravelly sandy clay loam	CL, SC	A-4, A-6	0	0-8	84-100	68-100	56-95	45-79	28-38	8-14
Slidecreek------	0-7	Gravelly loam	GC-GM, GC, CL	A-4, A-2-4	0	0	53-71	45-71	39-67	29-51	25-31	7-10
	7-14	Very gravelly loam, very gravelly clay loam, very gravelly silty clay loam, gravelly clay loam	GC, CL	A-6, A-2-4	0	0-9	34-74	27-74	24-74	18-58	28-38	8-14
	14-61	Very gravelly clay loam, very gravelly silty clay loam	GC	A-2-6, A-6, A-2-4	0	0-9	34-49	27-49	24-47	20-40	31-38	10-14
	61-79	Extremely gravelly silty clay loam, extremely gravelly clay loam	GC, GP-GC, GW-GC	A-2-6, A-2-4	0	9-25	18-24	6-24	5-23	5-20	31-38	10-14
Tectah----------	0-4	Loam	CL	A-4	0	0	81-100	76-100	68-95	55-77	27-31	8-10
	4-19	Clay loam, clay	CL, ML	A-6, A-7-6	0	0	83-100	77-100	67-100	57-88	34-48	14-20
	19-63	Gravelly clay loam, gravelly clay	CL, GC, ML	A-6, A-7-6	0	0-5	62-75	54-75	47-73	40-63	38-48	14-20

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
582:												
Slidecreek------	0-8	Gravelly loam	GC-GM, GC, CL	A-4, A-2-4	0	0	56-74	48-74	41-68	30-51	25-31	7-10
	8-15	Very gravelly clay loam, very gravelly silty clay loam	GC, CL	A-2-6, A-6, A-2-4	0	0-8	36-77	30-77	28-77	24-68	31-38	10-14
	15-50	Very gravelly clay loam, very gravelly silty clay loam	GC	A-2-6, A-6, A-2-4	0	0-8	36-52	30-52	26-50	22-43	31-38	10-14
	50-71	Extremely gravelly loam, extremely gravelly clay loam	GC, GW-GC, GP-GC	A-2-4, A-2-6	0	7-22	19-26	7-26	6-26	5-22	25-38	7-14
Lackscreek------	0-5	Very gravelly loam	GC	A-2-4	0	0-10	39-54	25-46	19-36	15-30	28-31	8-10
	5-17	Extremely gravelly clay loam, very gravelly loam, very gravelly clay loam, very cobbly clay loam	GP-GC, GC	A-2-4, A-6	0	0-31	29-57	15-50	14-50	10-39	30-38	10-14
	17-39	Extremely cobbly clay loam, extremely gravelly loam, extremely gravelly clay loam	GC, GW-GC	A-2-4, A-2-6	0	23-47	22-36	8-29	7-28	6-25	30-38	10-14
	39-79	Bedrock	---	---	---	---	---	---	---	---	---	---
Coppercreek-----	0-7	Gravelly loam	GC-GM, GC, CL	A-4, A-2-4	0	0-10	58-72	50-72	44-69	35-56	25-31	7-10
	7-24	Gravelly clay loam, gravelly silty clay loam, clay loam	CL, GC	A-6, A-4	0	0-8	63-76	55-76	50-76	43-66	31-38	10-14
	24-75	Very gravelly clay loam, very paragravelly clay loam, extremely gravelly clay loam	GC	A-6, A-2-4, A-7-6	0	0-14	42-55	29-55	26-55	22-49	31-43	10-17
583:												
Trailhead-------	0-7	Gravelly loam	ML, CL-ML, GM	A-4	0	0	65-70	56-70	48-66	39-54	20-25	2-4
	7-15	Gravelly clay loam	GM, GC-GM, ML	A-4	0	0-11	63-70	54-70	45-68	38-59	25-34	4-8
	15-56	Gravelly clay, clay	GM, ML	A-7-5, A-4	0	0-8	62-100	54-100	48-100	41-100	31-49	7-15
	56-79	Clay, gravelly clay, gravelly silty clay loam	GM, ML	A-7-5, A-4	0	0-9	67-100	59-100	53-100	44-99	31-49	7-15

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
583:												
Wiregrass-------	0-5	Loam	CL, CL-ML	A-4	0	0	83-100	76-100	66-94	53-77	25-31	7-10
	5-12	Clay loam, loam	CL	A-6, A-4	0	0	84-100	78-100	67-96	52-77	30-38	10-14
	12-35	Clay loam, gravelly clay loam	CL, SC	A-6, A-4	0	0	73-100	64-100	56-95	46-80	31-38	10-14
	35-67	Clay loam, gravelly clay loam	GC, CL	A-6, A-7-6, A-2-4	0	0-10	57-100	49-100	42-98	34-83	31-43	10-17
584:												
Wiregrass-------	0-12	Loam	CL, CL-ML	A-4	0	0	90-100	86-100	76-95	57-74	25-31	7-10
	12-20	Clay loam, loam	CL-ML, CL	A-6, A-4	0	0	87-100	82-100	72-100	55-82	25-38	7-14
	20-50	Clay loam	CL	A-6, A-4	0	0	89-100	84-100	72-96	56-77	30-38	10-14
	50-79	Clay loam, gravelly clay loam	SC, CL	A-6, A-7-6	0	0	80-100	66-100	58-97	44-77	34-43	12-17
Pittplace-------	0-7	Clay loam	CL	A-4, A-6	0	0	83-100	79-100	71-99	57-80	31-38	10-14
	7-43	Gravelly clay loam, paragravelly silty clay loam, gravelly silty clay loam, clay loam, clay	CL, MH	A-6, A-7-6	0	0	78-100	68-100	65-100	60-100	38-52	14-22
	43-56	Gravelly clay loam, clay	ML, SC, MH	A-7-6, A-6	0	0	73-92	53-85	48-85	41-78	38-52	14-22
	56-63	Very gravelly clay loam	GC, GM	A-7-6, A-2-6	0	0-4	63-67	47-53	42-53	33-45	38-52	14-22
Scaath----------	0-4	Gravelly loam	GC	A-4, A-2-4	0	0-10	58-73	50-68	38-54	31-44	28-31	8-10
	4-10	Gravelly clay loam	GC, CL	A-6, A-4	0	0-8	62-76	54-71	45-67	37-56	30-38	10-14
	10-39	Very cobbly clay loam, extremely cobbly clay loam, very gravelly clay loam	GC, GP-GC	A-2-6, A-6, A-2-4	0	4-42	22-58	14-53	12-49	10-43	31-38	10-14
	39-60	Bedrock	---	---	---	---	---	---	---	---	---	---
585:												
Wiregrass-------	0-8	Loam	CL, SC-SM	A-4	0	0	81-100	75-100	66-95	48-71	25-31	7-10
	8-15	Loam, clay loam	CL	A-6, A-4	0	0	82-100	77-100	69-100	52-78	30-38	10-14
	15-35	Gravelly clay loam, gravelly loam, loam, clay loam	CL, GC	A-6, A-4	0	0-8	63-100	55-100	47-95	36-75	30-38	10-14
	35-60	Gravelly clay loam, loam, very gravelly clay loam, clay loam	CL, GC	A-6, A-2-4	0	0-21	57-95	42-95	35-88	27-70	30-38	10-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
585:												
Rockysaddle-----	0-4	Gravelly loam	GC-GM, GC	A-2-4, A-4	0	0-10	59-73	43-63	37-59	27-45	25-31	7-10
	4-11	Gravelly loam, gravelly clay loam	SC-SM, GC, CL	A-4, A-6, A-2-4	0	0-10	67-74	51-65	43-65	32-51	25-38	7-14
	11-37	Very gravelly clay loam, very cobbly clay loam	GC	A-2-6, A-2-4	0	0-17	34-49	20-49	17-45	13-35	30-38	10-14
	37-60	Extremely cobbly clay loam, extremely gravelly clay loam, very cobbly clay loam, very gravelly clay loam	GC, GW	A-2-6, A-7-6	0	32-65	11-61	6-61	5-59	4-47	34-43	12-17
586:												
Wiregrass-------	0-8	Loam	CL, CL-ML	A-4	0	0	92-100	82-100	73-95	59-78	25-31	7-10
	8-39	Clay loam, gravelly clay loam	CL, GC	A-6, A-2-4	0	0-11	55-100	46-100	40-95	31-76	31-38	10-14
	39-69	Clay loam, very gravelly clay loam, gravelly clay loam	CL, GC	A-6, A-2-4, A-7-6	0	0-14	39-100	32-100	27-99	23-84	31-43	10-17
Rockysaddle-----	0-4	Gravelly loam	GC-GM, GC, CL	A-4, A-2-4	0	0	54-67	45-67	39-62	31-51	25-31	7-10
	4-12	Very gravelly clay loam	GC	A-2-6, A-2-4	0	0-7	39-42	31-42	26-39	21-31	31-38	10-14
	12-54	Very gravelly clay loam	GC	A-2-4, A-2-6, A-7-6	0	0-10	31-45	24-45	21-45	17-38	31-43	10-17
	54-61	Very gravelly silty clay loam, extremely gravelly silty clay loam	GC, GP-GC	A-2-6, A-2-4	0	19-27	35-41	9-27	8-27	8-25	31-38	10-14
Trailhead-------	0-9	Loam	CL-ML, ML	A-4	0	0	80-100	74-100	64-93	52-77	20-25	2-4
	9-25	Clay, silty clay loam	ML	A-4, A-7-6	0	0	83-100	78-100	72-100	61-91	33-42	8-12
	25-62	Gravelly clay	GM, ML	A-4, A-7-5	0	0-8	62-75	54-75	50-75	42-74	34-49	8-15
	62-79	Extremely cobbly clay	GM, GP-GM	A-2-4, A-2-7	0	49-64	28-32	10-32	9-32	8-31	34-49	8-15
587:												
Childshill------	0-3	Loam	CL, SC-SM	A-4	0	0-12	83-100	76-100	66-94	48-71	25-31	7-10
	3-9	Sandy clay loam	SC, CL, SC-SM	A-2-4, A-4	0	0-12	83-100	76-100	64-92	35-53	25-31	7-10
	9-35	Gravelly clay loam, clay loam	GC, CL	A-6, A-2-4	0	0-15	57-73	49-73	43-70	34-56	31-38	10-14
	35-65	Very cobbly loam, very cobbly clay loam	GC, CL	A-6, A-2-4	0-9	25-45	56-70	45-70	40-69	31-55	30-38	10-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
588:												
Surpur	0-7	Loam	SC-SM, CL	A-4	0	0	75-100	67-100	58-93	42-71	23-30	6-10
	7-11	Clay loam, gravelly loam	GC-GM, GC, CL	A-6, A-2-4, A-4	0	0	59-100	51-100	44-96	35-79	25-34	7-12
	11-39	Clay loam, gravelly loam	CL, GC	A-2-4, A-6	0	0	59-100	51-100	44-93	35-76	30-36	10-13
	39-67	Very paragravelly loam	CL, SC-SM	A-4, A-6	0	0	81-100	75-100	65-98	47-74	25-36	7-13
590:												
Sasquatch	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-19	Loam	CL, CL-ML	A-4	0	0	93-100	84-100	67-86	57-75	25-31	7-10
	19-65	Clay loam	CL	A-6, A-4	0	0	92-100	76-100	60-87	54-79	31-38	10-14
	65-79	Clay loam, paragravelly clay loam	CL	A-7-6, A-4	0	0	93-100	78-100	57-87	51-79	31-43	10-17
Yeti	0-16	Loam	CL	A-4	0	0	81-100	76-100	69-93	57-77	30-31	10
	16-37	Clay loam	CL, MH	A-7-6, A-6	0	0	83-100	77-100	72-100	62-95	38-52	14-22
	37-51	Clay loam, gravelly clay loam, gravelly clay	ML, GC, MH	A-7-6, A-6	0	0	70-100	55-100	48-100	41-89	38-52	14-22
	51-60	Clay loam, gravelly clay loam, gravelly clay	ML, SC, MH	A-7-6, A-6	0	0	70-100	55-100	47-100	39-86	38-52	14-22
Footstep	0-15	Gravelly loam	SC, GC-GM, GC	A-4, A-2-4	0	0-10	58-73	50-68	42-63	31-48	23-31	6-10
	15-26	Extremely gravelly loam, very gravelly clay loam	GC	A-2-6, A-2-4, A-6	0	0-16	29-50	20-50	16-48	13-40	28-38	8-14
	26-31	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GP-GC	A-2-6, A-2-4	0	15-23	28-39	15-32	14-32	11-27	28-38	8-14
	31-79	Bedrock	---	---	---	---	---	---	---	---	---	---
591:												
Sasquatch	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-17	Loam	SC-SM, CL	A-4	0	0	80-100	70-100	56-87	48-75	25-31	7-10
	17-46	Gravelly silty clay loam, gravelly clay loam, cobbly clay loam	GC, CL	A-6, A-4	0	0-14	65-81	53-72	44-65	37-56	31-38	10-14
	46-56	Silty clay loam, clay loam	CL	A-4, A-6	0	0-6	90-100	76-100	63-91	54-78	31-38	10-14
	56-79	Very gravelly silty clay loam, gravelly clay loam, very gravelly clay loam	GC, CL	A-6, A-7-6, A-2-4	0	0-13	53-74	45-74	40-74	33-63	31-43	10-17

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
591:												
Sisterrocks-----	0-9	Loam	SC-SM, CL	A-4	0	0-4	80-89	74-89	63-82	46-62	25-31	7-10
	9-16	Gravelly clay loam	CL, GC-GM, GC	A-4, A-6	0	0-6	57-71	52-71	47-68	36-54	31-36	10-13
	16-41	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly clay loam	GC	A-2-6, A-6, A-2-4	0	0-9	35-49	25-49	22-47	19-40	31-38	10-14
	41-67	Very gravelly silty clay loam, very gravelly clay loam, extremely gravelly silty clay loam, extremely gravelly clay loam	GC, GP-GC	A-2-6, A-6, A-2-4	0	0-9	36-64	12-50	11-49	11-47	31-38	10-14
Ladybird--------	0-7	Gravelly loam	GC-GM, GC	A-2-4, A-4	0	0-11	56-70	47-70	33-55	28-47	23-31	6-10
	7-15	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, GC-GM, CL	A-4, A-6	0	0-10	58-72	50-72	39-69	36-65	23-38	6-14
	15-55	Gravelly clay loam, gravelly loam	GC, SC, CL	A-6, A-2-4	0	0-9	60-75	52-74	38-62	30-51	30-38	10-14
	55-60	Very gravelly loam	GC-GM, GC	A-2-4, A-1-b	0	0-18	35-55	28-48	21-39	17-32	23-31	6-10
592:												
Sisterrocks-----	0-7	Gravelly loam	SC-SM, SC, GC	A-4, A-2-4	0	0-10	66-72	48-66	40-60	29-44	25-31	7-10
	7-13	Very gravelly loam, very gravelly clay loam	GC, GC-GM	A-2-6, A-2-4	0	0-17	36-50	29-43	24-40	16-28	25-34	7-12
	13-32	Extremely gravelly sandy clay loam, extremely gravelly clay loam	GC, GP-GC	A-2-6, A-2-4	0	0-17	25-32	13-24	11-22	7-14	31-38	10-14
	32-60	Extremely gravelly loam, extremely gravelly sandy clay loam, extremely gravelly clay loam	GP-GC, GC, GW-GC	A-2-6, A-2-4	0	9-25	23-34	10-28	8-26	7-22	28-38	8-14
Ladybird--------	0-2	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	2-16	Gravelly loam	GC-GM, GC	A-2-4, A-4	0	0-11	56-70	47-70	33-55	28-47	23-31	6-10
	16-23	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, GC-GM, CL	A-6, A-2-4, A-2-6	0	0-10	58-72	50-72	33-60	27-51	23-38	6-14
	23-53	Gravelly clay loam, gravelly loam	GC, SC, CL	A-6, A-2-4	0	0-9	60-75	52-74	38-62	30-51	30-38	10-14
	53-60	Very gravelly loam	GC-GM, GC	A-2-4, A-1-b	0	0-18	35-55	28-48	21-39	17-32	23-31	6-10

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
592:												
Footstep--------	0-7	Gravelly loam	SC-SM, GC, GC-GM	A-4, A-2-4	0	0-10	58-73	50-68	43-65	31-49	23-31	6-10
	7-14	Very gravelly loam, extremely gravelly clay loam	GC	A-2-4, A-2-6	0	0-16	29-40	20-40	18-40	15-34	28-38	8-14
	14-28	Extremely cobbly clay loam, extremely gravelly clay loam	GC, GP-GC	A-2-6, A-2-4	0	15-23	28-39	15-32	14-32	11-27	28-38	8-14
	28-79	Bedrock	---	---	---	---	---	---	---	---	---	---
593:												
Sasquatch-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-20	Loam	CL, CL-ML	A-4	0	0	93-100	84-100	73-94	59-77	25-31	7-10
	20-40	Clay loam	CL	A-6, A-4	0	0	92-100	76-100	69-99	58-84	31-38	10-14
	40-61	Clay loam, paragravelly clay loam	CL	A-6, A-4, A-7-6	0	0	93-100	78-100	68-100	57-86	31-43	10-17
Yeti------------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-16	Clay loam	CL	A-6, A-4	0	0	81-100	76-100	68-95	55-79	31-37	10-14
	16-43	Clay loam, clay	CL, ML	A-6, A-7-6	0	0	83-100	77-100	72-100	62-95	38-48	14-20
	43-67	Clay loam, paragravelly clay loam	MH, CL	A-6, A-7-6	0	0	88-100	76-100	67-97	56-84	34-52	12-22
Sisterrocks-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-16	Gravelly loam	SC, SC-SM, GC	A-4, A-2-4	0	0-10	66-72	48-66	41-61	29-45	25-31	7-10
	16-22	Very gravelly loam, very gravelly clay loam	GC, GC-GM	A-2-6, A-2-4	0	0-17	36-50	29-43	24-40	17-30	25-34	7-12
	22-47	Very gravelly clay loam	GC	A-2-6, A-2-4	0	0-9	40-50	27-43	25-43	17-30	31-38	10-14
	47-60	Extremely gravelly clay loam	GC, GP-GC	A-2-6, A-2-4	0	17-25	29-39	10-25	9-24	7-20	31-38	10-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
594:												
Sisterrocks-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-8	Gravelly loam	SC-SM, SC, GC	A-4, A-2-4	0	0-10	66-72	48-66	42-62	31-47	25-31	7-10
	8-16	Very gravelly loam, very gravelly clay loam	GC, GC-GM	A-2-6, A-2-4	0	0-17	36-50	29-43	24-41	18-31	25-34	7-12
	16-47	Very gravelly clay loam, extremely gravelly clay loam	GC, GP-GC	A-2-6, A-2-4	0	0-17	25-50	13-43	11-41	8-31	31-38	10-14
	47-60	Extremely gravelly loam, very gravelly clay loam, extremely gravelly clay loam, very gravelly silty clay loam	GC, GP-GC	A-2-6, A-2-4	0	9-38	26-49	12-42	10-40	8-33	28-38	8-14
Sasquatch-------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	2-20	Loam	CL, CL-ML	A-4	0	0-6	85-100	75-100	64-93	51-75	25-31	7-10
	20-41	Clay loam	CL	A-4, A-6	0	0-6	86-100	76-100	67-95	55-80	31-38	10-14
	41-79	Gravelly clay loam	CL, GC	A-4, A-6, A-7-6	0	0-9	60-74	52-74	42-70	36-61	31-43	10-17
Houda-----------	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	---	---	---	---	12-20	NP
	1-8	Gravelly loam	SC, CL, GC-GM	A-4	0	0-12	67-74	55-74	43-62	36-54	25-31	7-10
	8-15	Gravelly clay loam	GC, CL, GC-GM	A-6	0	0-12	67-74	55-74	51-71	40-56	32-36	11-13
	15-33	Very gravelly clay loam	GC	A-2-6, A-6	0	0-10	43-54	34-54	29-51	25-44	32-38	11-14
	33-53	Very gravelly clay loam	GC	A-2-6, A-6	0	0-9	44-56	35-56	29-51	25-44	32-38	11-14
	53-60	Extremely gravelly clay loam	GC, GW-GC	A-2-6	0	0-9	16-31	8-31	7-29	6-25	32-38	11-14
595:												
Battery---------	0-13	Gravelly clay loam	GC, CL	A-4, A-6	0	0-11	56-70	47-70	44-69	37-59	31-37	10-14
	13-70	Gravelly clay loam	CL, SC, GC	A-6, A-2-4	0	0-9	60-75	52-74	45-69	34-55	31-38	10-14
	70-79	Paragravelly clay loam, clay loam, gravelly clay loam	CL	A-6, A-4	0	0-9	82-100	76-100	65-93	50-73	31-38	10-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
595:												
Catchings-------	0-16	Very gravelly loam	GC, GC-GM	A-2-4	0	0-10	36-45	26-45	22-40	16-30	25-30	7-10
	16-39	Very gravelly clay loam, very gravelly loam	GC	A-2-6, A-2-4	0	0-9	34-49	27-49	22-45	16-34	28-37	8-14
	39-52	Gravelly sandy loam	SM, SC-SM	A-1-b, A-2-4	0	0-9	60-74	52-74	38-61	18-33	16-25	2-7
	52-63	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam, very gravelly sandy loam, gravelly sandy loam	GP-GM, GW, GC-GM	A-1-a, A-4	0	0-12	15-75	7-75	4-55	2-36	12-25	NP-7
	63-69	Silt loam	CL, CL-ML, ML	A-4	0	0	83-100	75-100	64-100	52-84	16-30	NP-10
596:												
Flintrock-------	0-10	Very gravelly clay loam	GC	A-2-6, A-2-4, A-6	0-1	0-13	30-47	27-45	25-44	21-37	31-36	10-13
	10-19	Very gravelly clay loam	GC	A-2-6, A-6, A-2-4	0-8	0-19	32-49	30-47	26-46	22-39	31-38	10-14
	19-31	Extremely gravelly clay loam	GW-GC, GC	A-2-6, A-2-4	16-24	0-19	11-30	7-27	6-27	5-23	31-38	10-14
	31-38	Very gravelly clay loam	GC	A-2-6, A-6, A-2-4	0-1	0-11	34-52	31-50	27-47	23-40	31-38	10-14
	38-63	Extremely gravelly clay loam, very gravelly clay loam, extremely cobbly clay loam, very cobbly clay loam	GC, GW-GC	A-2-4, A-2-6, A-7-6	0-7	0-58	11-52	7-50	6-48	5-41	31-43	10-17
Highprairie-----	0-15	Clay loam	CL	A-6, A-4	0	0	75-100	74-100	69-98	58-83	31-36	10-13
	15-26	Clay loam	CL	A-6, A-4	0	0	79-100	78-100	69-97	58-82	31-38	10-14
	26-55	Clay loam, gravelly clay loam	GC, CL	A-6, A-4	0	0	52-83	50-83	43-78	36-66	31-38	10-14
	55-67	Gravelly clay loam	GC, CL	A-6, A-2-4, A-7-6	0	0	52-76	50-75	42-73	35-62	31-43	10-17
597:												
Tarquin---------	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	3-20	Loam	CL, CL-ML	A-4	0	0	87-100	82-100	71-93	54-73	25-31	7-10
	20-30	Clay loam, silty clay loam	CL	A-6, A-4	0	0	90-100	85-100	77-98	66-86	31-38	10-14
	30-50	Gravelly clay loam, silty clay loam, clay loam	CL	A-7-6, A-6	0	0	72-100	68-100	65-100	57-89	38-43	14-17
	50-60	Very paragravelly silty clay loam	CL	A-7-6, A-6	0	0	86-100	82-100	75-100	71-97	34-43	12-17

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
598:												
Ladybird--------	0-1	Slightly decomposed plant material	PT	A-8	---	---	---	---	---	---	12-20	NP
	1-9	Gravelly loam	GC-GM, GC	A-2-4, A-4	0	0-12	54-68	45-68	31-54	26-46	23-31	6-10
	9-24	Gravelly loam, gravelly silty clay loam, gravelly clay loam	GC, GC-GM	A-2-6, A-6, A-1-b	0	0-11	56-70	47-70	31-58	25-50	23-38	6-14
	24-51	Gravelly clay loam, gravelly loam	GC, SC	A-6, A-2-4	0	0-10	57-72	50-71	37-60	29-49	30-38	10-14
	51-76	Very gravelly loam	GC-GM, GC	A-2-4, A-1-a	0	6-20	33-51	26-45	19-37	15-30	23-31	6-10
Stonehill-------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-11	Cobbly silt loam	SM, CL-ML	A-4	0	23-32	77-86	55-86	48-83	38-67	18-25	3-7
	11-32	Gravelly silt loam, gravelly silty clay loam	CL, GC	A-4, A-6	0	0-10	66-77	48-71	45-71	40-66	30-38	10-14
	32-60	Bedrock	---	---	---	---	---	---	---	---	---	---
659:												
Raingage--------	0-17	Loam	CL, SC-SM	A-4	0	0	80-89	74-89	64-82	47-62	25-30	7-10
	17-26	Very gravelly clay loam, gravelly clay loam, gravelly loam	CL, GC	A-6, A-2-4	0	0	55-74	42-74	37-70	28-54	30-36	10-13
	26-51	Gravelly silty clay loam, clay loam, silty clay loam	GC, CL	A-6	0	0-33	61-82	55-82	49-77	44-69	34-38	12-14
	51-59	Clay loam, silty clay loam, gravelly silty clay loam, very gravelly silty clay loam	CL, GC	A-6	0	0-29	60-84	44-84	40-79	36-72	37-38	14
Pigpen----------	0-6	Gravelly loam	GC, GC-GM	A-2-4, A-4	0	0-11	56-62	47-62	40-57	30-43	25-30	7-10
	6-14	Gravelly clay loam, gravelly silty clay loam	GC, CL	A-6, A-4	0	5-18	65-74	56-65	51-65	46-58	31-38	10-14
	14-32	Very cobbly silty clay loam, very gravelly clay loam, very gravelly silty clay loam	GC	A-6, A-2-6	0	17-32	50-66	34-54	30-51	27-46	34-38	12-14
	32-59	Very gravelly clay loam, extremely gravelly clay loam, very gravelly silty clay loam	GC, GP-GC	A-2-6, A-6	0	0-47	32-65	9-58	8-55	6-43	34-38	12-14

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
756:												
Oragran---------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-3	Very stony loam	GM, GC, ML	A-6, A-2-6, A-7-6	41-47	0	56-76	54-75	47-71	35-54	33-47	13-18
	3-13	Stony silt loam, gravelly silt loam, gravelly clay loam	CL, GC	A-4, A-7-6, A-6	27-34	0	53-100	51-100	44-100	38-94	25-45	9-25
	13-17	Bedrock	---	---	---	---	---	---	---	---	---	---
Weitchpec-------	0-8	Gravelly silt loam	GM, GC, ML	A-4, A-6, A-7-6	0	0-10	52-74	50-73	46-69	38-58	29-41	9-13
	8-30	Very gravelly sandy clay loam, very gravelly sandy loam, very gravelly clay loam, extremely gravelly sandy loam	GC, GP-GC, GW	A-2-4, A-2-6, A-2-7	0-34	0-34	10-49	6-47	5-44	2-26	26-48	9-24
	30-35	Very gravelly sandy clay loam, very gravelly sandy loam, very gravelly clay loam, extremely gravelly sandy loam	GC, GP-GC, GW	A-2-4, A-2-6, A-2-7	0-34	0-34	11-49	7-47	5-44	3-26	26-48	9-24
	35-39	Bedrock	---	---	---	---	---	---	---	---	---	---
759:												
Jayel, extremely stony----------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-11	Stony clay loam	MH, CL, GC	A-7-6	28-36	0	67-100	65-100	56-94	43-74	41-55	19-25
	11-32	Stony clay loam, stony clay	CH, CL	A-7-6	21-30	0-21	74-88	73-87	64-85	51-70	45-59	25-32
	32-39	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
759:												
Walnett, extremely stony	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Very stony loam	GC, GM	A-2-6, A-6, A-7-6	28-35	0	39-61	37-60	32-55	24-42	35-47	14-18
	5-43	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly silty clay loam	GC, GW-GC	A-2-6, A-2-7, A-7-6	10-36	10-36	11-55	7-53	6-50	5-39	39-51	19-25
	43-61	Very gravelly loam, very gravelly clay loam, extremely gravelly loam, extremely gravelly clay loam, very gravelly silty clay loam	GC, GW-GC	A-2-6	0-34	10-34	12-47	8-45	7-44	5-34	33-44	17-25
	61-65	Bedrock	---	---	---	---	---	---	---	---	---	---
Oragran	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-3	Very stony loam	CL, GC	A-2-6, A-6, A-7-6	42-48	0	55-76	53-75	46-69	34-53	33-45	13-19
	3-19	Stony silt loam, gravelly silt loam, gravelly clay loam	CL, GC	A-6, A-7-6	28-35	0	52-100	50-100	47-100	41-94	33-46	16-25
	19-23	Bedrock	---	---	---	---	---	---	---	---	---	---
760:												
Jayel, extremely stony	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-11	Stony clay loam	MH, CL, GC	A-7-6	28-36	0	67-100	65-100	56-94	43-74	41-55	19-25
	11-32	Stony clay loam, stony clay, clay loam	CH, CL, GC	A-7-6	0-30	0-11	65-100	64-100	56-98	44-80	45-59	25-32
	32-39	Bedrock	---	---	---	---	---	---	---	---	---	---
Oragran	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-3	Very stony loam	GC, ML, GM	A-2-6, A-6, A-7-6	41-47	0	56-76	54-75	47-71	35-54	33-47	13-18
	3-13	Stony silt loam, gravelly silt loam, gravelly clay loam	CL, GC	A-4, A-6, A-7-6	27-34	0	53-100	51-100	44-100	38-94	25-45	9-25
	13-17	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
760:												
Walnett, extremely stony	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Very stony loam	GC, GM	A-2-6, A-6, A-7-6	28-35	0	39-61	37-60	32-55	24-42	35-47	14-18
	5-43	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly silty clay loam	GC, GW-GC	A-2-6, A-2-7, A-7-6	10-36	10-36	11-62	7-60	6-57	5-45	39-51	19-25
	43-61	Very gravelly clay loam, extremely gravelly loam, extremely gravelly clay loam, very gravelly silty clay loam, very gravelly loam	GC, GW-GC	A-2-6	0-34	10-34	12-47	8-45	7-44	5-34	33-44	17-25
	61-65	Bedrock	---	---	---	---	---	---	---	---	---	---
761:												
Gasquet, extremely stony	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-10	Stony loam	ML, CL	A-6, A-7-6	28-35	0-35	100	100	88-92	66-70	36-47	15-18
	10-61	Stony clay loam, stony clay, stony silty clay loam	CH, CL	A-7-6	30	0-30	100	100	90-100	71-81	44-60	25-32
	61-65	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
761:												
Walnett, extremely stony	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	12-20	NP
	1-5	Very stony loam	GC, GM	A-6, A-2-6, A-7-6	28-35	0	39-61	37-60	32-55	24-42	35-47	14-18
	5-43	Very gravelly clay loam, very gravelly silty clay loam, extremely gravelly silty clay loam	GC, GW-GC	A-2-6, A-2-7, A-7-6	10-36	10-36	11-62	7-60	6-57	5-45	39-51	19-25
	43-61	Extremely gravelly clay loam, very gravelly clay loam, extremely gravelly loam, very gravelly silty clay loam	GC, GW-GC	A-2-6, A-7-6	19-34	10-34	12-62	8-60	7-60	5-47	33-44	17-25
	61-65	Bedrock	---	---	---	---	---	---	---	---	---	---
Jayel	0-12	Clay loam	MH, CL, GC	A-7-6	0	0	72-100	71-100	64-99	49-79	41-55	19-25
	12-39	Clay, silty clay, gravelly clay, clay loam	CH, CL, GC	A-7-6	0-21	0	60-100	59-100	51-98	41-80	45-59	25-32
	39-60	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 16.--Physical Properties of the Soils

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
100:							
Riverwash	0-20	0-1	1.50-1.70	42.34-141.14	0.01-0.03	0.0-0.0	0.0-0.1
	20-79	0-1	1.60-1.80	42.34-141.14	0.00-0.03	0.0-0.0	0.0-0.1
102:							
Fluvents	0-2	5-15	1.20-1.40	14.11-42.34	0.13-0.17	0.0-2.9	0.5-2.0
	2-9	10-18	1.20-1.40	14.11-42.34	0.13-0.17	0.0-2.9	0.5-2.0
	9-37	0-5	1.30-1.50	14.11-42.34	0.08-0.11	0.0-2.9	0.5-2.0
	37-60	0-5	1.40-1.60	141.14-141.14	0.01-0.04	0.0-2.9	0.5-1.0
110:							
Weott	0-12	18-27	1.45-1.55	4.23-14.11	0.15-0.20	3.0-5.9	2.0-4.0
	12-26	18-33	1.45-1.55	4.23-14.11	0.15-0.21	3.0-5.9	0.5-2.0
	26-60	15-35	1.45-1.60	1.41-14.11	0.13-0.21	0.0-5.9	0.3-0.5
116:							
Swainslough	0-3	---	0.05-0.10	42.34-141.14	0.20-0.30	---	60-100
	3-12	27-37	1.45-1.55	1.41-4.23	0.17-0.21	3.0-8.9	4.0-6.0
	12-20	30-45	1.40-1.55	0.42-4.23	0.14-0.21	3.0-8.9	2.0-4.0
	20-29	30-45	1.40-1.55	0.42-4.23	0.14-0.21	3.0-8.9	2.0-4.0
	29-38	30-45	1.40-1.55	0.42-4.23	0.14-0.21	3.0-8.9	2.0-4.0
	38-65	30-45	1.40-1.55	0.42-4.23	0.14-0.21	3.0-8.9	0.5-2.0
119:							
Arlynda	0-3	---	0.05-0.10	42.34-141.14	0.20-0.30	---	60-100
	3-14	25-34	1.45-1.55	1.41-4.23	0.17-0.21	3.0-5.9	2.0-4.0
	14-22	25-34	1.45-1.55	1.41-14.11	0.15-0.21	3.0-5.9	0.5-2.0
	22-63	21-39	1.45-1.55	1.41-14.11	0.15-0.21	3.0-5.9	0.5-2.0
126:							
Loleta	0-4	15-25	1.45-1.55	4.23-14.11	0.14-0.18	0.0-5.9	2.0-5.0
	4-14	15-25	1.45-1.55	4.23-14.11	0.14-0.18	0.0-5.9	2.0-5.0
	14-32	15-27	1.45-1.60	4.23-14.11	0.13-0.20	0.0-5.9	0.5-2.0
	32-50	15-27	1.45-1.60	4.23-14.11	0.13-0.20	0.0-5.9	0.5-2.0
	50-68	15-35	1.45-1.60	1.41-14.11	0.13-0.21	0.0-5.9	0.5-2.0
155:							
Samoa	0-1	---	0.05-0.10	42.34-141.14	0.20-0.30	---	60-100
	1-6	0-5	1.60-1.70	42.00-141.00	0.05-0.08	0.0-0.0	0.5-1.0
	6-18	0-1	1.60-1.70	42.00-141.00	0.05-0.08	0.0-0.0	0.5-0.8
	18-63	0-1	1.60-1.70	42.00-141.00	0.02-0.08	0.0-0.0	0.0-0.5
Clambeach	0-9	0-1	1.60-1.70	42.00-141.00	0.05-0.08	0.0-0.0	0.5-1.0
	9-20	0-1	1.60-1.70	42.00-141.00	0.05-0.08	0.0-0.0	0.3-0.8
	20-63	0-1	1.60-1.70	42.00-141.00	0.02-0.08	0.0-0.0	0.0-0.5
Dune land	0-72	0-1	1.60-1.70	42.00-141.00	0.02-0.08	0.0-0.0	0.0-0.1
157:							
Beaches	0-72	0-0	1.60-1.80	42.00-423.00	0.03-0.08	0.0-0.0	0.0-0.0
Samoa	0-17	0-1	1.60-1.70	42.00-141.00	0.05-0.08	0.0-0.0	0.1-0.5
	17-63	0-1	1.60-1.70	42.00-141.00	0.02-0.08	0.0-0.0	0.0-0.3
Dune land	0-72	0-1	1.60-1.70	42.00-141.00	0.02-0.08	0.0-0.0	0.0-0.1

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
171:							
Worswick	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-17	15-25	1.45-1.55	4.23-14.11	0.14-0.18	0.0-5.9	2.0-4.0
	17-27	10-18	1.45-1.60	4.23-42.34	0.13-0.17	0.0-2.9	0.5-2.0
	27-58	10-30	1.45-1.60	1.41-42.34	0.13-0.21	0.0-5.9	0.3-0.5
	58-62	5-20	1.45-1.60	1.41-42.34	0.13-0.21	0.0-5.9	0.3-0.5
Arlynda	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-2	15-25	1.10-1.30	4.23-14.11	0.20-0.24	0.0-2.9	3.0-8.0
	2-15	15-25	1.20-1.40	4.23-14.11	0.15-0.19	0.0-2.9	1.0-3.0
	15-35	20-30	1.30-1.50	4.23-14.11	0.15-0.20	0.0-2.9	0.0-2.0
	35-60	10-30	1.40-1.50	4.23-14.11	0.11-0.19	0.0-2.9	0.0-5.0
172:							
Bigriver, fine sandy loam	0-4	5-10	1.50-1.60	14.11-42.34	0.14-0.17	0.0-2.9	1.0-3.0
	4-61	5-18	1.45-1.60	4.23-28.23	0.08-0.20	0.0-2.9	0.0-0.5
173:							
Bigriver, silt loam	0-15	5-18	1.50-1.60	4.23-14.11	0.19-0.22	0.0-2.9	1.0-3.0
	15-63	5-18	1.45-1.60	4.23-28.23	0.07-0.20	0.0-2.9	0.0-0.5
Ferndale	0-7	10-20	1.30-1.50	4.23-14.11	0.22-0.24	0.0-2.9	2.0-4.0
	7-32	18-30	1.50-1.70	4.23-14.11	0.17-0.22	0.0-2.9	1.0-2.0
	32-60	18-30	1.50-1.70	1.41-14.11	0.17-0.22	0.0-2.9	1.0-2.0
Russ	0-10	10-20	1.50-1.60	4.23-14.11	0.19-0.22	0.0-2.9	1.0-5.0
	10-28	10-18	1.30-1.60	4.23-42.34	0.05-0.19	0.0-2.9	0.5-1.0
	28-43	5-18	1.50-1.60	4.23-42.34	0.05-0.19	0.0-2.9	0.5-1.0
	43-60	5-18	1.50-1.70	4.23-14.11	0.08-0.22	0.0-2.9	0.2-1.0
174:							
Bigtree	0-10	15-25	0.90-1.15	4.23-14.11	0.18-0.22	0.0-2.9	2.0-10
	10-47	18-25	1.20-1.50	4.23-14.11	0.14-0.22	0.0-2.9	1.0-6.0
	47-57	5-18	1.40-1.70	4.23-42.34	0.10-0.14	0.0-2.9	0.0-1.0
	57-63	5-18	1.40-1.70	4.23-14.11	0.13-0.22	0.0-2.9	0.0-1.0
Mystery	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-24	10-20	1.30-1.40	4.23-14.11	0.12-0.17	0.0-2.9	2.0-10
	24-30	5-20	1.30-1.50	4.23-42.34	0.07-0.17	0.0-2.9	1.0-6.0
	30-41	5-20	1.30-1.50	4.23-42.34	0.07-0.17	0.0-2.9	1.0-6.0
	41-60	0-22	1.40-1.50	4.23-42.34	0.02-0.22	0.0-5.0	0.0-1.0
177:							
Battery, dry	0-13	27-33	1.00-1.25	1.41-4.23	0.11-0.16	0.0-2.9	5.0-10
	13-70	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-1.5
	70-79	27-35	1.25-1.50	1.41-4.23	0.13-0.19	0.0-2.9	0.0-1.0
178:							
Battery	0-7	20-27	1.00-1.25	1.41-4.23	0.13-0.19	0.0-2.9	5.0-10
	7-47	27-35	1.25-1.50	1.41-4.23	0.10-0.15	0.0-2.9	0.0-1.5
	47-60	27-35	1.25-1.50	1.41-4.23	0.08-0.12	0.0-2.9	0.0-1.0
191:							
Talawa	0-12	15-20	1.00-1.20	4.23-14.11	0.15-0.18	0.0-2.9	2.0-8.0
	12-17	15-20	1.10-1.30	4.23-14.11	0.15-0.18	0.0-2.9	2.0-4.0
	17-39	10-18	1.30-1.50	4.23-42.34	0.11-0.17	0.0-2.9	0.5-2.0
	39-63	0-10	1.30-1.50	42.34-141.14	0.08-0.13	0.0-2.9	0.0-0.5

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
192:							
Aubell	0-10	27-30	1.20-1.35	1.41-4.23	0.16-0.19	0.0-2.9	2.0-8.0
	10-27	35-40	1.30-1.50	0.42-1.41	0.14-0.19	2.9-5.9	0.5-2.0
	27-39	35-45	1.30-1.50	0.42-1.41	0.13-0.21	2.9-5.9	0.0-0.5
	39-60	30-45	1.30-1.50	0.42-4.23	0.07-0.14	2.9-5.9	0.0-0.5
194:							
Tsunami	0-4	18-25	1.10-1.35	4.23-14.11	0.17-0.22	0.0-2.9	2.0-8.0
	4-18	18-27	1.20-1.35	4.23-14.11	0.16-0.22	0.0-2.9	2.0-8.0
	18-38	18-28	1.30-1.50	1.41-14.11	0.08-0.17	0.0-2.9	1.0-5.0
	38-60	18-40	1.30-1.50	0.42-14.11	0.01-0.16	0.0-2.9	0.0-1.0
220:							
Ferndale	0-11	18-27	1.40-1.50	4.00-14.00	0.15-0.20	3.0-5.9	2.0-4.0
	11-16	18-30	1.40-1.55	1.40-14.00	0.15-0.21	3.0-5.9	0.5-2.0
	16-21	18-30	1.40-1.55	1.40-14.00	0.15-0.21	3.0-5.9	0.5-2.0
	21-50	18-30	1.40-1.55	1.40-14.00	0.15-0.21	3.0-5.9	0.5-2.0
	50-60	10-30	1.45-1.60	4.00-42.00	0.13-0.20	0.0-5.9	0.5-2.0
222:							
Ferndale, moderately well drained	0-13	10-15	1.00-1.20	4.23-14.11	0.20-0.22	0.0-2.9	6.0-10
	13-17	10-20	1.00-1.30	4.23-14.11	0.20-0.24	0.0-2.9	3.0-8.0
	17-41	15-25	1.20-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0
	41-51	17-25	1.30-1.60	4.23-14.11	0.18-0.22	0.0-2.9	0.5-1.5
	51-60	15-23	1.30-1.60	4.23-14.11	0.08-0.21	0.0-2.9	0.0-1.0
251:							
Surpur	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-14	12-25	0.70-1.20	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	14-22	20-32	1.00-1.30	4.23-9.17	0.15-0.24	0.0-2.9	2.0-8.0
	22-33	25-35	1.00-1.40	1.41-6.70	0.12-0.20	0.0-2.9	0.5-4.0
	33-79	25-35	1.00-1.40	1.41-6.70	0.14-0.21	0.0-2.9	0.0-1.0
289:							
Espa	0-3	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	3-16	18-25	0.80-1.20	4.23-14.11	0.20-0.22	0.0-2.9	5.0-10
	16-47	18-35	1.15-1.40	4.23-14.11	0.15-0.19	0.0-2.9	0.5-2.0
	47-79	5-18	1.20-1.40	4.23-42.34	0.10-0.15	0.0-2.9	0.0-1.0
290:							
Surpur	0-4	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	4-12	18-25	0.90-1.20	4.23-14.11	0.15-0.18	0.0-2.9	5.0-10
	12-41	25-35	1.10-1.30	1.41-4.23	0.12-0.19	0.0-2.9	0.5-4.0
	41-63	15-25	1.20-1.40	4.23-14.11	0.12-0.19	0.0-1.9	0.5-1.0
	63-79	0-18	1.20-1.40	42.34-141.40	0.07-0.17	0.0-1.9	0.0-1.0
Mettah	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-9	27-35	0.80-1.00	1.41-4.23	0.15-0.19	0.0-2.9	3.0-8.0
	9-17	33-40	0.80-1.35	1.41-4.23	0.16-0.20	0.0-2.9	1.5-3.0
	17-58	40-60	1.10-1.60	0.42-1.41	0.08-0.13	0.0-2.9	0.0-1.5
	58-79	32-45	1.20-1.60	0.42-1.41	0.10-0.21	0.0-2.9	0.0-1.0
291:							
Ossagon	0-4	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	4-12	18-25	0.70-1.20	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	12-16	20-30	1.00-1.30	1.41-9.17	0.15-0.20	0.0-2.9	2.0-6.0
	16-48	25-32	1.00-1.40	1.41-9.17	0.13-0.19	0.0-2.9	0.5-2.0
	48-56	0-18	1.00-1.40	14.11-42.34	0.05-0.13	0.0-0.9	0.0-1.0
	56-79	0-18	1.00-1.40	14.11-42.34	0.05-0.13	0.0-0.9	0.0-1.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
291:							
Squashan	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	15-20	0.90-1.20	4.23-14.11	0.13-0.18	0.0-2.9	2.0-10
	5-20	18-25	1.00-1.40	4.23-14.11	0.07-0.12	0.0-2.9	0.5-4.0
	20-33	3-15	1.20-1.50	14.11-42.34	0.01-0.09	0.0-0.9	0.0-1.0
	33-79	0-10	1.20-1.50	42.34-141.14	0.01-0.05	0.0-0.9	0.0-0.5
292:							
Ossagon	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-13	18-25	0.70-1.20	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	13-34	22-30	1.00-1.40	4.23-14.11	0.15-0.24	0.0-2.9	1.0-5.0
	34-54	8-25	1.00-1.40	4.23-42.34	0.10-0.19	0.0-2.9	0.5-2.0
	54-75	0-10	1.00-1.40	42.34-141.14	0.04-0.15	0.0-0.9	0.0-1.0
Squashan	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-12	15-20	0.90-1.20	4.23-14.11	0.13-0.18	0.0-2.9	2.0-10
	12-43	18-27	1.00-1.40	4.23-14.11	0.05-0.12	0.0-2.9	0.5-4.0
	43-74	5-25	1.20-1.50	4.23-42.34	0.02-0.12	0.0-5.9	0.0-1.0
293:							
Ossagon	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-15	18-25	0.70-1.20	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	15-65	18-30	1.00-1.40	1.41-9.17	0.15-0.22	0.0-2.9	0.5-5.0
	65-79	0-18	1.00-1.40	4.23-42.34	0.05-0.13	0.0-2.9	0.0-1.0
Goldbluffs	0-8	15-25	1.00-1.20	4.23-14.11	0.10-0.14	0.0-2.9	2.0-8.0
	8-13	10-25	1.15-1.45	4.23-14.11	0.07-0.14	0.0-2.9	2.0-6.0
	13-25	2-17	1.25-1.50	14.11-42.34	0.04-0.09	0.0-0.9	0.5-3.0
	25-60	2-10	1.25-1.60	14.11-42.34	0.01-0.07	0.0-0.9	0.0-1.0
Squashan	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-9	15-25	0.90-1.20	4.23-14.11	0.13-0.19	0.0-2.9	2.0-10
	9-17	15-25	0.90-1.20	4.23-14.11	0.13-0.19	0.0-2.9	2.0-10
	17-47	20-30	1.00-1.40	1.41-9.17	0.03-0.12	0.0-2.9	0.5-4.0
	47-65	3-20	1.20-1.50	14.11-42.34	0.01-0.09	0.0-0.9	0.0-1.0
	65-79	3-20	1.20-1.50	14.11-42.34	0.01-0.09	0.0-0.9	0.0-1.0
294:							
Ossagon	0-4	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	4-12	18-25	0.70-1.20	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	12-16	20-30	1.00-1.30	1.41-9.17	0.15-0.20	0.0-2.9	2.0-6.0
	16-48	25-32	1.00-1.40	1.41-9.17	0.13-0.19	0.0-2.9	0.5-2.0
	48-79	0-18	1.00-1.40	14.11-42.34	0.05-0.13	0.0-0.9	0.0-1.0
Goldbluffs	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-10	15-25	1.00-1.20	4.23-14.11	0.10-0.14	0.0-2.9	2.0-8.0
	10-37	10-17	1.15-1.45	4.23-14.11	0.05-0.14	0.0-2.9	2.0-6.0
	37-47	2-17	1.25-1.50	14.11-42.34	0.02-0.08	0.0-0.9	0.5-3.0
	47-69	2-10	1.25-1.60	14.11-42.34	0.01-0.07	0.0-0.9	0.0-1.0
Squashan	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-14	15-20	0.90-1.20	4.23-14.11	0.13-0.19	0.0-2.9	2.0-10
	14-37	18-25	1.00-1.40	4.23-14.11	0.07-0.12	0.0-2.9	0.5-4.0
	37-47	3-15	1.20-1.50	14.11-42.34	0.02-0.09	0.0-0.9	0.0-1.0
	47-60	0-10	1.20-1.50	42.34-141.14	0.01-0.07	0.0-0.9	0.0-0.5

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
462:							
Mooncreek	0-3	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	3-8	16-23	1.45-1.55	4.23-14.11	0.10-0.14	0.0-2.9	3.0-10
	8-16	18-25	1.45-1.55	4.23-14.11	0.10-0.14	0.0-2.9	2.0-5.0
	16-27	23-35	1.40-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.5-4.0
	27-37	29-40	1.40-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.5-2.0
	37-50	33-40	1.35-1.45	1.41-4.23	0.10-0.16	0.0-2.9	0.5-2.0
	50-63	35-40	1.40-1.50	1.41-4.23	0.15-0.19	0.0-2.9	0.1-0.8
Noisy	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	1-6	15-26	1.45-1.55	4.23-14.11	0.09-0.14	0.0-2.9	3.0-10
	6-12	18-28	1.45-1.55	1.41-4.23	0.10-0.16	0.0-2.9	1.0-5.0
	12-24	18-26	1.45-1.55	1.41-4.23	0.03-0.08	0.0-2.9	0.1-0.8
	24-61	15-26	1.45-1.55	4.23-14.11	0.02-0.08	0.0-2.9	0.1-0.8
Tossup	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	1-8	16-26	1.45-1.55	4.23-14.11	0.09-0.14	0.0-2.9	3.0-10
	8-21	35-45	1.45-1.55	1.41-4.23	0.10-0.16	0.0-2.9	0.5-4.0
	21-37	35-55	1.35-1.45	0.42-1.41	0.11-0.19	0.0-2.9	0.5-2.0
	37-48	35-55	1.35-1.45	0.42-1.41	0.09-0.13	0.0-2.9	0.5-2.0
	48-79	40-55	1.35-1.45	0.42-1.41	0.01-0.04	0.0-2.9	0.1-0.8
463:							
Mooncreek	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	2-5	20-27	1.00-1.30	4.23-14.11	0.09-0.14	0.0-2.9	3.0-7.0
	5-8	20-27	1.00-1.30	4.23-14.11	0.11-0.14	0.0-2.9	3.0-7.0
	8-16	27-35	1.10-1.30	1.41-4.23	0.12-0.19	0.0-2.9	2.0-4.0
	16-26	28-35	1.30-1.40	1.41-4.23	0.10-0.19	0.0-2.9	0.5-1.0
	26-42	30-40	1.30-1.40	1.41-4.23	0.11-0.21	0.0-2.9	0.2-0.5
	42-62	30-40	1.30-1.40	1.41-4.23	0.17-0.21	0.0-2.9	0.2-0.5
Noisy	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	2-7	12-23	1.45-1.55	4.23-14.11	0.09-0.14	0.0-2.9	3.0-10
	7-12	16-23	1.45-1.55	4.23-14.11	0.13-0.19	0.0-2.9	3.0-10
	12-23	18-26	1.45-1.55	4.23-14.11	0.04-0.08	0.0-2.9	1.0-5.0
	23-39	27-33	1.40-1.50	4.20-14.11	0.08-0.12	0.0-2.9	0.5-4.0
	39-47	22-35	1.45-1.55	4.23-14.11	0.02-0.08	0.0-2.9	0.5-2.0
	47-63	20-26	1.45-1.55	4.23-14.11	0.07-0.09	0.0-2.9	0.1-0.8
Sidehill	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	2-6	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	6-10	10-18	1.15-1.35	14.10-42.30	0.01-0.06	0.0-2.9	3.0-5.0
	10-18	10-18	1.15-1.35	14.10-42.30	0.01-0.06	0.0-2.9	3.0-5.0
	18-33	10-18	1.25-1.45	4.23-14.11	0.02-0.11	0.0-2.9	0.5-2.0
	33-59	---	---	---	---	---	---
464:							
Mooncreek	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	2-3	20-25	1.00-1.30	4.23-14.11	0.13-0.19	0.0-2.9	3.0-7.0
	3-6	25-35	1.10-1.30	4.23-14.11	0.15-0.22	0.0-2.9	2.0-4.0
	6-21	25-35	1.10-1.30	4.23-14.11	0.13-0.19	0.0-2.9	2.0-4.0
	21-38	27-35	1.30-1.40	1.41-4.23	0.09-0.20	0.0-2.9	0.5-1.0
	38-55	30-40	1.30-1.40	1.41-4.23	0.11-0.21	0.0-2.9	0.2-0.5
	55-79	30-40	1.30-1.40	1.41-4.23	0.11-0.21	0.0-2.9	0.2-0.5
Tossup	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	1-4	20-28	1.40-1.45	4.23-14.11	0.17-0.22	0.0-2.9	3.0-5.0
	4-6	35-45	1.40-1.45	1.41-4.23	0.13-0.19	0.0-2.9	0.2-0.3
	6-12	35-45	1.45-1.55	0.42-1.41	0.13-0.19	0.0-2.9	0.5-1.0
	12-20	35-45	1.45-1.55	0.42-1.41	0.13-0.19	0.0-2.9	0.1-1.0
	20-41	35-45	1.45-1.55	0.42-1.41	0.15-0.19	0.0-2.9	0.1-0.5
	41-61	35-45	1.45-1.55	0.42-1.41	0.15-0.19	0.0-2.9	0.1-0.5

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
464:							
Noisy	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	2-5	16-23	1.45-1.55	4.23-14.11	0.09-0.14	0.0-2.9	3.0-10
	5-10	18-26	1.45-1.55	4.23-14.11	0.06-0.08	0.0-2.9	1.0-5.0
	10-31	27-33	1.40-1.50	4.20-14.11	0.06-0.12	0.0-2.9	0.5-4.0
	31-51	22-26	1.45-1.55	4.23-14.11	0.02-0.07	0.0-2.9	0.5-2.0
	51-61	20-26	1.45-1.55	4.23-14.11	0.02-0.12	0.0-2.9	0.1-0.8
465:							
Sidehill	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	1-7	18-25	1.15-1.35	4.23-14.11	0.13-0.19	0.0-2.9	3.0-5.0
	7-30	10-25	1.25-1.45	4.23-14.11	0.07-0.10	0.0-2.9	0.5-2.0
	30-59	---	---	---	---	---	---
Oakside	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	2-6	11-18	1.45-1.55	4.23-14.11	0.01-0.13	0.0-2.9	6.0-12
	6-10	10-18	1.45-1.55	4.23-14.11	0.01-0.09	0.0-2.9	6.0-12
	10-59	---	---	---	---	---	---
Darkwoods	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	1-7	15-25	1.30-1.40	4.23-14.11	0.03-0.09	0.0-2.9	2.0-8.0
	7-15	18-25	1.35-1.45	4.23-14.11	0.08-0.12	0.0-2.9	0.2-1.0
	15-25	28-35	1.35-1.45	1.41-4.23	0.04-0.12	0.0-2.9	0.2-1.0
	25-31	18-30	1.35-1.45	1.41-4.23	0.11-0.18	0.0-2.9	0.2-0.5
	31-44	18-25	1.35-1.45	4.23-14.11	0.11-0.15	0.0-2.9	0.2-0.5
	44-52	15-18	1.35-1.45	14.11-42.34	0.04-0.08	0.0-2.9	0.2-0.5
	52-79	5-8	1.35-1.45	42.34-141.40	0.02-0.05	0.0-2.9	0.2-0.5
473:							
Highoaks	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	1-9	12-25	1.00-1.20	4.23-14.11	0.12-0.17	0.0-2.9	5.0-10
	9-20	30-35	1.30-1.60	1.41-4.23	0.15-0.19	0.0-2.9	1.0-5.0
	20-31	30-35	1.30-1.60	1.41-4.23	0.12-0.16	0.0-2.9	1.0-5.0
	31-42	40-45	1.30-1.60	1.41-4.23	0.10-0.14	0.0-2.9	0.2-0.8
	42-50	30-35	1.30-1.60	1.41-4.23	0.09-0.18	0.0-2.9	0.2-0.8
	50-63	30-35	1.30-1.60	1.41-4.23	0.09-0.18	0.0-2.9	0.2-0.8
Noisy	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	2-5	16-23	1.45-1.55	4.23-14.11	0.09-0.14	0.0-2.9	3.0-10
	5-9	18-35	1.45-1.55	4.23-14.11	0.06-0.12	0.0-2.9	1.0-5.0
	9-24	27-35	1.40-1.50	4.20-14.11	0.09-0.12	0.0-2.9	0.5-4.0
	24-39	22-35	1.45-1.55	1.41-4.23	0.07-0.13	0.0-2.9	0.5-2.0
	39-63	20-35	1.45-1.55	4.23-14.11	0.03-0.05	0.0-2.9	0.1-0.8
Mudhorse	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-1.5	60-100
	2-5	12-25	0.90-1.20	4.23-14.11	0.15-0.19	0.0-2.9	3.0-5.0
	5-12	20-35	1.25-1.45	4.23-14.11	0.14-0.19	0.0-2.9	1.0-2.0
	12-20	28-35	1.25-1.45	1.41-4.23	0.14-0.19	1.0-2.9	0.5-1.0
	20-32	35-45	1.25-1.45	0.42-1.41	0.12-0.16	1.0-2.9	0.2-0.5
	32-51	45-50	1.25-1.45	0.42-1.41	0.12-0.16	2.0-2.9	0.1-0.2
	51-79	45-50	1.25-1.45	0.42-1.41	0.12-0.16	2.0-2.9	0.1-0.2
480:							
Dolason	0-17	15-25	1.00-1.20	4.23-14.11	0.17-0.21	0.0-2.9	5.0-10
	17-35	15-25	1.00-1.30	4.23-14.11	0.13-0.21	0.0-2.9	3.0-10
	35-59	20-30	1.20-1.60	4.23-14.11	0.08-0.13	0.0-2.9	1.0-5.0
	59-77	15-30	1.30-1.60	4.23-14.11	0.08-0.13	0.0-2.9	1.0-5.0
Countshill	0-7	18-27	1.00-1.20	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	7-20	18-30	1.05-1.30	4.23-14.11	0.13-0.22	0.0-2.9	3.0-10
	20-28	20-27	1.20-1.40	4.23-14.11	0.09-0.14	0.0-2.9	3.0-8.0
	28-60	---	---	---	---	---	---

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
480:							
Airstrip	0-17	16-24	1.10-1.20	4.23-14.11	0.13-0.21	0.0-2.9	5.0-10
	17-26	20-26	1.20-1.50	4.23-14.11	0.03-0.14	0.0-2.9	1.0-8.0
	26-60	---	---	---	---	---	---
481:							
Dolason	0-3	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	3-15	15-25	1.00-1.20	4.23-14.11	0.17-0.21	0.0-2.9	5.0-10
	15-34	15-27	1.00-1.30	4.23-14.11	0.17-0.21	0.0-2.9	3.0-10
	34-46	20-32	1.20-1.60	1.41-4.23	0.11-0.18	0.0-2.9	1.0-5.0
	46-78	20-32	1.30-1.60	4.23-14.11	0.11-0.18	0.0-2.9	1.0-5.0
Airstrip	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-15	16-24	1.10-1.20	4.23-14.11	0.13-0.18	0.0-2.9	5.0-10
	15-41	20-26	1.20-1.50	4.23-14.11	0.03-0.14	0.0-2.9	1.0-8.0
	41-60	---	---	---	---	---	---
Countshill	0-7	18-27	1.00-1.20	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	7-19	18-30	1.05-1.30	4.23-14.11	0.13-0.22	0.0-2.9	5.0-10
	19-23	20-27	1.20-1.40	4.23-14.11	0.09-0.14	0.0-2.9	3.0-8.0
	23-35	---	---	---	---	---	---
	35-60	---	---	---	---	---	---
482:							
Dolason	0-13	15-25	1.00-1.20	4.23-14.11	0.17-0.21	0.0-2.9	5.0-10
	13-21	15-25	1.00-1.30	4.23-14.11	0.13-0.21	0.0-2.9	3.0-10
	21-44	20-30	1.20-1.60	4.23-14.11	0.06-0.14	0.0-2.9	1.0-5.0
	44-59	20-30	1.30-1.60	4.23-14.11	0.06-0.12	0.0-2.9	1.0-5.0
Countshill	0-3	15-25	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	5.0-10
	3-24	18-30	1.05-1.30	4.23-14.11	0.15-0.22	0.0-2.9	5.0-10
	24-30	20-27	1.20-1.40	4.23-14.11	0.08-0.14	0.0-2.9	3.0-8.0
	30-60	---	---	---	---	---	---
483:							
Doolyville	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-6	20-26	1.00-1.25	4.23-14.11	0.19-0.24	0.0-2.9	3.0-10
	6-11	27-33	1.20-1.35	1.41-4.23	0.14-0.22	0.0-2.9	1.0-6.0
	11-15	30-35	1.25-1.35	0.42-1.41	0.11-0.19	0.0-2.9	0.5-3.0
	15-18	30-35	1.30-1.50	0.42-1.41	0.11-0.17	0.0-2.9	0.0-2.0
	18-61	24-40	1.50-1.70	0.07-0.42	0.07-0.18	3.0-5.9	0.0-1.0
Pasturerock	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-8	22-27	1.00-1.25	4.23-14.11	0.17-0.20	0.0-2.9	3.0-10
	8-17	27-35	1.25-1.35	1.41-4.23	0.11-0.18	0.0-2.9	2.0-8.0
	17-55	27-35	1.30-1.60	1.41-4.23	0.08-0.18	0.0-2.9	1.0-4.0
	55-68	30-38	1.40-1.70	1.41-4.23	0.09-0.18	0.0-2.9	0.0-1.0
484:							
Elkcamp	0-8	20-26	1.20-1.50	4.23-14.11	0.17-0.22	0.0-2.9	3.0-10
	8-21	23-35	1.25-1.45	1.41-14.11	0.14-0.20	0.0-2.9	3.0-8.0
	21-37	27-35	1.40-1.70	1.41-6.70	0.09-0.17	0.0-2.9	0.5-3.0
	37-49	27-35	1.40-1.70	1.41-6.70	0.09-0.18	0.0-2.9	0.0-1.0
	49-65	27-35	1.40-1.80	1.41-6.70	0.07-0.18	0.0-2.9	0.0-1.0
Dolason	0-13	15-25	1.00-1.20	4.23-14.11	0.17-0.21	0.0-2.9	5.0-10
	13-21	15-25	1.00-1.30	4.23-14.11	0.13-0.21	0.0-2.9	3.0-10
	21-44	20-30	1.20-1.60	4.23-14.11	0.06-0.12	0.0-2.9	1.0-5.0
	44-59	20-30	1.30-1.60	4.23-14.11	0.06-0.12	0.0-2.9	1.0-5.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
484:							
Airstrip	0-14	16-24	1.10-1.20	4.23-14.11	0.13-0.19	0.0-2.9	5.0-10
	14-31	20-26	1.20-1.50	4.23-14.11	0.03-0.14	0.0-2.9	1.0-8.0
	31-60	---	---	---	---	---	---
485:							
Pasturerock	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	22-27	1.00-1.25	4.23-14.11	0.17-0.21	0.0-2.9	3.0-10
	5-8	27-35	1.25-1.35	1.41-4.23	0.11-0.18	0.0-2.9	2.0-8.0
	8-17	27-35	1.30-1.60	1.41-4.23	0.11-0.19	0.0-2.9	1.0-4.0
	17-35	27-35	1.30-1.60	1.41-4.23	0.11-0.19	0.0-2.9	1.0-4.0
	35-48	27-35	1.30-1.60	1.41-4.23	0.11-0.19	0.0-2.9	1.0-4.0
	48-69	27-38	1.40-1.70	0.42-4.23	0.02-0.17	0.0-2.9	0.0-1.0
Coyoterock	0-0.5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	0.5-8	27-30	1.20-1.35	1.41-4.23	0.12-0.17	0.0-2.9	3.0-10
	8-16	27-30	1.20-1.35	1.41-4.23	0.12-0.17	0.0-2.9	3.0-10
	16-29	30-45	1.25-1.35	0.42-1.41	0.06-0.18	1.5-5.9	0.5-3.0
	29-39	35-45	1.40-1.70	0.42-1.41	0.07-0.19	1.5-5.9	0.0-2.0
	39-60	35-50	1.40-1.70	0.07-0.42	0.06-0.19	3.0-5.9	0.0-1.0
Maneze	0-0.5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	0.5-11	22-26	1.00-1.15	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	11-18	22-26	1.10-1.35	4.23-14.11	0.01-0.14	0.0-2.9	3.0-6.0
	18-44	27-32	1.20-1.40	1.41-4.23	0.01-0.12	0.0-2.9	1.0-5.0
	44-63	28-35	1.40-1.60	1.41-4.23	0.01-0.13	0.0-2.9	0.0-1.5
531:							
Atwell	0-10	23-27	1.20-1.40	4.23-14.11	0.19-0.23	0.0-2.9	3.0-10
	10-30	27-40	1.30-1.80	0.42-4.23	0.15-0.18	0.0-2.9	0.5-3.0
	30-71	35-50	1.30-1.80	0.42-1.41	0.15-0.18	2.9-5.9	0.5-3.0
	71-82	35-50	1.60-2.00	0.07-0.42	0.15-0.18	2.9-5.9	0.0-1.5
Coppercreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	20-27	1.00-1.25	4.23-14.11	0.17-0.21	0.0-2.9	5.0-10
	5-20	25-35	1.10-1.30	1.41-9.17	0.15-0.18	0.0-2.9	1.0-5.0
	20-61	25-35	1.25-1.50	1.41-9.17	0.15-0.18	0.0-2.9	0.0-1.5
	61-79	40-50	1.40-1.60	1.41-4.23	0.12-0.16	3.0-5.9	0.0-1.5
532:							
Atwell	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-7	23-27	1.20-1.40	4.23-14.11	0.19-0.23	0.0-2.9	3.0-10
	7-23	30-40	1.30-1.80	0.42-4.23	0.06-0.18	0.0-2.9	0.5-3.0
	23-32	35-50	1.30-1.80	0.42-1.41	0.06-0.18	2.9-5.9	0.5-3.0
	32-81	35-50	1.60-2.00	0.07-0.42	0.06-0.18	2.9-5.9	0.0-1.5
Ladybird	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-6	27-27	1.00-1.20	1.41-4.23	0.11-0.16	0.0-2.9	8.0-10
	6-22	27-34	1.10-1.30	1.41-4.23	0.11-0.16	0.0-2.9	3.0-8.0
	22-47	30-40	1.20-1.35	1.41-4.23	0.11-0.16	0.0-2.9	1.0-5.0
	47-71	30-40	1.20-1.35	1.41-4.23	0.06-0.18	0.0-2.9	0.5-1.0
533:							
Coppercreek	0-0.5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	0.5-3	23-27	1.00-1.10	4.23-14.11	0.16-0.19	0.0-2.9	5.0-10
	3-13	23-30	1.10-1.20	4.23-14.11	0.15-0.20	0.0-2.9	1.0-6.0
	13-41	27-35	1.25-1.50	1.41-4.23	0.12-0.17	0.0-2.9	0.0-2.0
	41-62	27-35	1.45-1.55	1.41-4.23	0.08-0.13	0.0-2.9	0.0-1.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
533:							
Ahpah	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-4	27-30	1.10-1.20	1.41-4.23	0.11-0.16	0.0-2.9	2.0-6.0
	4-19	27-32	1.20-1.50	1.41-4.23	0.12-0.17	0.0-2.9	0.5-2.0
	19-32	20-27	1.20-1.50	4.23-14.11	0.08-0.11	0.0-2.9	0.0-0.5
	32-43	---	---	---	---	---	---
	43-60	---	---	---	---	---	---
534:							
Coppercreek	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-6	20-27	1.00-1.10	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	6-13	25-35	1.10-1.20	1.41-4.23	0.11-0.19	0.0-2.9	1.0-6.0
	13-41	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	41-62	23-35	1.45-1.55	1.41-14.11	0.06-0.15	0.0-2.9	0.0-1.0
Ahpah	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-11	20-27	1.10-1.20	4.23-14.11	0.13-0.19	0.0-2.9	2.0-6.0
	11-25	22-27	1.20-1.50	4.23-14.11	0.11-0.16	0.0-2.9	0.5-2.0
	25-38	20-27	1.20-1.50	4.23-14.11	0.08-0.11	0.0-2.9	0.0-0.5
	38-60	---	---	---	---	---	---
Lackscreek	0-3	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	3-6	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	6-27	25-35	1.20-1.50	1.41-4.23	0.03-0.13	0.0-2.9	1.0-5.0
	27-35	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	35-60	---	---	---	---	---	---
535:							
Wiregrass	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	20-27	1.00-1.10	4.23-14.11	0.11-0.16	0.0-2.9	5.0-10
	5-11	25-35	1.10-1.20	1.41-4.23	0.13-0.19	0.0-2.9	1.0-6.0
	11-41	27-35	1.25-1.50	1.41-4.23	0.09-0.16	0.0-2.9	0.0-2.0
	41-67	23-35	1.45-1.55	1.41-14.11	0.07-0.15	0.0-2.9	0.0-1.0
Scaath	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-18	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	18-24	25-35	1.20-1.50	1.41-4.23	0.05-0.14	0.0-2.9	1.0-5.0
	24-37	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	37-60	---	---	---	---	---	---
536:							
Coppercreek	0-5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	5-10	20-27	1.00-1.10	4.23-14.11	0.13-0.19	0.0-2.9	5.0-10
	10-16	27-35	1.10-1.20	1.41-4.23	0.11-0.16	0.0-2.9	1.0-6.0
	16-44	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	44-73	25-35	1.45-1.55	1.41-4.23	0.05-0.16	0.0-2.9	0.0-1.0
Ahpah	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-9	27-30	1.10-1.20	1.41-4.23	0.11-0.16	0.0-2.9	2.0-6.0
	9-28	27-32	1.20-1.50	1.41-4.23	0.12-0.17	0.0-2.9	0.5-2.0
	28-34	20-27	1.20-1.50	4.23-14.11	0.08-0.11	0.0-2.9	0.0-0.5
	34-60	---	---	---	---	---	---
Lackscreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-6	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	6-18	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	18-23	20-30	1.20-1.60	4.23-9.17	0.05-0.11	0.0-2.9	0.0-1.5
	23-60	---	---	---	---	---	---

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
537:							
Wiregrass	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	20-27	1.00-1.10	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	5-12	25-35	1.10-1.20	1.41-4.23	0.11-0.19	0.0-2.9	1.0-6.0
	12-51	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	51-85	23-35	1.45-1.55	1.41-14.11	0.06-0.15	0.0-2.9	0.0-1.0
Scaath	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-18	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	18-24	25-35	1.20-1.50	1.41-4.23	0.05-0.14	0.0-2.9	1.0-5.0
	24-37	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	37-60	---	---	---	---	---	---
538:							
Wiregrass	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-2	20-27	1.00-1.10	4.23-14.11	0.13-0.19	0.0-2.9	5.0-10
	2-11	27-35	1.10-1.20	1.41-4.23	0.11-0.16	0.0-2.9	1.0-6.0
	11-39	27-35	1.25-1.50	1.41-4.23	0.10-0.17	0.0-2.9	0.0-2.0
	39-60	25-35	1.45-1.55	1.41-4.23	0.06-0.16	0.0-2.9	0.0-1.0
Pittplace	0-7	27-35	1.20-1.30	4.23-14.11	0.15-0.19	0.0-2.9	3.0-6.0
	7-43	35-50	1.30-1.60	0.42-1.41	0.09-0.20	3.0-5.9	0.5-2.0
	43-56	35-50	1.30-1.60	0.42-1.41	0.06-0.16	3.0-5.9	0.0-1.0
	56-63	35-50	1.30-1.60	0.42-1.41	0.06-0.16	3.0-5.9	0.0-1.0
539:							
Wiregrass	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	20-27	1.00-1.10	4.23-14.11	0.10-0.14	0.0-2.9	5.0-10
	5-33	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	33-73	27-35	1.25-1.50	1.41-4.23	0.07-0.12	0.0-2.9	0.0-2.0
Scaath	0-0.5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	0.5-10	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	10-30	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	30-60	---	---	---	---	---	---
541:							
Wiregrass	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	20-27	1.00-1.10	4.23-14.11	0.11-0.16	0.0-2.9	5.0-10
	5-17	25-35	1.10-1.20	1.41-4.23	0.13-0.19	0.0-2.9	1.0-6.0
	17-41	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	41-67	23-35	1.45-1.55	1.41-14.11	0.06-0.15	0.0-2.9	0.0-1.0
Rockysaddle	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-7	20-27	1.10-1.20	4.23-14.11	0.01-0.09	0.0-2.9	2.0-10
	7-21	27-35	1.20-1.50	1.41-4.23	0.02-0.11	0.0-2.9	0.5-4.0
	21-60	25-35	1.20-1.60	1.41-4.23	0.01-0.10	0.0-2.9	0.0-1.0
542:							
Coppercreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	20-27	1.00-1.10	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	5-12	25-35	1.10-1.20	1.41-4.23	0.11-0.19	0.0-2.9	1.0-6.0
	12-51	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	51-85	23-35	1.45-1.55	1.41-14.11	0.06-0.15	0.0-2.9	0.0-1.0
Slidecreek, gravelly loam	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-9	20-27	1.10-1.20	4.23-14.11	0.01-0.09	0.0-2.9	2.0-10
	9-31	27-35	1.20-1.50	1.41-4.23	0.02-0.11	0.0-2.9	0.5-4.0
	31-62	25-35	1.20-1.60	1.41-4.23	0.01-0.10	0.0-2.9	0.0-1.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
542:							
Lackscreek	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-15	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	15-23	25-35	1.20-1.50	1.41-4.23	0.03-0.13	0.0-2.9	1.0-5.0
	23-32	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	32-60	---	---	---	---	---	---
543:							
Wiregrass	0-7	20-27	1.00-1.10	4.23-14.11	0.13-0.18	0.0-2.9	5.0-10
	7-18	25-35	1.10-1.20	1.41-4.23	0.11-0.19	0.0-2.9	1.0-6.0
	18-39	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	39-75	23-35	1.45-1.55	1.41-14.11	0.06-0.15	0.0-2.9	0.0-1.0
Rockysaddle	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-6	20-27	1.10-1.20	4.23-14.11	0.01-0.09	0.0-2.9	2.0-10
	6-14	20-27	1.10-1.20	4.23-14.11	0.01-0.09	0.0-2.9	2.0-10
	14-44	27-35	1.20-1.50	1.41-4.23	0.02-0.11	0.0-2.9	0.5-4.0
	44-61	25-35	1.20-1.60	1.41-4.23	0.01-0.10	0.0-2.9	0.0-1.0
Scaath	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-8	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	8-22	25-35	1.20-1.50	1.41-4.23	0.05-0.13	0.0-2.9	1.0-5.0
	22-37	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	37-60	---	---	---	---	---	---
544:							
Coppercreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	20-27	1.00-1.10	4.23-14.11	0.11-0.17	0.0-2.9	5.0-10
	5-11	25-35	1.10-1.20	1.41-4.23	0.13-0.19	0.0-2.9	1.0-6.0
	11-41	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	41-67	23-35	1.45-1.55	1.41-14.11	0.06-0.15	0.0-2.9	0.0-1.0
Tectah	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-12	27-35	1.20-1.30	1.41-4.23	0.18-0.23	0.0-2.9	3.0-6.0
	12-45	35-50	1.30-1.60	0.42-1.41	0.09-0.20	3.0-5.9	0.5-2.0
	45-73	35-50	1.30-1.60	0.42-1.41	0.09-0.20	3.0-5.9	0.0-1.0
Lackscreek	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-15	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	15-23	25-35	1.20-1.50	1.41-4.23	0.03-0.13	0.0-2.9	1.0-5.0
	23-32	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	32-60	---	---	---	---	---	---
545:							
Devilscreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-6	25-27	1.00-1.25	4.23-14.11	0.13-0.19	0.0-2.9	2.0-10
	6-14	27-35	1.05-1.30	1.41-4.23	0.10-0.18	0.0-2.9	1.0-4.0
	14-30	27-35	1.25-1.50	1.41-4.23	0.10-0.18	0.0-2.9	1.0-3.0
	30-37	15-25	1.40-1.60	4.23-14.11	0.08-0.14	0.0-2.9	0.0-1.5
	37-67	10-20	1.40-1.60	4.23-14.11	0.08-0.18	0.0-2.9	0.0-1.0
Panthercreek	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-7	15-25	1.20-1.30	4.23-14.11	0.13-0.18	0.0-2.9	5.0-10
	7-13	15-25	1.20-1.40	4.23-14.11	0.06-0.19	0.0-2.9	2.0-5.0
	13-36	8-20	1.40-1.60	14.11-42.34	0.04-0.12	0.0-2.9	0.5-2.0
	36-67	8-20	1.40-1.60	14.11-42.34	0.04-0.12	0.0-2.9	0.5-2.0
Coppercreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-4	20-27	1.00-1.10	4.23-14.11	0.10-0.14	0.0-2.9	5.0-10
	4-13	25-35	1.10-1.20	1.41-4.23	0.11-0.18	0.0-2.9	1.0-6.0
	13-52	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	52-67	25-35	1.45-1.55	1.41-4.23	0.06-0.15	0.0-2.9	0.0-1.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
546:							
Lackscreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-4	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	4-9	25-35	1.20-1.50	1.41-4.23	0.03-0.13	0.0-2.9	1.0-5.0
	9-21	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	21-29	20-30	1.20-1.60	4.23-9.17	0.04-0.11	0.0-2.9	0.0-1.5
	29-60	---	---	---	---	---	---
Coppercreek	0-5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	5-10	20-27	1.00-1.10	4.23-14.11	0.13-0.19	0.0-2.9	5.0-10
	10-16	27-35	1.10-1.20	1.41-4.23	0.11-0.16	0.0-2.9	1.0-6.0
	16-44	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	44-73	25-35	1.45-1.55	1.41-4.23	0.05-0.16	0.0-2.9	0.0-1.0
549:							
Scaath	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-4	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	4-9	25-35	1.20-1.50	1.41-4.23	0.05-0.12	0.0-2.9	1.0-5.0
	9-22	27-35	1.20-1.60	1.41-4.23	0.01-0.08	0.0-2.9	0.5-3.0
	22-60	---	---	---	---	---	---
Rockysaddle	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-9	20-27	1.10-1.20	4.23-14.11	0.02-0.08	0.0-2.9	2.0-10
	9-45	27-35	1.20-1.50	1.41-4.23	0.03-0.11	0.0-2.9	0.5-4.0
	45-69	25-35	1.20-1.60	1.41-4.23	0.01-0.10	0.0-2.9	0.0-1.0
Wiregrass	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-9	20-27	1.00-1.10	4.23-14.11	0.13-0.18	0.0-2.9	5.0-10
	9-26	25-35	1.10-1.20	1.41-4.23	0.11-0.16	0.0-2.9	1.0-6.0
	26-46	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	46-71	23-35	1.45-1.55	1.41-14.11	0.07-0.17	0.0-2.9	0.0-1.0
550:							
Scaath	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-11	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	11-18	23-30	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	18-24	27-35	1.20-1.60	1.41-4.23	0.01-0.08	0.0-2.9	0.5-3.0
	24-37	27-35	1.20-1.60	1.41-4.23	0.01-0.08	0.0-2.9	0.5-3.0
	37-60	---	---	---	---	---	---
Rockysaddle	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-14	20-27	1.10-1.20	4.23-14.11	0.02-0.08	0.0-2.9	2.0-10
	14-44	27-35	1.20-1.50	1.41-4.23	0.03-0.11	0.0-2.9	0.5-4.0
	44-61	25-35	1.20-1.60	1.41-4.23	0.01-0.10	0.0-2.9	0.0-1.0
Wiregrass	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-7	20-27	1.00-1.10	4.23-14.11	0.13-0.18	0.0-2.9	5.0-10
	7-13	25-35	1.10-1.20	1.41-4.23	0.11-0.16	0.0-2.9	1.0-6.0
	13-63	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	63-69	23-35	1.45-1.55	1.41-14.11	0.07-0.17	0.0-2.9	0.0-1.0
553:							
Ladybird	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	18-27	1.00-1.20	4.23-14.11	0.13-0.19	0.0-2.9	8.0-10
	5-9	27-35	1.00-1.20	4.23-14.11	0.13-0.19	0.0-2.9	8.0-10
	9-24	18-35	1.10-1.30	1.41-4.23	0.11-0.19	0.0-2.9	3.0-8.0
	24-51	25-35	1.20-1.35	1.41-4.23	0.10-0.16	0.0-2.9	1.0-5.0
	51-61	18-27	1.20-1.35	4.23-14.11	0.06-0.12	0.0-2.9	0.0-1.0
	61-76	18-27	1.20-1.35	4.23-14.11	0.06-0.12	0.0-2.9	0.0-1.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
553:							
Stonehill	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	5-20	12-20	1.00-1.20	4.23-14.11	0.14-0.20	0.0-2.9	8.0-10
	20-25	12-30	1.00-1.20	4.23-14.11	0.14-0.20	0.0-2.9	8.0-10
	25-32	25-35	1.20-1.35	1.41-4.23	0.08-0.20	0.0-2.9	3.0-8.0
	32-60	---	---	0.00-0.42	---	---	---
554:							
Ladybird	0-6	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	6-28	18-27	1.00-1.20	4.23-14.11	0.13-0.19	0.0-2.9	8.0-10
	28-37	18-35	1.10-1.30	1.41-4.23	0.11-0.19	0.0-2.9	3.0-8.0
	37-62	25-35	1.20-1.35	1.41-4.23	0.10-0.16	0.0-2.9	1.0-5.0
	62-67	18-27	1.20-1.35	4.23-14.11	0.06-0.11	0.0-2.9	0.0-1.0
Trailhead	0-5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	5-24	27-32	1.10-1.30	1.41-9.17	0.18-0.23	0.0-2.9	3.0-10
	24-30	30-35	1.20-1.35	1.41-4.23	0.18-0.23	0.0-2.9	3.0-7.0
	30-38	35-45	1.20-1.50	1.41-4.23	0.12-0.17	0.0-2.9	0.5-3.0
	38-54	40-50	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
	54-66	40-60	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
555:							
Panthercreek	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-7	15-25	1.20-1.30	4.23-14.11	0.13-0.18	0.0-2.9	5.0-10
	7-16	15-25	1.20-1.40	4.23-14.11	0.06-0.19	0.0-2.9	2.0-5.0
	16-34	8-20	1.40-1.60	14.11-42.34	0.04-0.12	0.0-2.9	0.5-2.0
	34-89	8-20	1.40-1.60	14.11-42.34	0.04-0.12	0.0-2.9	0.5-2.0
Coppercreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-4	20-27	1.00-1.10	4.23-14.11	0.10-0.14	0.0-2.9	5.0-10
	4-13	25-35	1.10-1.20	1.41-4.23	0.11-0.19	0.0-2.9	1.0-6.0
	13-52	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-2.0
	52-67	25-35	1.45-1.55	1.41-4.23	0.07-0.14	0.0-2.9	0.0-1.0
Devilscreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-11	25-27	1.00-1.25	4.23-14.11	0.13-0.19	0.0-2.9	2.0-10
	11-35	27-35	1.25-1.50	1.41-4.23	0.08-0.18	0.0-2.9	1.0-3.0
	35-67	15-25	1.40-1.60	4.23-14.11	0.08-0.14	0.0-2.9	0.0-1.5
	67-71	10-20	1.40-1.60	4.23-14.11	0.08-0.18	0.0-2.9	0.0-1.0
556:							
Rodgerpeak	0-0.5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	0.5-7	15-27	1.10-1.20	4.23-14.11	0.13-0.18	0.0-2.9	2.0-5.0
	7-18	20-30	1.20-1.50	4.23-14.11	0.10-0.16	0.0-2.9	0.0-2.0
	18-60	---	---	0.00-0.07	---	---	---
Wiregrass	0-0.5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	0.5-10	20-27	1.00-1.10	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	10-14	25-35	1.10-1.20	4.23-14.11	0.12-0.18	0.0-2.9	1.0-6.0
	14-59	25-35	1.25-1.50	1.41-4.23	0.12-0.16	0.0-2.9	0.0-2.0
557:							
Ustic Palehumults	0-3	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	3-7	20-27	1.10-1.20	4.23-14.11	0.06-0.13	0.0-2.9	2.0-10
	7-13	20-27	1.10-1.20	4.23-14.11	0.06-0.13	0.0-2.9	2.0-10
	13-20	15-30	1.20-1.50	1.41-4.23	0.01-0.13	0.0-2.9	0.5-4.0
	20-57	27-35	1.20-1.50	1.41-4.23	0.01-0.13	0.0-2.9	0.5-4.0
	57-91	25-35	1.20-1.60	4.23-14.11	0.01-0.11	0.0-2.9	0.0-1.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
558:							
Tectah	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-26	27-35	1.20-1.30	1.41-4.23	0.18-0.23	0.0-2.9	3.0-6.0
	26-51	35-50	1.30-1.60	0.42-1.41	0.10-0.21	3.0-5.9	0.5-2.0
	51-63	35-50	1.30-1.60	0.42-1.41	0.10-0.21	3.0-5.9	0.0-1.0
Coppercreek	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-14	20-27	1.00-1.10	4.23-14.11	0.18-0.22	0.0-2.9	5.0-10
	14-23	27-35	1.10-1.20	1.41-4.23	0.15-0.19	0.0-2.9	1.0-6.0
	23-92	27-35	1.25-1.50	1.41-4.23	0.15-0.19	0.0-2.9	0.0-2.0
Trailhead	0-4	27-32	1.10-1.30	1.41-9.17	0.18-0.23	0.0-2.9	3.0-10
	4-15	30-35	1.20-1.35	1.41-4.23	0.18-0.23	0.0-2.9	3.0-7.0
	15-30	40-50	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
	30-79	40-60	1.40-1.70	1.41-4.23	0.12-0.16	0.0-2.9	0.0-1.0
559:							
Trailhead	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-7	27-32	1.10-1.30	1.41-9.17	0.18-0.23	0.0-2.9	3.0-10
	7-18	30-35	1.20-1.35	1.41-4.23	0.18-0.23	0.0-2.9	3.0-7.0
	18-37	40-50	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
	37-60	40-60	1.40-1.70	1.41-4.23	0.12-0.16	0.0-2.9	0.0-1.0
560:							
Trailhead	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-7	27-32	1.10-1.30	1.41-9.17	0.18-0.23	0.0-2.9	3.0-10
	7-13	30-35	1.20-1.35	1.41-4.23	0.18-0.23	0.0-2.9	3.0-7.0
	13-23	35-45	1.20-1.50	1.41-4.23	0.12-0.17	0.0-2.9	0.5-3.0
	23-54	40-50	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
	54-73	40-60	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
561:							
Trailhead	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-3	25-26	1.10-1.30	1.41-9.17	0.17-0.22	0.0-2.9	3.0-10
	3-8	30-35	1.20-1.35	1.41-4.23	0.18-0.23	0.0-2.9	3.0-7.0
	8-48	40-50	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
	48-93	40-60	1.40-1.70	1.41-4.23	0.12-0.16	0.0-2.9	0.0-1.0
562:							
Trailhead	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	27-32	1.10-1.30	1.41-9.17	0.18-0.23	0.0-2.9	3.0-10
	5-12	30-35	1.20-1.35	1.41-4.23	0.18-0.23	0.0-2.9	3.0-7.0
	12-27	35-45	1.20-1.50	1.41-4.23	0.12-0.17	0.0-2.9	0.5-3.0
	27-36	40-50	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
	36-80	40-60	1.40-1.70	1.41-4.23	0.12-0.16	0.0-2.9	0.0-1.0
Fortyfour	0-0.5	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	0.5-12	27-35	1.10-1.30	1.41-4.23	0.18-0.22	0.0-2.9	2.0-6.0
	12-30	40-50	1.20-1.50	0.42-1.41	0.11-0.16	3.0-5.9	0.2-2.0
	30-39	40-50	1.20-1.50	0.42-1.41	0.12-0.16	3.0-5.9	0.0-0.5
	39-60	---	---	0.00-0.42	---	---	0.0-0.0
563:							
Trailhead	0-5	27-32	1.10-1.30	1.41-9.17	0.18-0.23	0.0-2.9	3.0-10
	5-13	30-35	1.20-1.35	1.41-4.23	0.18-0.23	0.0-2.9	3.0-7.0
	13-43	40-50	1.40-1.70	1.41-4.23	0.12-0.17	0.0-2.9	0.0-1.0
	43-60	40-60	1.40-1.70	1.41-4.23	0.12-0.16	0.0-2.9	0.0-1.0
Fortyfour	0-8	27-35	1.10-1.30	1.41-4.23	0.18-0.23	0.0-2.9	2.0-6.0
	8-25	40-50	1.20-1.50	0.42-1.41	0.12-0.17	0.0-2.9	0.2-2.0
	25-31	40-50	1.20-1.50	0.42-1.41	0.12-0.16	0.0-2.9	0.0-0.5
	31-60	---	---	0.00-0.42	---	---	0.0-0.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
580:							
Coppercreek	0-5	20-27	1.00-1.10	4.23-14.11	0.19-0.22	0.0-2.9	5.0-10
	5-16	25-35	1.10-1.20	1.41-4.23	0.15-0.22	0.0-2.9	1.0-6.0
	16-43	27-35	1.25-1.50	1.41-4.23	0.13-0.19	0.0-2.9	0.0-2.0
	43-79	27-35	1.25-1.50	1.41-4.23	0.13-0.19	0.0-2.9	0.0-2.0
Tectah	0-9	27-35	1.20-1.30	1.41-4.23	0.15-0.19	0.0-2.9	3.0-6.0
	9-15	35-50	1.30-1.60	0.42-1.41	0.10-0.23	1.5-5.9	1.5-4.0
	15-28	35-50	1.30-1.60	0.42-1.41	0.09-0.19	1.5-5.9	0.5-2.0
	28-60	35-50	1.30-1.60	0.42-1.41	0.07-0.19	3.0-5.9	0.0-1.0
Slidecreek	0-3	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	3-11	20-27	1.10-1.20	4.23-14.11	0.08-0.14	0.0-2.9	2.0-10
	11-15	27-35	1.20-1.50	1.41-4.23	0.04-0.12	0.0-2.9	0.5-6.0
	15-55	27-35	1.20-1.50	1.41-4.23	0.03-0.12	0.0-2.9	0.5-4.0
	55-60	25-40	1.20-1.60	1.41-4.23	0.01-0.06	0.0-2.9	0.0-1.0
581:							
Coppercreek	0-8	20-27	1.00-1.10	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	8-15	25-35	1.10-1.20	1.41-4.23	0.11-0.21	0.0-2.9	1.0-6.0
	15-55	27-35	1.25-1.50	1.41-4.23	0.07-0.16	0.0-2.9	0.0-2.0
	55-79	23-35	1.45-1.55	1.41-14.11	0.06-0.15	0.0-2.9	0.0-1.0
Slidecreek	0-7	20-27	1.10-1.20	4.23-14.11	0.13-0.19	0.0-2.9	2.0-10
	7-14	23-35	1.20-1.50	1.41-4.23	0.07-0.19	0.0-2.9	1.5-6.0
	14-61	27-35	1.20-1.50	1.41-4.23	0.06-0.13	0.0-2.9	0.5-4.0
	61-79	27-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.0-1.0
Tectah	0-4	22-27	1.20-1.30	4.23-14.11	0.17-0.22	0.0-2.9	3.0-6.0
	4-19	35-45	1.30-1.60	0.42-1.41	0.08-0.19	3.0-5.9	0.5-2.0
	19-63	35-45	1.30-1.60	0.42-1.41	0.06-0.16	3.0-5.9	0.0-1.0
582:							
Slidecreek	0-8	20-27	1.10-1.20	4.23-14.11	0.13-0.19	0.0-2.9	2.0-10
	8-15	27-35	1.20-1.50	1.41-4.23	0.07-0.19	0.0-2.9	1.5-6.0
	15-50	27-35	1.20-1.50	1.41-4.23	0.06-0.13	0.0-2.9	0.5-4.0
	50-71	20-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.0-1.0
Lackscreek	0-5	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	5-17	25-35	1.20-1.50	1.41-4.23	0.03-0.13	0.0-2.9	1.0-5.0
	17-39	26-35	1.20-1.60	1.41-4.23	0.01-0.07	0.0-2.9	0.5-3.0
	39-79	---	---	---	---	---	---
Coppercreek	0-7	20-27	1.00-1.10	4.23-14.11	0.13-0.19	0.0-2.9	5.0-10
	7-24	27-35	1.25-1.50	1.41-4.23	0.10-0.17	0.0-2.9	0.0-4.0
	24-75	27-40	1.45-1.55	1.41-4.23	0.05-0.12	0.0-2.9	0.0-1.0
583:							
Trailhead	0-7	20-27	1.10-1.30	1.41-14.11	0.15-0.19	0.0-2.9	3.0-10
	7-15	27-40	1.20-1.35	0.42-14.11	0.12-0.16	0.0-2.9	3.0-7.0
	15-56	35-60	1.40-1.70	0.42-4.23	0.06-0.11	0.0-2.9	0.0-3.0
	56-79	35-60	1.40-1.70	0.42-4.23	0.06-0.20	0.0-2.9	0.0-1.0
Wiregrass	0-5	20-27	1.00-1.10	4.23-14.11	0.18-0.22	0.0-2.9	5.0-10
	5-12	25-35	1.10-1.20	1.41-14.11	0.15-0.22	0.0-2.9	1.0-6.0
	12-35	27-35	1.25-1.50	0.42-4.23	0.12-0.19	0.0-4.5	0.0-2.0
	35-67	27-40	1.25-1.50	0.42-4.23	0.10-0.19	0.0-4.5	0.0-1.5

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
584:							
Wiregrass	0-12	20-27	1.00-1.10	4.23-14.11	0.19-0.22	0.0-2.9	5.0-10
	12-20	20-35	1.10-1.20	1.41-14.11	0.15-0.22	0.0-2.9	1.0-6.0
	20-50	25-35	1.25-1.50	1.41-4.23	0.13-0.19	0.0-2.9	0.0-2.0
	50-79	30-40	1.45-1.55	1.41-4.23	0.11-0.19	0.0-2.9	0.0-1.0
Pittplace	0-7	27-35	1.20-1.30	4.23-14.11	0.15-0.19	0.0-2.9	3.0-6.0
	7-43	35-50	1.30-1.60	0.42-1.41	0.07-0.20	3.0-5.9	0.5-2.0
	43-56	35-50	1.30-1.60	0.42-1.41	0.06-0.16	3.0-5.9	0.0-1.0
	56-63	35-50	1.30-1.60	0.42-1.41	0.06-0.16	3.0-5.9	0.0-1.0
Scaath	0-4	23-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-8.0
	4-10	25-35	1.20-1.50	1.41-4.23	0.11-0.16	0.0-2.9	1.0-5.0
	10-39	27-35	1.20-1.60	1.41-4.23	0.02-0.12	0.0-2.9	0.5-3.0
	39-60	---	---	---	---	---	---
585:							
Wiregrass	0-8	20-27	1.00-1.10	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	8-15	25-35	1.10-1.20	1.41-14.11	0.15-0.22	0.0-2.9	1.0-6.0
	15-35	25-35	1.25-1.50	1.41-14.11	0.10-0.19	0.0-2.9	0.0-2.0
	35-60	25-35	1.45-1.55	1.41-14.11	0.07-0.18	0.0-2.9	0.0-1.0
Rockysaddle	0-4	20-27	1.10-1.20	4.23-14.11	0.13-0.18	0.0-2.9	2.0-10
	4-11	20-35	1.10-1.30	1.41-14.11	0.11-0.18	0.0-2.9	2.0-6.0
	11-37	25-35	1.20-1.50	1.41-4.23	0.04-0.12	0.0-2.9	0.5-4.0
	37-60	30-40	1.20-1.60	0.42-4.23	0.01-0.11	0.0-5.9	0.0-1.0
586:							
Wiregrass	0-8	20-27	1.00-1.10	4.23-14.11	0.19-0.22	0.0-2.9	5.0-10
	8-39	27-35	1.10-1.20	1.41-4.23	0.11-0.19	0.0-2.9	1.0-6.0
	39-69	27-40	1.25-1.50	0.91-4.23	0.07-0.19	0.0-4.5	0.0-2.0
Rockysaddle	0-4	20-27	1.00-1.10	4.23-14.11	0.14-0.19	0.0-2.9	5.0-10
	4-12	27-35	1.10-1.20	1.41-4.23	0.09-0.12	0.0-2.9	1.0-6.0
	12-54	27-40	1.25-1.50	0.91-4.23	0.06-0.12	0.0-4.5	0.0-2.0
	54-61	27-35	1.25-1.50	1.41-4.23	0.02-0.08	0.0-2.9	0.0-1.0
Trailhead	0-9	20-27	1.10-1.30	1.41-9.17	0.17-0.22	0.0-2.9	1.0-6.0
	9-25	38-50	1.40-1.70	0.42-4.23	0.08-0.20	0.0-2.9	0.0-1.0
	25-62	40-60	1.40-1.70	0.42-1.41	0.06-0.09	0.0-2.9	0.0-1.0
	62-79	40-60	1.40-1.70	0.42-1.41	0.01-0.05	0.0-2.9	0.0-0.5
587:							
Childshill	0-3	20-27	0.80-1.10	4.23-14.11	0.17-0.22	0.0-2.9	3.0-8.0
	3-9	20-27	0.80-1.10	4.23-14.11	0.17-0.22	0.0-2.9	3.0-8.0
	9-35	27-35	1.10-1.60	1.41-4.23	0.10-0.16	0.0-2.9	0.0-4.0
	35-65	25-35	1.20-1.60	1.41-4.23	0.06-0.12	0.0-2.9	0.0-2.0
588:							
Surpur	0-7	18-25	0.70-1.20	4.23-14.11	0.17-0.22	0.0-2.9	5.0-10
	7-11	20-30	1.00-1.40	1.41-4.23	0.12-0.22	0.0-2.9	1.0-4.0
	11-39	25-32	1.00-1.40	1.41-4.23	0.11-0.19	0.0-2.9	0.5-2.0
	39-67	20-32	1.00-1.40	4.23-14.11	0.14-0.18	0.0-2.9	0.0-1.0
590:							
Sasquatch	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-19	20-27	1.00-1.10	4.23-14.11	0.19-0.22	0.0-2.9	5.0-10
	19-65	27-35	1.25-1.50	0.42-4.23	0.14-0.19	0.0-3.9	1.0-5.0
	65-79	27-40	1.25-1.60	0.42-4.23	0.12-0.19	0.0-3.9	0.0-2.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
590:							
Yeti	0-16	25-27	1.20-1.30	4.23-14.11	0.17-0.22	0.0-2.9	3.0-8.0
	16-37	35-50	1.30-1.60	0.42-4.23	0.15-0.19	3.0-5.9	1.0-5.0
	37-51	35-45	1.30-1.60	0.42-1.41	0.06-0.19	3.0-5.9	0.0-2.0
	51-60	35-50	1.30-1.60	0.42-1.41	0.06-0.19	3.0-5.9	0.0-1.0
Footstep	0-15	18-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-10
	15-26	23-35	1.20-1.45	1.41-14.11	0.04-0.12	0.0-2.9	1.0-6.0
	26-31	23-35	1.20-1.60	1.41-4.23	0.03-0.08	0.0-2.9	0.5-3.0
	31-79	---	---	0.00-0.42	---	---	---
591:							
Sasquatch	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-17	20-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	4.0-8.0
	17-46	27-35	1.10-1.30	1.41-4.23	0.10-0.16	0.0-2.9	0.5-5.0
	46-56	27-35	1.10-1.30	1.41-4.23	0.10-0.16	0.0-2.9	0.5-5.0
	56-79	27-40	1.20-1.35	1.41-4.23	0.10-0.18	0.0-2.9	0.0-1.0
Sisterrocks	0-9	20-27	1.10-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-10
	9-16	27-32	1.10-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-10
	16-41	27-35	1.20-1.50	1.41-4.23	0.06-0.12	0.0-2.9	1.0-5.0
	41-67	27-35	1.20-1.60	1.41-4.23	0.03-0.13	0.0-2.9	0.0-1.0
Ladybird	0-7	18-27	1.00-1.20	4.23-14.11	0.13-0.19	0.0-2.9	8.0-10
	7-15	18-35	1.10-1.30	1.41-4.23	0.11-0.19	0.0-2.9	3.0-8.0
	15-55	25-35	1.20-1.35	1.41-4.23	0.11-0.18	0.0-2.9	1.0-5.0
	55-60	18-27	1.20-1.35	4.23-14.11	0.06-0.11	0.0-2.9	0.0-1.0
592:							
Sisterrocks	0-7	20-27	1.10-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-10
	7-13	20-30	1.20-1.50	2.82-14.11	0.07-0.11	0.0-2.9	1.0-5.0
	13-32	27-35	1.20-1.50	1.41-14.11	0.03-0.07	0.0-2.9	0.5-3.0
	32-60	23-35	1.20-1.60	1.41-14.11	0.02-0.07	0.0-2.9	0.0-1.0
Ladybird	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-16	18-27	1.00-1.20	4.23-14.11	0.13-0.19	0.0-2.9	8.0-10
	16-23	18-35	1.10-1.30	1.41-4.23	0.11-0.19	0.0-2.9	3.0-8.0
	23-53	25-35	1.20-1.35	1.41-4.23	0.11-0.18	0.0-2.9	1.0-5.0
	53-60	18-27	1.20-1.35	4.23-14.11	0.06-0.11	0.0-2.9	0.0-1.0
Footstep	0-7	18-27	1.00-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-10
	7-14	23-35	1.20-1.45	2.82-14.11	0.04-0.12	0.0-2.9	1.0-6.0
	14-28	23-35	1.20-1.60	1.41-4.23	0.03-0.08	0.0-2.9	0.5-3.0
	28-79	---	---	0.00-0.42	---	---	---
593:							
Sasquatch	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-20	20-27	1.00-1.10	4.23-14.11	0.19-0.22	0.0-2.9	5.0-10
	20-40	27-35	1.25-1.50	1.41-4.23	0.13-0.19	0.0-3.9	1.0-5.0
	40-61	27-40	1.25-1.60	0.42-4.23	0.12-0.19	0.0-5.9	0.0-2.0
Yeti	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-16	27-33	1.20-1.30	1.41-4.23	0.15-0.19	0.0-2.9	3.0-8.0
	16-43	35-45	1.30-1.60	0.42-1.41	0.10-0.19	3.0-5.9	1.0-5.0
	43-67	30-50	1.30-1.60	0.42-1.41	0.15-0.21	3.0-5.9	0.0-2.0
Sisterrocks	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-16	20-27	1.10-1.20	4.23-14.11	0.13-0.19	0.0-2.9	3.0-10
	16-22	20-30	1.20-1.50	2.82-14.11	0.06-0.11	0.0-2.9	1.0-5.0
	22-47	27-35	1.20-1.50	1.41-4.23	0.06-0.11	0.0-2.9	0.5-4.0
	47-60	27-35	1.20-1.60	1.41-4.23	0.02-0.07	0.0-2.9	0.0-1.0

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
594:							
Sisterrocks	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-8	20-27	1.10-1.20	4.23-14.11	0.13-0.18	0.0-2.9	3.0-10
	8-16	20-30	1.20-1.50	2.82-14.11	0.07-0.11	0.0-2.9	1.0-5.0
	16-47	27-35	1.20-1.50	1.41-4.23	0.03-0.11	0.0-2.9	0.5-4.0
	47-60	23-35	1.20-1.60	1.41-4.23	0.02-0.11	0.0-2.9	0.0-1.0
Sasquatch	0-2	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	2-20	20-27	1.00-1.20	4.23-14.11	0.17-0.22	0.0-2.9	4.0-8.0
	20-41	27-35	1.10-1.30	1.41-4.23	0.14-0.19	0.0-2.9	0.5-5.0
	41-79	27-40	1.20-1.35	1.41-4.23	0.11-0.16	0.0-4.5	0.0-1.0
Houda	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-8	20-27	1.20-1.40	4.23-14.11	0.13-0.19	0.0-2.9	3.0-10
	8-15	28-32	1.20-1.40	4.23-14.11	0.13-0.19	0.0-2.9	3.0-10
	15-33	28-35	1.30-1.80	1.41-4.23	0.06-0.12	0.0-2.9	0.5-3.0
	33-53	28-35	1.60-2.00	1.41-4.23	0.06-0.12	0.0-2.9	0.0-1.5
	53-60	28-35	1.60-2.00	1.41-4.23	0.02-0.07	0.0-2.9	0.0-1.5
595:							
Battery	0-13	27-33	1.00-1.25	1.41-4.23	0.11-0.16	0.0-2.9	5.0-10
	13-70	27-35	1.25-1.50	1.41-4.23	0.10-0.16	0.0-2.9	0.0-1.5
	70-79	27-35	1.25-1.50	1.41-4.23	0.12-0.19	0.0-2.9	0.0-1.0
Catchings	0-16	20-26	1.10-1.20	4.23-14.11	0.09-0.14	0.0-2.9	2.0-10
	16-39	23-33	1.20-1.50	1.41-4.23	0.06-0.12	0.0-2.9	0.5-4.0
	39-52	10-20	1.20-1.50	1.41-4.23	0.06-0.12	0.0-2.9	0.5-4.0
	52-63	5-20	1.20-1.60	4.23-28.23	0.01-0.20	0.0-2.9	0.0-1.0
	63-69	10-25	1.20-1.60	4.23-28.23	0.01-0.20	0.0-2.9	0.0-1.0
596:							
Flintrock	0-10	27-32	1.10-1.35	1.41-4.23	0.07-0.12	0.0-2.9	2.0-8.0
	10-19	27-35	1.20-1.35	1.41-4.23	0.06-0.12	0.0-2.9	2.0-6.0
	19-31	27-35	1.20-1.35	1.41-4.23	0.06-0.12	0.0-2.9	2.0-6.0
	31-38	27-35	1.30-1.50	1.41-4.23	0.06-0.12	0.0-2.9	0.5-3.0
	38-63	27-40	1.30-1.50	0.42-4.24	0.01-0.14	0.0-2.9	0.0-0.5
Highprairie	0-15	27-32	1.10-1.35	1.41-4.23	0.15-0.19	0.0-2.9	2.0-8.0
	15-26	27-35	1.30-1.50	1.41-4.23	0.15-0.19	0.0-2.9	1.0-6.0
	26-55	27-35	1.30-1.50	1.41-4.23	0.10-0.16	0.0-2.9	1.0-4.0
	55-67	27-40	1.30-1.50	0.42-4.23	0.11-0.18	0.0-2.9	0.0-0.5
597:							
Tarquin	0-3	---	0.05-0.10	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	3-20	20-27	1.20-1.40	4.23-14.11	0.17-0.22	0.0-2.9	3.0-10
	20-30	27-35	1.30-1.80	1.41-4.23	0.15-0.23	0.0-2.9	0.5-5.0
	30-50	35-40	1.30-1.80	0.42-1.41	0.11-0.20	3.0-5.9	0.5-3.0
	50-60	30-40	1.60-1.80	0.42-2.82	0.15-0.20	1.5-5.9	0.0-1.5
598:							
Ladybird	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-9	18-27	1.00-1.20	4.23-14.11	0.13-0.19	0.0-2.9	8.0-10
	9-24	18-35	1.10-1.30	1.41-4.23	0.11-0.17	0.0-2.9	3.0-8.0
	24-51	25-35	1.20-1.35	1.41-4.23	0.11-0.16	0.0-2.9	1.0-5.0
	51-76	18-27	1.20-1.35	4.23-14.11	0.07-0.12	0.0-2.9	0.0-1.0
Stonehill	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-11	12-20	1.00-1.20	4.23-14.11	0.14-0.20	0.0-2.9	8.0-10
	11-32	25-35	1.20-1.35	1.41-4.23	0.14-0.20	0.0-2.9	3.0-8.0
	32-60	---	---	0.00-0.42	---	---	---

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
659:							
Raingage	0-17	20-26	1.00-1.20	4.23-14.11	0.17-0.21	0.0-2.9	5.0-10
	17-26	25-32	1.25-1.35	4.23-14.11	0.11-0.19	0.0-2.9	2.0-8.0
	26-51	30-35	1.25-1.35	1.41-4.23	0.08-0.18	0.0-2.9	1.0-3.0
	51-59	33-35	1.50-1.70	1.41-4.23	0.07-0.18	0.0-2.9	0.0-1.0
Pigpen	0-6	20-26	1.00-1.30	4.23-14.11	0.13-0.18	0.0-2.9	5.0-10
	6-14	27-35	1.25-1.35	1.41-4.23	0.11-0.17	0.0-2.9	3.0-8.0
	14-32	30-35	1.25-1.40	1.41-4.23	0.06-0.14	0.0-2.9	0.5-3.0
	32-59	30-35	1.50-1.70	1.41-4.23	0.01-0.14	0.0-2.9	0.0-1.0
756:							
Oragran	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-3	20-27	1.45-1.55	4.23-14.11	0.10-0.14	0.0-2.9	2.0-5.0
	3-13	15-35	1.45-1.55	1.41-14.11	0.08-0.19	0.0-2.9	0.2-0.8
	13-17	---	---	---	---	---	---
Weitchpec	0-8	15-20	1.45-1.55	4.23-14.11	0.14-0.20	0.0-2.9	2.0-5.0
	8-30	15-35	1.45-1.55	1.41-14.11	0.01-0.12	0.0-2.9	0.5-2.5
	30-35	15-35	1.45-1.55	1.41-14.11	0.01-0.12	0.0-2.9	0.5-2.5
	35-39	---	---	---	---	---	---
759:							
Jayel, extremely stony	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-11	27-35	1.35-1.45	1.41-4.23	0.11-0.16	3.0-5.9	2.0-5.0
	11-32	35-45	1.25-1.35	0.42-4.23	0.06-0.16	3.0-5.9	1.0-2.5
	32-39	---	---	---	---	---	---
Walnett, extremely stony	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	22-27	1.40-1.50	4.23-14.11	0.09-0.14	0.0-2.9	2.0-5.0
	5-43	27-35	1.35-1.45	1.41-4.23	0.06-0.13	3.0-5.9	1.0-3.0
	43-61	25-35	1.45-1.55	1.41-14.11	0.01-0.13	0.0-2.9	0.1-0.3
	61-65	---	---	---	---	---	---
Oragran	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-3	20-27	1.40-1.50	4.23-14.11	0.08-0.12	3.0-5.9	1.0-3.0
	3-19	23-35	1.40-1.50	1.41-14.11	0.08-0.18	3.0-5.9	0.1-0.3
	19-23	---	---	---	---	---	---
760:							
Jayel, extremely stony	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-11	27-35	1.35-1.45	1.41-4.23	0.11-0.16	3.0-5.9	2.0-5.0
	11-32	35-45	1.25-1.35	0.42-4.23	0.06-0.19	3.0-5.9	1.0-2.5
	32-39	---	---	---	---	---	---
Oragran	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-3	20-27	1.45-1.55	4.23-14.11	0.08-0.12	0.0-2.9	2.0-5.0
	3-13	15-35	1.45-1.55	1.41-14.11	0.08-0.18	0.0-2.9	0.2-0.8
	13-17	---	---	---	---	---	---
Walnett, extremely stony	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	22-27	1.40-1.50	4.23-14.11	0.09-0.14	0.0-2.9	2.0-5.0
	5-43	27-35	1.35-1.45	1.41-14.11	0.06-0.13	3.0-5.9	1.0-3.0
	43-61	25-35	1.45-1.55	1.41-14.11	0.01-0.13	0.0-2.9	0.1-0.3
	61-65	---	---	---	---	---	---
761:							
Gasquet, extremely stony	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-10	23-27	1.40-1.50	4.23-14.11	0.12-0.19	0.0-2.9	2.0-5.0
	10-61	35-45	1.25-1.35	0.42-1.41	0.06-0.17	3.0-5.9	0.5-3.0
	61-65	---	---	---	---	---	---

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter
	In	*Pct*	*g/cc*	*µm/sec*	*In/in*	*Pct*	*Pct*
761:							
Walnett, extremely stony-----	0-1	---	0.05-0.30	42.34-141.14	0.25-0.50	0.0-0.0	60-100
	1-5	22-27	1.40-1.50	4.23-14.11	0.09-0.14	0.0-2.9	2.0-5.0
	5-43	27-35	1.35-1.45	1.41-14.11	0.06-0.13	3.0-5.9	1.0-3.0
	43-61	25-35	1.45-1.55	1.41-14.11	0.01-0.13	0.0-2.9	0.1-0.3
	61-65	---	---	---	---	---	---
Jayel-----------------------	0-12	30-40	1.35-1.45	1.41-4.23	0.14-0.18	3.0-5.9	2.0-5.0
	12-39	35-45	1.25-1.35	0.42-4.23	0.06-0.18	3.0-5.9	1.0-2.5
	39-60	---	---	---	---	---	---

Table 17.--Erosion Properties of Soils

[Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer]

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
100:						
Riverwash	0-20	.02	.05	5	8	0
	20-79	.02	.05			
102:						
Fluvents	0-2	.24	.24	4	3	86
	2-9	.24	.24			
	9-37	.24	.24			
	37-60	.05	.24			
110:						
Weott	0-12	.37	.37	5	6	48
	12-26	.49	.49			
	26-60	.49	.49			
116:						
Swainslough	0-3	---	---	5	8	0
	3-12	.28	.28			
	12-20	.32	.32			
	20-29	.28	.28			
	29-38	.32	.32			
	38-65	.43	.43			
119:						
Arlynda	0-3	---	---	5	8	0
	3-14	.32	.32			
	14-22	.43	.43			
	22-63	.43	.43			
126:						
Loleta	0-4	.17	.20	5	6	48
	4-14	.20	.20			
	14-32	.32	.32			
	32-50	.37	.37			
	50-68	.37	.37			
155:						
Samoa	0-1	---	---	5	1	220
	1-6	.02	.02			
	6-18	.10	.10			
	18-63	.10	.10			
Clambeach	0-9	.02	.02	5	1	220
	9-20	.10	.10			
	20-63	.10	.10			
Dune land	0-72	.05	.05	5	1	220
157:						
Beaches	0-72	.05	.05	5	1	220
Samoa	0-17	.02	.02	5	1	220
	17-63	.05	.05			
Dune land	0-72	.05	.05	5	1	220

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
171:						
Worswick	0-1	---	---	4	6	48
	1-17	.28	.28			
	17-27	.43	.43			
	27-58	.37	.37			
	58-62	.37	.37			
Arlynda	0-1	---	---	5	6	48
	1-2	.24	.24			
	2-15	.24	.24			
	15-35	.32	.32			
	35-60	.32	.32			
172:						
Bigriver, fine sandy loam	0-4	.28	.28	5	3	86
	4-61	.55	.55			
173:						
Bigriver, silt loam	0-15	.37	.37	5	3	86
	15-63	.55	.55			
Ferndale	0-7	.43	.43	5	3	86
	7-32	.49	.49			
	32-60	.49	.49			
Russ	0-10	.24	.24	2	6	48
	10-28	.17	.17			
	28-43	.20	.20			
	43-60	.24	.24			
174:						
Bigtree	0-10	.20	.20	5	6	48
	10-47	.28	.28			
	47-57	.28	.28			
	57-63	.49	.49			
Mystery	0-1	---	---	5	3	86
	1-24	.20	.20			
	24-30	.24	.24			
	30-41	.24	.24			
	41-60	.43	.43			
177:						
Battery, dry	0-13	.15	.24	5	7	38
	13-70	.15	.28			
	70-79	.24	.28			
178:						
Battery	0-7	.15	.24	5	7	38
	7-47	.17	.28			
	47-60	.15	.37			
191:						
Talawa	0-12	.10	.10	4	3	86
	12-17	.17	.17			
	17-39	.20	.20			
	39-63	.15	.15			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
192:						
Aubell	0-10	.20	.20	5	6	48
	10-27	.28	.32			
	27-39	.28	.28			
	39-60	.10	.32			
194:						
Tsunami	0-4	.20	.28	4	7	38
	4-18	.24	.32			
	18-38	.20	.37			
	38-60	.15	.43			
220:						
Ferndale	0-11	.37	.37	5	6	48
	11-16	.55	.55			
	16-21	.55	.55			
	21-50	.49	.49			
	50-60	.37	.37			
222:						
Ferndale, moderately well drained	0-13	.28	.28	5	5	56
	13-17	.24	.32			
	17-41	.49	.43			
	41-51	.43	.43			
	51-60	.10	.28			
251:						
Surpur	0-2	---	---	5	6	48
	2-14	.24	.37			
	14-22	.37	.37			
	22-33	.37	.43			
	33-79	.37	.49			
289:						
Espa	0-3	---	---	5	6	48
	3-16	.24	.24			
	16-47	.32	.32			
	47-79	.28	.28			
290:						
Surpur	0-4	---	---	5	6	48
	4-12	.15	.24			
	12-41	.17	.28			
	41-63	.17	.28			
	63-79	.20	.28			
Mettah	0-1	---	---	5	6	48
	1-9	.15	.24			
	9-17	.28	.32			
	17-58	.24	.24			
	58-79	.24	.32			
291:						
Ossagon	0-4	---	---	5	6	48
	4-12	.20	.24			
	12-16	.28	.28			
	16-48	.32	.37			
	48-56	.24	.32			
	56-79	.24	.32			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
291:						
Squashan	0-1	---	---	4	5	56
	1-5	.10	.24			
	5-20	.10	.32			
	20-33	.05	.20			
	33-79	.05	.17			
292:						
Ossagon	0-1	---	---	5	6	48
	1-13	.20	.24			
	13-34	.37	.37			
	34-54	.32	.37			
	54-75	.24	.32			
Squashan	0-2	---	---	2	6	48
	2-12	.10	.20			
	12-43	.05	.24			
	43-74	.05	.24			
293:						
Ossagon	0-1	---	---	5	6	48
	1-15	.24	.24			
	15-65	.37	.37			
	65-79	.24	.28			
Goldbluffs	0-8	.05	.24	2	7	38
	8-13	.15	.32			
	13-25	.15	.37			
	25-60	.05	.32			
Squashan	0-2	---	---	4	6	48
	2-9	.10	.24			
	9-17	.10	.24			
	17-47	.05	.24			
	47-65	.10	.28			
	65-79	.10	.28			
294:						
Ossagon	0-4	---	---	5	6	48
	4-12	.20	.24			
	12-16	.28	.28			
	16-48	.32	.37			
	48-79	.24	.32			
Goldbluffs	0-1	---	---	2	5	56
	1-10	.05	.24			
	10-37	.10	.24			
	37-47	.05	.24			
	47-69	.05	.32			
Squashan	0-1	---	---	4	5	56
	1-14	.15	.24			
	14-37	.10	.32			
	37-47	.10	.28			
	47-60	.02	.15			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
462:						
Mooncreek	0-3	---	---	5	5	56
	3-8	.10	.24			
	8-16	.10	.28			
	16-27	.15	.28			
	27-37	.15	.28			
	37-50	.10	.24			
	50-63	.24	.24			
Noisy	0-1	---	---	4	6	48
	1-6	.05	.24			
	6-12	.15	.24			
	12-24	.10	.37			
	24-61	.02	.43			
Tossup	0-1	---	---	5	5	56
	1-8	.10	.28			
	8-21	.20	.32			
	21-37	.15	.24			
	37-48	.20	.28			
	48-79	.10	.24			
463:						
Mooncreek	0-2	---	---	5	6	48
	2-5	.05	.24			
	5-8	.10	.24			
	8-16	.20	.28			
	16-26	.32	.32			
	26-42	.32	.28			
	42-62	.28	.28			
Noisy	0-2	---	---	4	5	56
	2-7	.10	.24			
	7-12	.15	.20			
	12-23	.10	.28			
	23-39	.10	.28			
	39-47	.02	.24			
	47-63	.10	.37			
Sidehill	0-2	---	---	2	8	0
	2-6	---	---			
	6-10	.02	.20			
	10-18	.05	.28			
	18-33	.17	.49			
	33-59	---	---			
464:						
Mooncreek	0-2	---	---	5	6	48
	2-3	.15	.24			
	3-6	.15	.24			
	6-21	.20	.24			
	21-38	.37	.37			
	38-55	.43	.43			
	55-79	.43	.43			
Tossup	0-1	---	---	5	6	48
	1-4	.17	.24			
	4-6	.20	.24			
	6-12	.20	.24			
	12-20	.28	.28			
	20-41	.28	.28			
	41-61	.28	.28			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
464:						
Noisy	0-2	---	---	4	5	56
	2-5	.05	.24			
	5-10	.05	.28			
	10-31	.10	.32			
	31-51	.05	.24			
	51-61	.05	.24			
465:						
Sidehill	0-1	---	---	2	8	0
	1-7	.17	.28			
	7-30	.17	.49			
	30-59	---	---			
Oakside	0-2	---	---	1	8	0
	2-6	.02	.32			
	6-10	.10	.32			
	10-59	---	---			
Darkwoods	0-1	---	---	5	6	48
	1-7	.05	.24			
	7-15	.10	.37			
	15-25	.05	.32			
	25-31	.20	.32			
	31-44	.20	.37			
	44-52	.10	.28			
	52-79	.05	.24			
473:						
Highoaks	0-1	---	---	5	5	56
	1-9	.10	.28			
	9-20	.32	.37			
	20-31	.20	.37			
	31-42	.20	.32			
	42-50	.37	.37			
	50-63	.37	.37			
Noisy	0-2	---	---	4	6	48
	2-5	.05	.24			
	5-9	.10	.24			
	9-24	.15	.28			
	24-39	.15	.37			
	39-63	.05	.43			
Mudhorse	0-2	---	---	5	5	56
	2-5	.17	.32			
	5-12	.28	.32			
	12-20	.32	.37			
	20-32	.24	.28			
	32-51	.20	.24			
	51-79	.20	.24			
480:						
Dolason	0-17	.17	.20	5	6	48
	17-35	.15	.28			
	35-59	.10	.28			
	59-77	.10	.28			
Countshill	0-7	.17	.20	2	6	48
	7-20	.20	.28			
	20-28	.10	.24			
	28-60	---	---			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
480:						
Airstrip	0-17	.17	.24	2	6	48
	17-26	.10	.28			
	26-60	---	---			
481:						
Dolason	0-3	---	---	5	6	48
	3-15	.17	.24			
	15-34	.20	.28			
	34-46	.20	.32			
	46-78	.20	.32			
Airstrip	0-2	---	---	3	6	48
	2-15	.10	.20			
	15-41	.05	.28			
	41-60	---	---			
Countshill	0-7	.17	.20	2	6	48
	7-19	.20	.28			
	19-23	.10	.24			
	23-35	---	---			
	35-60	---	---			
482:						
Dolason	0-13	.17	.20	5	6	48
	13-21	.15	.28			
	21-44	.10	.28			
	44-59	.10	.28			
Countshill	0-3	.10	.20	3	6	48
	3-24	.24	.32			
	24-30	.10	.28			
	30-60	---	---			
483:						
Doolyville	0-1	---	---	5	6	48
	1-6	.28	.32			
	6-11	.20	.28			
	11-15	.28	.37			
	15-18	.20	.37			
	18-61	.17	.43			
Pasturerock	0-1	---	---	5	6	48
	1-8	.17	.24			
	8-17	.17	.28			
	17-55	.15	.28			
	55-68	.10	.24			
484:						
Elkcamp	0-8	.15	.20	4	6	48
	8-21	.20	.28			
	21-37	.20	.32			
	37-49	.17	.32			
	49-65	.15	.32			
Dolason	0-13	.15	.20	5	6	48
	13-21	.15	.28			
	21-44	.10	.28			
	44-59	.10	.28			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
484:						
Airstrip	0-14	.10	.20	2	7	38
	14-31	.05	.32			
	31-60	---	---			
485:						
Pasturerock	0-1	---	---	5	6	48
	1-5	.17	.24			
	5-8	.17	.20			
	8-17	.17	.28			
	17-35	.17	.28			
	35-48	.17	.28			
	48-69	.10	.24			
Coyoterock	0-0.5	---	---	5	6	48
	0.5-8	.20	.28			
	8-16	.20	.28			
	16-29	.20	.37			
	29-39	.24	.37			
	39-60	.20	.37			
Maneze	0-0.5	---	---	3	6	48
	0.5-11	.15	.20			
	11-18	.05	.28			
	18-44	.05	.28			
	44-63	.10	.37			
531:						
Atwell	0-10	.24	.28	3	6	48
	10-30	.28	.37			
	30-71	.20	.32			
	71-82	.24	.32			
Coppercreek	0-1	---	---	5	6	48
	1-5	.17	.24			
	5-20	.20	.28			
	20-61	.24	.32			
	61-79	.20	.24			
532:						
Atwell	0-2	---	---	3	6	48
	2-7	.24	.32			
	7-23	.32	.37			
	23-32	.24	.32			
	32-81	.28	.37			
Ladybird	0-2	---	---	5	6	48
	2-6	.10	.17			
	6-22	.10	.24			
	22-47	.10	.24			
	47-71	.10	.28			
533:						
Coppercreek	0-0.5	---	---	5	6	48
	0.5-3	.15	.24			
	3-13	.15	.24			
	13-41	.20	.37			
	41-62	.15	.37			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
533:						
Ahpah	0-1	---	---	3	6	48
	1-4	.10	.20			
	4-19	.20	.43			
	19-32	.15	.49			
	32-43	---	---			
	43-60	---	---			
534:						
Coppercreek	0-2	---	---	5	6	48
	2-6	.17	.20			
	6-13	.10	.20			
	13-41	.20	.32			
	41-62	.10	.32			
Ahpah	0-2	---	---	3	6	48
	2-11	.15	.20			
	11-25	.20	.32			
	25-38	.15	.43			
	38-60	---	---			
Lackscreek	0-3	---	---	2	6	48
	3-6	.10	.17			
	6-27	.10	.24			
	27-35	.05	.32			
	35-60	---	---			
535:						
Wiregrass	0-1	---	---	5	6	48
	1-5	.10	.28			
	5-11	.15	.24			
	11-41	.15	.32			
	41-67	.15	.37			
Scaath	0-2	---	---	2	6	48
	2-18	.17	.28			
	18-24	.10	.28			
	24-37	.05	.37			
	37-60	---	---			
536:						
Coppercreek	0-5	---	---	5	6	48
	5-10	.10	.20			
	10-16	.10	.28			
	16-44	.10	.28			
	44-73	.15	.37			
Ahpah	0-2	---	---	3	6	48
	2-9	.10	.20			
	9-28	.20	.43			
	28-34	.15	.49			
	34-60	---	---			
Lackscreek	0-1	---	---	2	6	48
	1-6	.10	.17			
	6-18	.05	.32			
	18-23	.10	.37			
	23-60	---	---			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
537:						
Wiregrass	0-1	---	---	5	6	48
	1-5	.17	.20			
	5-12	.10	.20			
	12-51	.20	.32			
	51-85	.10	.32			
Scaath	0-2	---	---	2	6	48
	2-18	.17	.28			
	18-24	.10	.28			
	24-37	.05	.37			
	37-60	---	---			
538:						
Wiregrass	0-1	---	---	5	6	48
	1-2	.10	.20			
	2-11	.10	.20			
	11-39	.10	.28			
	39-60	.15	.37			
Pittplace	0-7	.20	.24	5	6	48
	7-43	.28	.37			
	43-56	.17	.32			
	56-63	.17	.32			
539:						
Wiregrass	0-1	---	---	2	6	48
	1-5	.05	.20			
	5-33	.10	.28			
	33-73	.10	.28			
Scaath	0-0.5	---	---	2	6	48
	0.5-10	.10	.24			
	10-30	.05	.37			
	30-60	---	---			
541:						
Wiregrass	0-1	---	---	5	6	48
	1-5	.10	.28			
	5-17	.15	.24			
	17-41	.15	.32			
	41-67	.15	.37			
Rockysaddle	0-1	---	---	2	6	48
	1-7	.02	.20			
	7-21	.10	.32			
	21-60	.05	.32			
542:						
Coppercreek	0-1	---	---	5	6	48
	1-5	.17	.20			
	5-12	.10	.20			
	12-51	.20	.32			
	51-85	.10	.32			
Slidecreek, gravelly loam	0-2	---	---	2	6	48
	2-9	.02	.20			
	9-31	.10	.32			
	31-62	.05	.32			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
542:						
Lackscreek	0-2	---	---	2	6	48
	2-15	.10	.17			
	15-23	.10	.24			
	23-32	.05	.32			
	32-60	---	---			
543:						
Wiregrass	0-7	.10	.24	5	7	38
	7-18	.15	.28			
	18-39	.20	.32			
	39-75	.10	.32			
Rockysaddle	0-2	---	---	2	6	48
	2-6	.02	.20			
	6-14	.02	.20			
	14-44	.10	.32			
	44-61	.05	.32			
Scaath	0-1	---	---	2	6	48
	1-8	.15	.24			
	8-22	.10	.28			
	22-37	.05	.37			
	37-60	---	---			
544:						
Coppercreek	0-1	---	---	5	6	48
	1-5	.10	.28			
	5-11	.15	.24			
	11-41	.15	.32			
	41-67	.15	.37			
Tectah	0-2	---	---	5	6	48
	2-12	.20	.28			
	12-45	.24	.32			
	45-73	.32	.37			
Lackscreek	0-2	---	---	2	6	48
	2-15	.10	.17			
	15-23	.10	.24			
	23-32	.05	.32			
	32-60	---	---			
545:						
Devilscreek	0-1	---	---	5	6	48
	1-6	.10	.24			
	6-14	.28	.32			
	14-30	.20	.37			
	30-37	.15	.43			
	37-67	.17	.55			
Panthercreek	0-2	---	---	3	5	56
	2-7	.10	.20			
	7-13	.15	.28			
	13-36	.10	.32			
	36-67	.10	.32			
Coppercreek	0-1	---	---	5	6	48
	1-4	.05	.24			
	4-13	.10	.20			
	13-52	.15	.32			
	52-67	.15	.32			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
546:						
Lackscreek	0-1	---	---	2	6	48
	1-4	.10	.17			
	4-9	.05	.20			
	9-21	.05	.32			
	21-29	.10	.37			
	29-60	---	---			
Coppercreek	0-5	---	---	5	6	48
	5-10	.10	.20			
	10-16	.10	.28			
	16-44	.10	.28			
	44-73	.15	.37			
549:						
Scaath	0-2	---	---	2	6	48
	2-4	.15	.24			
	4-9	.10	.24			
	9-22	.05	.37			
	22-60	---	---			
Rockysaddle	0-2	---	---	5	6	48
	2-9	.02	.20			
	9-45	.10	.32			
	45-69	.05	.37			
Wiregrass	0-1	---	---	5	6	48
	1-9	.10	.24			
	9-26	.15	.28			
	26-46	.20	.32			
	46-71	.10	.32			
550:						
Scaath	0-2	---	---	2	6	48
	2-2	---	---			
	2-11	.15	.24			
	11-18	.15	.24			
	18-24	.05	.37			
	24-37	.05	.37			
	37-60	---	---			
Rockysaddle	0-2	---	---	2	6	48
	2-14	.02	.20			
	14-44	.10	.32			
	44-61	.05	.37			
Wiregrass	0-1	---	---	5	6	48
	1-7	.10	.24			
	7-13	.15	.28			
	13-63	.20	.32			
	63-69	.10	.32			
553:						
Ladybird	0-1	---	---	5	6	48
	1-5	.05	.20			
	5-9	.05	.20			
	9-24	.10	.20			
	24-51	.10	.24			
	51-61	.15	.32			
	61-76	.15	.32			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
553:						
Stonehill	0-1	---	---	2	6	48
	1-5	---	---			
	5-20	.24	.43			
	20-25	.24	.43			
	25-32	.17	.37			
	32-60	---	---			
554:						
Ladybird	0-6	---	---	5	6	48
	6-28	.10	.24			
	28-37	.10	.20			
	37-62	.10	.24			
	62-67	.10	.32			
Trailhead	0-5	---	---	5	6	48
	5-24	.32	.32			
	24-30	.28	.28			
	30-38	.24	.28			
	38-54	.24	.24			
	54-66	.20	.20			
555:						
Panthercreek	0-2	---	---	3	5	56
	2-7	.10	.20			
	7-16	.15	.28			
	16-34	.10	.32			
	34-89	.10	.32			
Coppercreek	0-1	---	---	5	6	48
	1-4	.05	.24			
	4-13	.10	.20			
	13-52	.15	.32			
	52-67	.15	.32			
Devilscreek	0-1	---	---	5	6	48
	1-11	.10	.24			
	11-35	.20	.37			
	35-67	.15	.43			
	67-71	.17	.55			
556:						
Rodgerpeak	0-0.5	---	---	1	6	48
	0.5-7	.10	.28			
	7-18	.28	.43			
	18-60	---	---			
Wiregrass	0-0.5	---	---	5	6	48
	0.5-10	.20	.24			
	10-14	.15	.28			
	14-59	.17	.32			
557:						
Ustic Palehumults	0-3	---	---	2	8	0
	3-7	.05	.24			
	7-13	.05	.24			
	13-20	.10	.37			
	20-57	.10	.37			
	57-91	.05	.32			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
558:						
Tectah	0-2	---	---	5	6	48
	2-26	.28	.37			
	26-51	.24	.32			
	51-63	.32	.37			
Coppercreek	0-1	---	---	5	6	48
	1-14	.20	.20			
	14-23	.20	.24			
	23-92	.20	.28			
Trailhead	0-4	.24	.28	5	6	48
	4-15	.20	.20			
	15-30	.24	.24			
	30-79	.20	.20			
559:						
Trailhead	0-1	---	---	5	6	48
	1-7	.24	.28			
	7-18	.28	.28			
	18-37	.24	.24			
	37-60	.20	.20			
560:						
Trailhead	0-1	---	---	5	6	48
	1-7	.24	.28			
	7-13	.28	.28			
	13-23	.24	.28			
	23-54	.24	.24			
	54-73	.20	.20			
561:						
Trailhead	0-1	---	---	5	6	48
	1-3	.24	.24			
	3-8	.20	.20			
	8-48	.24	.24			
	48-93	.20	.20			
562:						
Trailhead	0-1	---	---	5	6	48
	1-5	.24	.28			
	5-12	.20	.20			
	12-27	.24	.28			
	27-36	.24	.24			
	36-80	.20	.20			
Fortyfour	0-0.5	---	---	3	6	48
	0.5-12	.17	.28			
	12-30	.20	.37			
	30-39	.24	.32			
	39-60	---	---			
563:						
Trailhead	0-5	.24	.28	5	6	48
	5-13	.20	.20			
	13-43	.24	.24			
	43-60	.20	.20			
Fortyfour	0-8	.20	.28	3	6	48
	8-25	.20	.37			
	25-31	.24	.32			
	31-60	---	---			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
580:						
Coppercreek	0-5	.20	.24	5	6	48
	5-16	.24	.28			
	16-43	.24	.28			
	43-79	.24	.32			
Tectah	0-9	.20	.28	5	6	48
	9-15	.20	.28			
	15-28	.24	.32			
	28-60	.28	.28			
Slidecreek	0-3	---	---	5	6	48
	3-11	.05	.20			
	11-15	.10	.28			
	15-55	.10	.28			
	55-60	.05	.32			
581:						
Coppercreek	0-8	.24	.24	5	6	48
	8-15	.20	.28			
	15-55	.17	.32			
	55-79	.15	.32			
Slidecreek	0-7	.10	.24	5	7	38
	7-14	.10	.32			
	14-61	.10	.32			
	61-79	.05	.37			
Tectah	0-4	.20	.28	5	6	48
	4-19	.28	.32			
	19-63	.17	.28			
582:						
Slidecreek	0-8	.10	.20	5	7	38
	8-15	.10	.32			
	15-50	.10	.32			
	50-71	.05	.37			
Lackscreek	0-5	.10	.17	3	8	0
	5-17	.10	.24			
	17-39	.05	.32			
	39-79	---	---			
Coppercreek	0-7	.15	.24	5	7	38
	7-24	.17	.32			
	24-75	.15	.37			
583:						
Trailhead	0-7	.15	.24	5	7	38
	7-15	.10	.24			
	15-56	.15	.28			
	56-79	.24	.28			
Wiregrass	0-5	.24	.28	5	6	48
	5-12	.20	.20			
	12-35	.28	.32			
	35-67	.17	.32			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
584:						
Wiregrass	0-12	.20	.24	5	6	48
	12-20	.28	.28			
	20-50	.28	.32			
	50-79	.28	.28			
Pittplace	0-7	.20	.24	5	6	48
	7-43	.28	.37			
	43-56	.17	.32			
	56-63	.17	.32			
Scaath	0-4	.15	.24	2	7	38
	4-10	.17	.28			
	10-39	.15	.37			
	39-60	---	---			
585:						
Wiregrass	0-8	.20	.24	5	6	48
	8-15	.20	.28			
	15-35	.28	.28			
	35-60	.24	.28			
Rockysaddle	0-4	.10	.24	4	7	38
	4-11	.10	.24			
	11-37	.10	.28			
	37-60	.05	.28			
586:						
Wiregrass	0-8	.20	.28	5	6	48
	8-39	.20	.28			
	39-69	.28	.32			
Rockysaddle	0-4	.10	.24	4	7	38
	4-12	.05	.20			
	12-54	.10	.32			
	54-61	.05	.43			
Trailhead	0-9	.24	.28	5	6	48
	9-25	.24	.28			
	25-62	.15	.28			
	62-79	.05	.28			
587:						
Childshill	0-3	.15	.24	5	6	48
	3-9	.15	.24			
	9-35	.15	.28			
	35-65	.15	.32			
588:						
Surpur	0-7	.20	.24	5	6	48
	7-11	.15	.24			
	11-39	.24	.32			
	39-67	.28	.37			
590:						
Sasquatch	0-2	---	---	5	6	48
	2-19	.28	.32			
	19-65	.28	.32			
	65-79	.24	.28			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
590:						
Yeti	0-16	.24	.24	5	6	48
	16-37	.24	.32			
	37-51	.15	.28			
	51-60	.15	.28			
Footstep	0-15	.17	.28	2	7	38
	15-26	.10	.37			
	26-31	.10	.43			
	31-79	---	---			
591:						
Sasquatch	0-1	---	---	5	6	48
	1-17	.17	.28			
	17-46	.15	.28			
	46-56	.15	.28			
	56-79	.15	.32			
Sisterrocks	0-9	.10	.20	5	6	48
	9-16	.10	.20			
	16-41	.10	.32			
	41-67	.10	.37			
Ladybird	0-7	.10	.20	5	7	38
	7-15	.15	.28			
	15-55	.10	.24			
	55-60	.15	.32			
592:						
Sisterrocks	0-7	.10	.20	2	7	38
	7-13	.05	.28			
	13-32	.05	.24			
	32-60	.05	.32			
Ladybird	0-2	---	---	5	6	48
	2-16	.10	.20			
	16-23	.10	.20			
	23-53	.10	.24			
	53-60	.15	.32			
Footstep	0-7	.15	.28	2	7	38
	7-14	.10	.43			
	14-28	.10	.43			
	28-79	---	---			
593:						
Sasquatch	0-1	---	---	5	6	48
	1-20	.28	.32			
	20-40	.28	.32			
	40-61	.28	.32			
Yeti	0-1	---	---	5	6	48
	1-16	.20	.24			
	16-43	.24	.32			
	43-67	.28	.32			
Sisterrocks	0-2	---	---	3	6	48
	2-16	.10	.20			
	16-22	.10	.28			
	22-47	.05	.28			
	47-60	.05	.32			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
594:						
Sisterrocks	0-1	---	---	2	6	48
	1-8	.10	.24			
	8-16	.10	.32			
	16-47	.05	.28			
	47-60	.10	.32			
Sasquatch	0-2	---	---	5	6	48
	2-20	.24	.28			
	20-41	.24	.28			
	41-79	.17	.28			
Houda	0-1	---	---	4	6	48
	1-8	.15	.24			
	8-15	.15	.24			
	15-33	.10	.32			
	33-53	.10	.32			
	53-60	.05	.32			
595:						
Battery	0-13	.15	.24	5	7	38
	13-70	.15	.28			
	70-79	.24	.28			
Catchings	0-16	.05	.20	3	8	0
	16-39	.10	.28			
	39-52	.10	.28			
	52-63	.05	.28			
	63-69	.37	.49			
596:						
Flintrock	0-10	.10	.24	3	8	0
	10-19	.10	.32			
	19-31	.10	.32			
	31-38	.10	.37			
	38-63	.05	.32			
Highprairie	0-15	.17	.24	4	6	48
	15-26	.24	.28			
	26-55	.17	.28			
	55-67	.20	.32			
597:						
Tarquin	0-3	---	---	3	6	48
	3-20	.28	.32			
	20-30	.32	.37			
	30-50	.28	.32			
	50-60	.32	.37			
598:						
Ladybird	0-1	---	---	5	6	48
	1-9	.05	.20			
	9-24	.10	.20			
	24-51	.10	.24			
	51-76	.15	.32			
Stonehill	0-1	---	---	2	3	86
	1-11	.20	.37			
	11-32	.17	.37			
	32-60	---	---			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
659:						
Raingage	0-17	.15	.24	5	6	48
	17-26	.10	.28			
	26-51	.20	.32			
	51-59	.20	.32			
Pigpen	0-6	.10	.20	5	7	38
	6-14	.17	.32			
	14-32	.15	.32			
	32-59	.10	.32			
756:						
Oragran	0-1	---	---	1	6	48
	1-3	.10	.28			
	3-13	.32	.43			
	13-17	---	---			
Weitchpec	0-8	.15	.37	2	5	56
	8-30	.05	.28			
	30-35	.05	.28			
	35-39	---	---			
759:						
Jayel, extremely stony	0-1	---	---	2	6	48
	1-11	.15	.20			
	11-32	.17	.28			
	32-39	---	---			
Walnett, extremely stony	0-1	---	---	3	6	48
	1-5	.10	.20			
	5-43	.05	.28			
	43-61	.10	.32			
	61-65	---	---			
Oragran	0-1	---	---	1	6	48
	1-3	.10	.32			
	3-19	.32	.49			
	19-23	---	---			
760:						
Jayel, extremely stony	0-1	---	---	2	6	48
	1-11	.15	.24			
	11-32	.15	.28			
	32-39	---	---			
Oragran	0-1	---	---	1	6	48
	1-3	.10	.28			
	3-13	.32	.43			
	13-17	---	---			
Walnett, extremely stony	0-1	---	---	3	6	48
	1-5	.10	.24			
	5-43	.05	.28			
	43-61	.10	.32			
	61-65	---	---			
761:						
Gasquet, extremely stony	0-1	---	---	3	6	48
	1-10	.15	.24			
	10-61	.17	.28			
	61-65	---	---			

Table 17.--Erosion Properties of Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
	In					
761:						
Walnett, extremely stony--	0-1	---	---	3	6	48
	1-5	.10	.20			
	5-43	.05	.28			
	43-61	.10	.37			
	61-65	---	---			
Jayel----------	0-12	.15	.20	2	6	48
	12-39	.15	.24			
	39-60	---	---			

Table 18.--Chemical Properties of the Soils

[Soil properties are measured or inferred from direct observations in the field or laboratory. Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
100:						
Riverwash	0-20	0-1	0.0-0.5	---	5.5-7.0	0
	20-79	0-1	0.0-0.5	---	5.5-7.0	0
102:						
Fluvents	0-2	5-15	3.0-10	---	5.6-6.5	0
	2-9	10-18	3.0-10	---	5.6-6.5	0
	9-37	0-5	1.0-6.0	---	5.6-6.5	0
	37-60	0-5	1.0-4.0	---	5.6-6.5	0
110:						
Weott	0-12	18-27	16-23	---	6.1-7.3	0.0-2.0
	12-26	18-33	15-27	---	6.1-7.8	0.0-2.0
	26-60	15-35	12-27	---	6.6-8.4	0.0-2.0
116:						
Swainslough	0-3	---	73-103	---	6.6-7.3	0.0-4.0
	3-12	27-37	23-31	---	5.6-7.3	0.0-4.0
	12-20	30-45	25-36	---	5.6-7.8	0.0-4.0
	20-29	30-45	25-36	---	5.6-7.8	0.0-4.0
	29-38	30-45	25-36	---	5.6-7.8	0.0-4.0
	38-65	30-45	23-35	---	5.6-7.8	0.0-4.0
119:						
Arlynda	0-3	---	73-103	---	6.6-7.3	0.0-4.0
	3-14	25-34	21-28	---	6.1-7.3	0.0-2.0
	14-22	25-34	20-27	---	6.1-7.8	0.0-2.0
	22-63	21-39	17-31	---	6.1-7.8	0.0-2.0
126:						
Loleta	0-4	15-25	13-22	---	5.1-7.3	0
	4-14	15-25	13-22	---	5.1-7.3	0
	14-32	15-27	12-22	---	5.6-7.3	0
	32-50	15-27	12-22	---	5.6-7.3	0
	50-68	15-35	12-27	---	5.6-7.3	0
155:						
Samoa	0-1	---	73-103	---	5.6-6.5	0.0-4.0
	1-6	0-5	0.0-4.2	---	5.6-6.0	0.0-2.0
	6-18	0-1	0.0-1.0	---	5.6-6.5	0.0-2.0
	18-63	0-1	0.0-1.0	---	6.1-7.3	0.0-2.0
Clambeach	0-9	0-1	0.0-1.0	---	5.6-6.5	0.0-2.0
	9-20	0-1	0.0-1.0	---	5.6-7.3	0.0-2.0
	20-63	0-1	0.0-1.0	---	6.1-7.3	0.0-2.0
Dune land	0-72	0-1	---	---	6.6-7.3	0.0-2.0
157:						
Beaches	0-72	0-0	---	---	6.6-8.4	4.0-32.0
Samoa	0-17	0-1	0.0-1.0	---	6.1-7.3	0.0-2.0
	17-63	0-1	0.0-0.9	---	6.1-7.3	0.0-2.0
Dune land	0-72	0-1	---	---	6.6-7.3	0.0-2.0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
171:						
Worswick	0-1	---	---	50-100	4.5-5.6	0
	1-17	15-25	13-21	---	6.1-7.3	0
	17-27	10-18	8.6-16	---	6.1-7.8	0
	27-58	10-30	8.5-23	---	6.1-7.8	0
	58-62	5-20	8.5-23	---	6.1-7.8	0
Arlynda	0-1	---	---	50-100	4.5-5.6	0
	1-2	15-25	12-26	---	5.6-6.5	0
	2-15	15-25	8.0-16	---	5.6-6.5	0
	15-35	20-30	7.0-15	---	5.6-6.5	0
	35-60	10-30	4.0-22	---	5.6-6.5	0
172:						
Bigriver, fine sandy loam	0-4	5-10	4.0-13	---	5.6-6.5	0
	4-61	5-18	2.0-10	---	5.6-6.5	0
173:						
Bigriver, silt loam	0-15	5-18	4.0-13	---	5.6-6.5	0
	15-63	5-18	2.0-10	---	5.6-6.5	0
Ferndale	0-7	10-20	15-28	---	5.1-6.5	0
	7-32	18-30	10-20	---	6.1-7.3	0
	32-60	18-30	10-17	---	6.1-7.3	0
Russ	0-10	10-20	6.0-18	---	6.1-7.0	0
	10-28	10-18	5.0-9.0	---	6.1-7.0	0
	28-43	5-18	3.0-9.0	---	6.1-7.0	0
	43-60	5-18	2.0-9.0	---	5.6-7.0	0
174:						
Bigtree	0-10	15-25	10-30	---	5.1-6.0	0
	10-47	18-25	---	1-5	5.1-5.5	0
	47-57	5-18	---	1-5	5.1-5.5	0
	57-63	5-18	---	1-5	5.1-5.5	0
Mystery	0-1	---	---	50-100	4.5-5.6	0
	1-24	10-20	6.0-17	---	5.1-6.0	0
	24-30	5-20	6.0-10	---	5.1-6.0	0
	30-41	5-20	6.0-10	---	5.1-6.0	0
	41-60	0-22	5.0-12	---	5.1-6.0	0
177:						
Battery, dry	0-13	27-33	---	15-25	5.1-5.5	0
	13-70	27-35	---	7-12	5.1-5.5	0
	70-79	27-35	---	7-11	4.5-5.5	0
178:						
Battery	0-7	20-27	---	14-24	5.1-5.5	0
	7-47	27-35	---	7-12	5.1-5.5	0
	47-60	27-35	---	7-11	4.5-5.5	0
191:						
Talawa	0-12	15-20	---	7-19	5.1-5.5	0
	12-17	15-20	---	7-12	5.1-5.5	0
	17-39	10-18	5.0-11	---	5.1-6.0	0
	39-63	0-10	0.0-5.0	---	5.1-6.0	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
192:						
Aubell	0-10	27-30	---	15-25	5.1-5.5	0
	10-27	35-40	---	10-17	5.1-5.5	0
	27-39	35-45	---	10-15	4.8-5.5	0
	39-60	30-45	---	8-12	4.8-5.8	0
194:						
Tsunami	0-4	18-25	---	8-21	5.1-5.5	0
	4-18	18-27	---	8-20	5.1-5.5	0
	18-38	18-28	---	6-16	5.1-5.5	0
	38-60	18-40	---	5-12	5.1-5.5	0
220:						
Ferndale	0-11	18-27	16-23	---	6.1-7.8	0
	11-16	18-30	15-25	---	6.1-7.8	0
	16-21	18-30	15-25	---	6.1-7.8	0
	21-50	18-30	15-25	---	6.1-7.8	0
	50-60	10-30	8.6-25	---	6.1-7.8	0
222:						
Ferndale, moderately well drained	0-13	10-15	17-28	---	5.1-5.6	0
	13-17	10-20	10-25	---	5.1-6.0	0
	17-41	15-25	9.0-15	---	5.1-6.0	0
	41-51	17-25	7.0-16	---	5.1-6.0	0
	51-60	15-23	7.0-15	---	5.1-6.0	0
251:						
Surpur	0-2	---	---	50-100	4.5-5.6	0
	2-14	12-25	---	11-24	5.1-6.0	0
	14-22	20-32	---	9-22	5.1-6.0	0
	22-33	25-35	---	7-16	4.5-5.5	0
	33-79	25-35	---	6-11	4.5-5.5	0
289:						
Espa	0-3	---	---	50-100	4.5-5.6	0
	3-16	18-25	---	10-20	5.1-6.0	0
	16-47	18-35	---	5-15	4.5-5.5	0
	47-79	5-18	---	2-10	4.5-5.5	0
290:						
Surpur	0-4	---	---	50-100	4.5-5.6	0
	4-12	18-25	5.0-20	---	5.1-6.0	0
	12-41	25-35	---	7-13	4.5-5.5	0
	41-63	15-25	---	5-13	4.5-5.5	0
	63-79	0-18	---	0-10	4.5-5.5	0
Mettah	0-1	---	---	50-100	4.5-5.6	0
	1-9	27-35	---	7-16	5.1-6.0	0
	9-17	33-40	---	5-8	5.1-6.0	0
	17-58	40-60	---	3-7	5.1-5.5	0
	58-79	32-45	---	2-5	5.1-5.5	0
291:						
Ossagon	0-4	---	---	50-100	4.5-5.6	0
	4-12	18-25	---	13-23	5.1-6.0	0
	12-16	20-30	---	9-18	5.1-6.0	0
	16-48	25-32	---	7-12	4.5-5.5	0
	48-56	0-18	---	0-5	4.5-5.5	0
	56-79	0-18	---	0-5	4.5-5.5	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
291:						
Squashan	0-1	---	---	50-100	4.5-5.6	0
	1-5	15-20	---	7-22	5.1-5.5	0
	5-20	18-25	---	6-13	5.1-5.5	0
	20-33	3-15	---	1-6	5.1-5.5	0
	33-79	0-10	---	0-4	5.1-5.5	0
292:						
Ossagon	0-1	---	---	50-100	4.5-5.6	0
	1-13	18-25	---	13-23	5.1-6.0	0
	13-34	22-30	---	8-16	4.5-5.5	0
	34-54	8-25	---	3-10	4.5-5.5	0
	54-75	0-10	---	0-4	4.5-5.5	0
Squashan	0-2	---	---	50-100	4.5-5.6	0
	2-12	15-20	---	7-22	5.1-5.5	0
	12-43	18-27	---	6-14	5.1-5.5	0
	43-74	5-25	---	1-8	5.1-5.5	0
293:						
Ossagon	0-1	---	---	50-100	4.5-5.6	0
	1-15	18-25	---	13-23	5.1-6.0	0
	15-65	18-30	---	6-16	4.5-5.5	0
	65-79	0-18	---	0-6	4.5-5.5	0
Goldbluffs	0-8	15-25	15-40	---	5.1-6.0	0
	8-13	10-25	---	6-15	5.1-5.5	0
	13-25	2-17	---	6-15	4.5-5.5	0
	25-60	2-10	---	0-15	4.5-5.5	0
Squashan	0-2	---	---	50-100	4.5-5.6	0
	2-9	15-25	---	7-23	5.1-5.5	0
	9-17	15-25	---	7-23	5.1-5.5	0
	17-47	20-30	---	6-15	5.1-5.5	0
	47-65	3-20	---	1-7	5.1-5.5	0
	65-79	3-20	---	1-7	5.1-5.5	0
294:						
Ossagon	0-4	---	---	50-100	4.5-5.6	0
	4-12	18-25	---	13-23	5.1-6.0	0
	12-16	20-30	---	9-18	5.1-6.0	0
	16-48	25-32	---	7-12	4.5-5.5	0
	48-79	0-18	---	0-5	4.5-5.5	0
Goldbluffs	0-1	---	---	50-100	4.5-5.6	0
	1-10	15-25	---	10-25	5.0-5.5	0
	10-37	10-17	---	6-15	4.5-5.5	0
	37-47	2-17	---	6-15	4.5-5.5	0
	47-69	2-10	---	0-15	4.5-5.5	0
Squashan	0-1	---	---	50-100	4.5-5.6	0
	1-14	15-20	---	7-22	5.1-5.5	0
	14-37	18-25	---	6-13	5.1-5.5	0
	37-47	3-15	---	1-6	5.1-5.5	0
	47-60	0-10	---	0-4	5.0-5.5	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
462:						
Mooncreek	0-3	---	---	50-100	4.5-5.8	0
	3-8	16-23	---	9-23	4.5-5.6	0
	8-16	18-25	---	8-15	4.5-5.6	0
	16-27	23-35	---	7-16	4.5-5.4	0
	27-37	29-40	---	9-14	4.5-5.4	0
	37-50	33-40	---	10-14	4.5-5.2	0
	50-63	35-40	---	10-12	4.5-5.0	0
Noisy	0-1	---	---	50-100	4.5-5.8	0
	1-6	15-26	---	9-24	4.5-6.2	0
	6-12	18-28	---	6-16	4.5-5.2	0
	12-24	18-26	---	5-8	4.5-5.2	0
	24-61	15-26	---	4-8	4.5-5.2	0
Tossup	0-1	---	---	50-100	4.5-5.8	0
	1-8	16-26	---	9-22	4.5-5.2	0
	8-21	35-45	---	11-16	4.5-5.2	0
	21-37	35-55	---	10-17	4.5-5.4	0
	37-48	35-55	---	10-17	4.5-5.4	0
	48-79	40-55	---	10-17	4.5-5.4	0
463:						
Mooncreek	0-2	---	---	50-100	4.5-5.8	0
	2-5	20-27	---	10-19	4.5-5.6	0
	5-8	20-27	---	10-19	4.5-5.6	0
	8-16	27-35	---	10-16	4.5-5.6	0
	16-26	28-35	---	8-11	4.5-5.4	0
	26-42	30-40	---	8-11	4.5-5.4	0
	42-62	30-40	---	8-11	4.5-5.4	0
Noisy	0-2	---	---	50-100	4.5-5.8	0
	2-7	12-23	---	8-23	4.5-6.2	0
	7-12	16-23	---	9-23	4.5-6.2	0
	12-23	18-26	---	6-15	4.5-5.2	0
	23-39	27-33	---	8-15	4.5-5.2	0
	39-47	22-35	---	6-13	4.5-5.2	0
	47-63	20-26	---	5-8	4.5-5.2	0
Sidehill	0-2	---	---	50-100	4.5-5.8	0
	2-6	---	---	50-100	4.5-5.8	0
	6-10	10-18	---	8-13	4.5-5.4	0
	10-18	10-18	---	8-13	4.5-5.4	0
	18-33	10-18	---	4-8	4.5-5.4	0
	33-59	---	---	---	---	---
464:						
Mooncreek	0-2	---	---	50-100	4.5-5.8	0
	2-3	20-25	---	10-18	4.5-5.6	0
	3-6	25-35	---	10-16	4.5-5.6	0
	6-21	25-35	---	10-16	4.5-5.6	0
	21-38	27-35	---	8-11	4.5-5.4	0
	38-55	30-40	---	8-11	4.5-5.4	0
	55-79	30-40	---	8-11	4.5-5.4	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
464:						
Tossup	0-1	---	---	50-100	4.5-5.8	0
	1-4	20-28	---	10-16	4.5-6.0	0
	4-6	35-45	---	10-12	4.5-6.0	0
	6-12	35-45	---	10-14	4.5-5.4	0
	12-20	35-45	---	9-14	4.5-5.4	0
	20-41	35-45	---	9-13	4.5-5.4	0
	41-61	35-45	---	9-13	4.5-5.4	0
Noisy	0-2	---	---	50-100	4.5-5.8	0
	2-5	16-23	---	9-23	4.5-6.2	0
	5-10	18-26	---	6-15	4.5-5.2	0
	10-31	27-33	---	6-15	4.5-5.2	0
	31-51	22-26	---	5-8	4.5-5.2	0
	51-61	20-26	---	5-8	4.5-5.2	0
465:						
Sidehill	0-1	---	---	50-100	4.5-5.8	0
	1-7	18-25	---	10-15	4.5-5.4	0
	7-30	10-25	---	4-10	4.5-5.4	0
	30-59	---	---	---	---	---
Oakside	0-2	---	---	50-100	4.5-5.8	0
	2-6	11-18	17-33	---	5.6-6.2	0
	6-10	10-18	17-33	---	5.4-6.2	0
	10-59	---	---	---	---	---
Darkwoods	0-1	---	---	50-100	4.5-5.8	0
	1-7	15-25	10-27	---	4.5-6.0	0
	7-15	18-25	7.0-11	---	4.5-6.0	0
	15-25	28-35	6.0-10	---	4.5-6.0	0
	25-31	18-30	---	7-11	4.5-5.4	0
	31-44	18-25	---	5-9	4.5-5.4	0
	44-52	15-18	---	5-7	4.5-5.4	0
	52-79	5-8	---	2-4	4.5-5.4	0
473:						
Highoaks	0-1	---	---	50-100	4.5-6.4	0
	1-9	12-25	15-31	---	4.5-6.4	0
	9-20	30-35	---	10-18	4.5-5.4	0
	20-31	30-35	---	10-18	4.5-5.4	0
	31-42	40-45	---	10-13	4.5-5.4	0
	42-50	30-35	---	8-11	4.5-5.4	0
	50-63	30-35	---	8-11	4.5-5.4	0
Noisy	0-2	---	---	50-100	4.5-7.0	0
	2-5	16-23	10-20	---	4.5-7.0	0
	5-9	18-35	9.0-17	---	4.5-5.8	0
	9-24	27-35	---	10-13	4.5-5.2	0
	24-39	22-35	---	12-14	4.5-5.2	0
	39-63	20-35	---	12-14	4.5-5.2	0
Mudhorse	0-2	---	---	50-100	4.5-5.8	0
	2-5	12-25	---	8-15	4.5-6.0	0
	5-12	20-35	---	7-12	4.5-5.6	0
	12-20	28-35	---	8-11	4.5-5.6	0
	20-32	35-45	---	10-13	4.5-5.2	0
	32-51	45-50	---	12-14	4.5-5.2	0
	51-79	45-50	---	12-14	4.5-5.2	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
480:						
Dolason	0-17	15-25	---	11-22	4.5-5.5	0
	17-35	15-25	---	8-22	4.5-5.5	0
	35-59	20-30	---	5-15	4.5-5.5	0
	59-77	15-30	---	5-14	4.5-5.5	0
Countshill	0-7	18-27	---	12-22	5.1-5.5	0
	7-20	18-30	---	8-23	4.6-5.5	0
	20-28	20-27	---	9-20	4.6-5.5	0
	28-60	---	---	---	---	---
Airstrip	0-17	16-24	---	11-21	4.5-5.5	0
	17-26	20-26	---	8-18	4.5-5.5	0
	26-60	---	---	---	---	---
481:						
Dolason	0-3	---	---	50-100	4.5-5.6	0
	3-15	15-25	---	11-22	4.5-5.5	0
	15-34	15-27	---	8-22	4.5-5.5	0
	34-46	20-32	---	5-15	4.5-5.5	0
	46-78	20-32	---	5-14	4.5-5.5	0
Airstrip	0-2	---	---	50-100	4.5-5.6	0
	2-15	16-24	---	11-21	4.5-5.5	0
	15-41	20-26	---	8-18	4.5-5.5	0
	41-60	---	---	---	---	---
Countshill	0-7	18-27	---	12-22	5.1-5.5	0
	7-19	18-30	---	12-23	4.6-5.5	0
	19-23	20-27	---	9-20	4.6-5.5	0
	23-35	---	---	---	---	---
	35-60	---	---	---	---	---
482:						
Dolason	0-13	15-25	---	11-22	4.5-5.5	0
	13-21	15-25	---	8-22	4.5-5.5	0
	21-44	20-30	---	5-15	4.5-5.5	0
	44-59	20-30	---	5-14	4.5-5.5	0
Countshill	0-3	15-25	---	11-22	5.1-5.5	0
	3-24	18-30	---	12-23	4.6-5.5	0
	24-30	20-27	---	9-19	4.6-5.5	0
	30-60	---	---	---	---	---
483:						
Doolyville	0-1	---	50-100	---	5.5-6.5	0
	1-6	20-26	14-30	---	5.1-6.0	0
	6-11	27-33	12-25	---	5.1-6.0	0
	11-15	30-35	12-20	---	5.1-6.0	0
	15-18	30-35	10-17	---	5.6-8.0	0
	18-61	24-40	10-16	---	6.0-8.0	0
Pasturerock	0-1	---	50-100	---	5.5-6.5	0
	1-8	22-27	14-32	---	5.1-6.5	0
	8-17	27-35	14-30	---	5.1-6.0	0
	17-55	27-35	12-21	---	5.1-6.0	0
	55-68	30-38	10-16	---	5.6-7.0	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
484:						
Elkcamp	0-8	20-26	---	15-25	4.5-5.6	0
	8-21	23-35	---	10-23	4.5-5.6	0
	21-37	27-35	---	8-15	4.5-5.6	0
	37-49	27-35	---	7-10	4.5-5.6	0
	49-65	27-35	---	7-10	4.5-6.0	0
Dolason	0-13	15-25	---	11-22	4.5-5.5	0
	13-21	15-25	---	8-22	4.5-5.5	0
	21-44	20-30	---	5-15	4.5-5.5	0
	44-59	20-30	---	5-14	4.5-5.5	0
Airstrip	0-14	16-24	---	11-21	5.1-5.5	0
	14-31	20-26	---	8-18	5.1-5.5	0
	31-60	---	---	---	---	---
485:						
Pasturerock	0-1	---	50-100	---	5.5-6.5	0
	1-5	22-27	14-32	---	5.1-6.5	0
	5-8	27-35	14-30	---	5.1-6.0	0
	8-17	27-35	12-21	---	5.1-6.0	0
	17-35	27-35	12-21	---	5.1-6.0	0
	35-48	27-35	12-21	---	5.1-6.0	0
	48-69	27-38	10-16	---	5.6-7.0	0
Coyoterock	0-0.5	---	50-100	---	5.5-6.5	0
	0.5-8	27-30	14-30	---	5.1-6.0	0
	8-16	27-30	14-30	---	5.1-6.0	0
	16-29	30-45	---	8-16	5.1-6.0	0
	29-39	35-45	---	9-14	5.1-6.0	0
	39-60	35-50	7.0-11	---	4.5-6.0	0
Maneze	0-0.5	---	50-100	---	5.5-6.5	0
	0.5-11	22-26	---	14-24	5.1-6.0	0
	11-18	22-26	---	11-17	5.1-6.0	0
	18-44	27-32	---	9-17	5.1-6.0	0
	44-63	28-35	---	7-12	5.1-6.0	0
531:						
Atwell	0-10	23-27	12-29	---	5.6-6.5	0
	10-30	27-40	---	8-15	5.1-6.0	0
	30-71	35-50	---	8-15	5.1-6.0	0
	71-82	35-50	9.0-16	---	5.6-7.0	0
Coppercreek	0-1	---	---	50-100	4.5-5.6	0
	1-5	20-27	---	12-22	5.1-5.5	0
	5-20	25-35	---	6-15	5.1-5.5	0
	20-61	25-35	---	5-9	5.1-5.5	0
	61-79	40-50	---	8-12	4.5-5.5	0
532:						
Atwell	0-2	---	---	50-100	4.5-5.6	0
	2-7	23-27	13-29	---	5.6-6.5	0
	7-23	30-40	---	8-15	5.1-6.0	0
	23-32	35-50	---	8-15	5.1-6.0	0
	32-81	35-50	9.0-16	---	5.6-7.0	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
532:						
Ladybird	0-2	---	---	50-100	4.5-5.6	0
	2-6	27-27	---	21-24	4.5-6.0	0
	6-22	27-34	---	12-22	4.5-5.5	0
	22-47	30-40	---	10-19	4.5-5.5	0
	47-71	30-40	11-16	---	5.0-6.0	0
533:						
Coppercreek	0-0.5	---	---	50-100	4.5-5.6	0
	0.5-3	23-27	---	13-22	5.1-5.5	0
	3-13	23-30	---	6-16	5.1-5.5	0
	13-41	27-35	---	5-10	5.1-5.5	0
	41-62	27-35	---	5-8	5.1-5.5	0
Ahpah	0-1	---	---	50-100	4.5-5.6	0
	1-4	27-30	---	8-16	5.1-6.0	0
	4-19	27-32	---	6-12	5.1-6.0	0
	19-32	20-27	---	5-8	5.1-6.0	0
	32-43	---	---	---	---	---
	43-60	---	---	---	---	---
534:						
Coppercreek	0-2	---	---	50-100	4.5-5.6	0
	2-6	20-27	---	12-22	4.5-5.5	0
	6-13	25-35	---	6-17	4.5-5.5	0
	13-41	27-35	---	4-8	4.5-5.5	0
	41-62	23-35	---	5-10	4.5-5.5	0
Ahpah	0-2	---	---	50-100	4.5-5.6	0
	2-11	20-27	---	7-15	5.1-6.0	0
	11-25	22-27	---	6-12	5.1-6.0	0
	25-38	20-27	---	5-8	5.1-6.0	0
	38-60	---	---	---	---	---
Lackscreek	0-3	---	---	50-100	4.5-5.6	0
	3-6	23-27	---	9-19	5.1-6.0	0
	6-27	25-35	---	6-15	5.1-6.0	0
	27-35	27-35	---	6-12	5.1-6.0	0
	35-60	---	---	---	---	---
535:						
Wiregrass	0-1	---	---	50-100	4.5-5.6	0
	1-5	20-27	---	12-22	4.5-5.5	0
	5-11	25-35	---	6-17	4.5-5.5	0
	11-41	27-35	---	5-10	4.5-5.5	0
	41-67	23-35	---	4-8	4.5-5.5	0
Scaath	0-2	---	---	50-100	4.5-5.6	0
	2-18	23-27	---	11-21	5.1-6.0	0
	18-24	25-35	---	8-18	5.1-6.0	0
	24-37	27-35	---	8-14	5.1-6.0	0
	37-60	---	---	---	---	---
536:						
Coppercreek	0-5	---	---	50-100	4.5-5.6	0
	5-10	20-27	---	12-22	5.1-5.5	0
	10-16	27-35	---	7-17	5.1-5.5	0
	16-44	27-35	---	5-10	5.1-5.5	0
	44-73	25-35	---	5-8	4.5-5.5	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
536:						
Ahpah	0-2	---	---	50-100	4.5-5.6	0
	2-9	27-30	---	8-16	5.1-6.0	0
	9-28	27-32	---	6-12	5.1-6.0	0
	28-34	20-27	---	5-8	5.1-6.0	0
	34-60	---	---	---	---	---
Lackscreek	0-1	---	---	50-100	4.5-5.6	0
	1-6	23-27	---	9-19	5.1-6.0	0
	6-18	27-35	---	6-12	5.1-6.0	0
	18-23	20-30	---	4-8	5.1-6.0	0
	23-60	---	---	---	---	---
537:						
Wiregrass	0-1	---	---	50-100	4.5-5.6	0
	1-5	20-27	---	12-22	4.5-5.5	0
	5-12	25-35	---	6-17	4.5-5.5	0
	12-51	27-35	---	5-10	4.5-5.5	0
	51-85	23-35	---	4-8	4.5-5.5	0
Scaath	0-2	---	---	50-100	4.5-5.6	0
	2-18	23-27	---	11-21	5.1-6.0	0
	18-24	25-35	---	8-18	5.1-6.0	0
	24-37	27-35	---	8-14	5.1-6.0	0
	37-60	---	---	---	---	---
538:						
Wiregrass	0-1	---	---	50-100	4.5-5.6	0
	1-2	20-27	---	12-22	5.1-5.5	0
	2-11	27-35	---	7-17	5.1-5.5	0
	11-39	27-35	---	5-10	5.1-5.5	0
	39-60	25-35	---	5-8	4.5-5.5	0
Pittplace	0-7	27-35	---	12-19	4.5-5.5	0
	7-43	35-50	---	10-17	4.5-5.5	0
	43-56	35-50	---	9-15	4.5-5.5	0
	56-63	35-50	---	9-15	4.5-5.5	0
539:						
Wiregrass	0-1	---	---	50-100	4.5-5.6	0
	1-5	20-27	---	12-22	4.5-5.5	0
	5-33	27-35	---	5-10	4.5-5.5	0
	33-73	27-35	---	5-10	4.5-5.5	0
Scaath	0-0.5	---	---	50-100	4.5-5.6	0
	0.5-10	23-27	---	11-21	5.1-6.0	0
	10-30	27-35	---	8-14	5.1-6.0	0
	30-60	---	---	---	---	---
541:						
Wiregrass	0-1	---	---	50-100	4.5-5.6	0
	1-5	20-27	---	12-22	4.5-5.5	0
	5-17	25-35	---	6-17	4.5-5.5	0
	17-41	27-35	---	5-10	4.5-5.5	0
	41-67	23-35	---	4-8	4.5-5.5	0
Rockysaddle	0-1	---	---	50-100	4.5-5.6	0
	1-7	20-27	10-29	---	5.1-6.0	0
	7-21	27-35	---	6-13	5.1-6.0	0
	21-60	25-35	---	5-8	5.1-6.0	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
542:						
Coppercreek	0-1	---	---	50-100	4.5-5.6	0
	1-5	20-27	---	12-22	4.5-5.5	0
	5-12	25-35	---	6-17	4.5-5.5	0
	12-51	27-35	---	5-10	4.5-5.5	0
	51-85	23-35	---	4-8	4.5-5.5	0
Slidecreek, gravelly loam	0-2	---	---	50-100	4.5-5.6	0
	2-9	20-27	10-29	---	5.1-6.0	0
	9-31	27-35	---	6-13	5.1-6.0	0
	31-62	25-35	---	5-8	5.1-6.0	0
Lackscreek	0-2	---	---	50-100	4.5-5.6	0
	2-15	23-27	---	9-19	5.1-6.0	0
	15-23	25-35	---	6-15	5.1-6.0	0
	23-32	27-35	---	6-12	5.1-6.0	0
	32-60	---	---	---	---	---
543:						
Wiregrass	0-7	20-27	---	12-22	4.5-5.5	0
	7-18	25-35	---	6-17	4.5-5.5	0
	18-39	27-35	---	5-10	4.5-5.5	0
	39-75	23-35	---	4-8	4.5-5.5	0
Rockysaddle	0-2	---	---	50-100	4.5-5.6	0
	2-6	20-27	10-29	---	5.1-6.0	0
	6-14	20-27	10-29	---	5.1-6.0	0
	14-44	27-35	---	6-13	5.1-6.0	0
	44-61	25-35	---	5-8	5.1-6.0	0
Scaath	0-1	---	---	50-100	4.5-5.6	0
	1-8	23-27	---	11-21	5.1-6.0	0
	8-22	25-35	---	8-18	5.1-6.0	0
	22-37	27-35	---	8-14	5.1-6.0	0
	37-60	---	---	---	---	---
544:						
Coppercreek	0-1	---	---	50-100	4.5-5.6	0
	1-5	20-27	---	12-22	4.5-5.5	0
	5-11	25-35	---	6-17	4.5-5.5	0
	11-41	27-35	---	5-10	4.5-5.5	0
	41-67	23-35	---	4-8	4.5-5.5	0
Tectah	0-2	---	---	50-100	4.5-5.6	0
	2-12	27-35	---	12-19	4.5-5.6	0
	12-45	35-50	---	10-17	4.5-5.6	0
	45-73	35-50	---	9-15	4.5-5.6	0
Lackscreek	0-2	---	---	50-100	4.5-5.6	0
	2-15	23-27	---	9-19	5.1-6.0	0
	15-23	25-35	---	6-15	5.1-6.0	0
	23-32	27-35	---	6-12	5.1-6.0	0
	32-60	---	---	---	---	---
545:						
Devilscreek	0-1	---	---	50-100	4.5-5.6	0
	1-6	25-27	---	8-22	5.1-5.6	0
	6-14	27-35	---	7-13	5.1-5.6	0
	14-30	27-35	---	7-12	5.1-5.6	0
	30-37	15-25	---	3-7	5.1-5.6	0
	37-67	10-20	---	2-5	5.1-5.6	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
545:						
Panthercreek	0-2	---	---	50-100	4.5-5.6	0
	2-7	15-25	17-31	---	5.6-6.5	0
	7-13	15-25	10-20	---	5.6-6.5	0
	13-36	8-20	4.0-12	---	5.6-7.3	0
	36-67	8-20	4.0-12	---	5.6-7.3	0
Coppercreek	0-1	---	---	50-100	4.5-5.6	0
	1-4	20-27	---	12-22	4.5-5.5	0
	4-13	25-35	---	6-17	4.5-5.5	0
	13-52	27-35	---	5-10	4.5-5.5	0
	52-67	25-35	---	5-8	4.5-5.5	0
546:						
Lackscreek	0-1	---	---	50-100	4.5-5.6	0
	1-4	23-27	---	9-19	5.1-6.0	0
	4-9	25-35	---	6-15	5.1-6.0	0
	9-21	27-35	---	6-12	5.1-6.0	0
	21-29	20-30	---	4-8	5.1-6.0	0
	29-60	---	---	---	---	---
Coppercreek	0-5	---	---	50-100	4.5-5.6	0
	5-10	20-27	---	12-22	5.1-5.5	0
	10-16	27-35	---	7-17	5.1-5.5	0
	16-44	27-35	---	5-10	5.1-5.5	0
	44-73	25-35	---	5-8	4.5-5.5	0
549:						
Scaath	0-2	---	---	50-100	4.5-5.6	0
	2-4	23-27	---	11-21	5.1-6.0	0
	4-9	25-35	---	8-18	5.1-6.0	0
	9-22	27-35	---	8-14	5.1-6.0	0
	22-60	---	---	---	---	---
Rockysaddle	0-2	---	---	50-100	4.5-5.6	0
	2-9	20-27	10-29	---	5.1-6.0	0
	9-45	27-35	---	6-13	5.1-6.0	0
	45-69	25-35	---	5-8	5.1-6.0	0
Wiregrass	0-1	---	---	50-100	4.5-5.6	0
	1-9	20-27	---	12-22	4.5-5.5	0
	9-26	25-35	---	6-17	4.5-5.5	0
	26-46	27-35	---	5-10	4.5-5.5	0
	46-71	23-35	---	4-8	4.5-5.5	0
550:						
Scaath	0-2	---	---	50-100	4.5-5.6	0
	2-2	---	---	50-100	4.5-5.6	0
	2-11	23-27	---	11-21	5.1-6.0	0
	11-18	23-30	---	11-21	5.1-6.0	0
	18-24	27-35	---	8-14	5.1-6.0	0
	24-37	27-35	---	8-14	5.1-6.0	0
	37-60	---	---	---	---	---
Rockysaddle	0-2	---	---	50-100	4.5-5.6	0
	2-14	20-27	10-29	---	5.1-6.0	0
	14-44	27-35	---	6-13	5.1-6.0	0
	44-61	25-35	---	5-8	5.1-6.0	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
550:						
Wiregrass	0-1	---	---	50-100	4.5-5.6	0
	1-7	20-27	---	12-22	4.5-5.5	0
	7-13	25-35	---	6-17	4.5-5.5	0
	13-63	27-35	---	5-10	4.5-5.5	0
	63-69	23-35	---	4-8	4.5-5.5	0
553:						
Ladybird	0-1	---	---	50-100	4.5-5.6	0
	1-5	18-27	---	18-24	4.5-6.0	0
	5-9	27-35	---	18-24	4.5-6.0	0
	9-24	18-35	---	10-22	4.5-5.5	0
	24-51	25-35	---	8-18	4.5-5.5	0
	51-61	18-27	---	5-9	4.5-5.5	0
	61-76	18-27	---	5-9	4.5-5.5	0
Stonehill	0-1	---	---	50-100	4.5-5.6	0
	1-5	---	---	50-100	4.5-5.6	0
	5-20	12-20	---	17-22	4.5-5.0	0
	20-25	12-30	---	17-22	4.5-5.0	0
	25-32	25-35	---	12-22	4.5-5.0	0
	32-60	---	---	---	---	---
554:						
Ladybird	0-6	---	---	50-100	4.5-5.6	0
	6-28	18-27	---	18-24	4.5-6.0	0
	28-37	18-35	---	10-23	4.5-5.5	0
	37-62	25-35	---	8-18	4.5-5.5	0
	62-67	18-27	---	5-9	4.5-5.5	0
Trailhead	0-5	---	---	50-100	4.5-5.6	0
	5-24	27-32	---	7-19	5.1-5.5	0
	24-30	30-35	---	7-14	5.1-5.5	0
	30-38	35-45	---	4-8	5.1-5.5	0
	38-54	40-50	---	3-5	4.5-5.5	0
	54-66	40-60	---	3-6	4.5-5.5	0
555:						
Panthercreek	0-2	---	---	50-100	4.5-5.6	0
	2-7	15-25	17-31	---	5.6-6.5	0
	7-16	15-25	10-20	---	5.6-6.5	0
	16-34	8-20	4.0-12	---	5.6-7.3	0
	34-89	8-20	4.0-12	---	5.6-7.3	0
Coppercreek	0-1	---	---	50-100	4.5-5.6	0
	1-4	20-27	---	12-22	4.5-5.5	0
	4-13	25-35	---	6-17	4.5-5.5	0
	13-52	27-35	---	5-10	4.5-5.5	0
	52-67	25-35	---	5-8	4.5-5.5	0
Devilscreek	0-1	---	---	50-100	4.5-5.6	0
	1-11	25-27	---	8-22	5.1-5.6	0
	11-35	27-35	---	7-12	5.1-5.6	0
	35-67	15-25	---	3-7	5.1-5.6	0
	67-71	10-20	---	2-5	5.1-5.6	0
556:						
Rodgerpeak	0-0.5	---	---	50-100	4.5-5.6	0
	0.5-7	15-27	10-21	---	5.1-6.0	0
	7-18	20-30	7.0-15	---	5.1-6.0	0
	18-60	---	---	---	---	---

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
556:						
Wiregrass	0-0.5	---	---	50-100	4.5-5.6	0
	0.5-10	20-27	---	12-22	4.5-5.5	0
	10-14	25-35	---	6-17	4.5-5.5	0
	14-59	25-35	---	5-10	4.5-5.5	0
557:						
Ustic Palehumults	0-3	---	---	50-100	4.5-5.6	0
	3-7	20-27	10-29	---	5.1-6.0	0
	7-13	20-27	10-29	---	5.1-6.0	0
	13-20	15-30	8.0-15	---	5.1-6.0	0
	20-57	27-35	8.0-15	---	5.1-6.0	0
	57-91	25-35	6.0-11	---	5.1-6.0	0
558:						
Tectah	0-2	---	---	50-100	4.5-5.6	0
	2-26	27-35	---	16-19	4.5-5.6	0
	26-51	35-50	---	10-17	4.5-5.6	0
	51-63	35-50	---	9-15	4.5-5.6	0
Coppercreek	0-1	---	---	50-100	4.5-5.6	0
	1-14	20-27	---	12-22	4.5-5.5	0
	14-23	27-35	---	7-17	4.5-5.5	0
	23-92	27-35	---	5-10	4.5-5.5	0
Trailhead	0-4	27-32	---	7-19	5.1-5.5	0
	4-15	30-35	---	7-14	5.1-5.5	0
	15-30	40-50	---	3-5	4.5-5.5	0
	30-79	40-60	---	3-6	4.5-5.5	0
559:						
Trailhead	0-1	---	---	50-100	4.5-5.6	0
	1-7	27-32	---	7-19	5.1-5.5	0
	7-18	30-35	---	7-14	5.1-5.5	0
	18-37	40-50	---	3-5	4.5-5.5	0
	37-60	40-60	---	3-6	4.5-5.5	0
560:						
Trailhead	0-1	---	---	50-100	4.5-5.6	0
	1-7	27-32	---	7-19	5.1-5.5	0
	7-13	30-35	---	7-14	5.1-5.5	0
	13-23	35-45	---	4-8	5.1-5.5	0
	23-54	40-50	---	3-5	4.5-5.5	0
	54-73	40-60	---	3-6	4.5-5.5	0
561:						
Trailhead	0-1	---	---	50-100	4.5-5.6	0
	1-3	25-26	---	7-19	5.1-5.5	0
	3-8	30-35	---	7-14	5.1-5.5	0
	8-48	40-50	---	3-5	4.5-5.5	0
	48-93	40-60	---	3-6	4.5-5.5	0
562:						
Trailhead	0-1	---	---	50-100	4.5-5.6	0
	1-5	27-32	---	7-19	5.1-5.5	0
	5-12	30-35	---	7-14	5.1-5.5	0
	12-27	35-45	---	4-8	5.1-5.5	0
	27-36	40-50	---	3-5	4.5-5.5	0
	36-80	40-60	---	3-6	4.5-5.5	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
562:						
Fortyfour	0-0.5	---	---	50-100	4.5-5.6	0
	0.5-12	27-35	---	5-13	4.5-5.5	0
	12-30	40-50	---	3-7	4.5-5.5	0
	30-39	40-50	---	3-5	4.5-5.5	0
	39-60	---	---	---	---	---
563:						
Trailhead	0-5	27-32	---	7-19	5.1-5.5	0
	5-13	30-35	---	7-14	5.1-5.5	0
	13-43	40-50	---	3-5	4.5-5.5	0
	43-60	40-60	---	3-6	4.5-5.5	0
Fortyfour	0-8	27-35	---	5-13	4.5-5.5	0
	8-25	40-50	---	3-7	4.5-5.5	0
	25-31	40-50	---	3-5	4.5-5.5	0
	31-60	---	---	---	---	---
580:						
Coppercreek	0-5	20-27	---	12-22	4.5-5.5	0
	5-16	25-35	---	6-17	4.5-5.5	0
	16-43	27-35	---	5-10	4.5-5.5	0
	43-79	27-35	---	5-10	4.5-5.5	0
Tectah	0-9	27-35	---	12-19	4.5-5.6	0
	9-15	35-50	---	12-20	4.5-5.6	0
	15-28	35-50	---	10-17	4.5-5.6	0
	28-60	35-50	---	9-15	4.5-5.6	0
Slidecreek	0-3	---	---	50-100	4.5-5.6	0
	3-11	20-27	---	7-22	4.5-5.5	0
	11-15	27-35	---	6-17	4.5-5.5	0
	15-55	27-35	---	6-13	4.5-5.5	0
	55-60	25-40	---	5-9	4.5-5.5	0
581:						
Coppercreek	0-8	20-27	---	12-22	4.5-5.5	0
	8-15	25-35	---	6-17	4.5-5.5	0
	15-55	27-35	---	5-10	4.5-5.5	0
	55-79	23-35	---	4-8	4.5-5.5	0
Slidecreek	0-7	20-27	---	7-22	5.1-6.0	0
	7-14	23-35	---	8-17	4.5-5.5	0
	14-61	27-35	---	6-13	4.5-5.5	0
	61-79	27-35	---	5-8	4.5-5.5	0
Tectah	0-4	22-27	---	11-17	4.5-5.6	0
	4-19	35-45	---	10-15	4.5-5.6	0
	19-63	35-45	---	9-14	4.5-5.6	0
582:						
Slidecreek	0-8	20-27	---	7-22	5.1-6.0	0
	8-15	27-35	---	8-17	4.5-5.5	0
	15-50	27-35	---	6-13	4.5-5.5	0
	50-71	20-35	---	4-8	4.5-5.5	0
Lackscreek	0-5	23-27	---	9-19	5.1-6.0	0
	5-17	25-35	---	6-15	5.1-6.0	0
	17-39	26-35	---	6-12	5.1-6.0	0
	39-79	---	---	---	---	---

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
582:						
Coppercreek	0-7	20-27	---	12-22	4.5-5.5	0
	7-24	27-35	---	5-13	4.5-5.5	0
	24-75	27-40	---	5-9	4.5-5.5	0
583:						
Trailhead	0-7	20-27	---	7-19	4.5-5.5	0
	7-15	27-40	---	7-15	4.5-5.5	0
	15-56	35-60	---	3-10	4.5-5.5	0
	56-79	35-60	---	3-6	4.5-5.5	0
Wiregrass	0-5	20-27	---	12-22	4.5-5.5	0
	5-12	25-35	---	6-17	4.5-5.5	0
	12-35	27-35	---	5-10	4.5-5.5	0
	35-67	27-40	---	5-10	4.5-5.5	0
584:						
Wiregrass	0-12	20-27	---	12-22	5.1-5.5	0
	12-20	20-35	---	6-17	4.5-5.5	0
	20-50	25-35	---	5-10	4.5-5.5	0
	50-79	30-40	---	6-9	4.5-5.5	0
Pittplace	0-7	27-35	---	12-19	4.5-5.5	0
	7-43	35-50	---	10-17	4.5-5.5	0
	43-56	35-50	---	9-15	4.5-5.5	0
	56-63	35-50	---	9-15	4.5-5.5	0
Scaath	0-4	23-27	---	11-21	4.5-5.5	0
	4-10	25-35	---	8-18	4.5-5.5	0
	10-39	27-35	---	8-14	4.5-5.5	0
	39-60	---	---	---	---	---
585:						
Wiregrass	0-8	20-27	---	12-22	4.5-5.5	0
	8-15	25-35	---	6-17	4.5-5.5	0
	15-35	25-35	---	5-10	4.5-5.5	0
	35-60	25-35	---	5-8	4.5-5.5	0
Rockysaddle	0-4	20-27	---	7-22	4.5-5.5	0
	4-11	20-35	---	7-17	4.5-5.5	0
	11-37	25-35	---	6-13	4.5-5.5	0
	37-60	30-40	---	6-9	4.0-5.5	0
586:						
Wiregrass	0-8	20-27	---	12-22	5.0-6.5	0
	8-39	27-35	---	7-17	4.5-5.5	0
	39-69	27-40	---	5-11	4.5-5.5	0
Rockysaddle	0-4	20-27	---	12-22	4.5-5.5	0
	4-12	27-35	---	7-17	4.5-5.5	0
	12-54	27-40	---	5-11	4.5-5.5	0
	54-61	27-35	---	5-8	4.5-5.5	0
Trailhead	0-9	20-27	---	3-12	5.1-5.5	0
	9-25	38-50	---	3-5	4.5-5.5	0
	25-62	40-60	---	3-6	4.5-5.5	0
	62-79	40-60	---	3-5	4.5-5.5	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
587:						
Childshill	0-3	20-27	12-25	---	5.1-6.0	0
	3-9	20-27	12-25	---	5.1-6.0	0
	9-35	27-35	---	5-13	4.5-5.5	0
	35-65	25-35	---	5-10	4.5-5.5	0
588:						
Surpur	0-7	18-25	---	11-22	5.1-6.0	0
	7-11	20-30	---	5-12	4.5-5.5	0
	11-39	25-32	---	6-9	4.5-5.5	0
	39-67	20-32	---	4-8	4.5-5.5	0
590:						
Sasquatch	0-2	---	---	50-100	4.5-5.6	0
	2-19	20-27	---	13-24	5.0-5.5	0
	19-65	27-35	---	9-18	4.5-5.5	0
	65-79	27-40	---	7-14	4.5-5.5	0
Yeti	0-16	25-27	---	10-20	4.5-5.5	0
	16-37	35-50	---	12-22	4.5-5.5	0
	37-51	35-45	---	11-17	4.5-5.5	0
	51-60	35-50	---	9-15	4.5-5.5	0
Footstep	0-15	18-27	---	12-27	4.5-5.5	0
	15-26	23-35	---	10-23	4.5-5.5	0
	26-31	23-35	---	10-18	4.5-5.5	0
	31-79	---	---	---	---	---
591:						
Sasquatch	0-1	---	---	50-100	4.5-5.6	0
	1-17	20-27	---	12-21	4.5-6.0	0
	17-46	27-35	---	8-18	4.5-5.5	0
	46-56	27-35	---	8-18	4.5-5.5	0
	56-79	27-40	---	7-12	4.5-5.5	0
Sisterrocks	0-9	20-27	---	10-24	4.5-6.0	0
	9-16	27-32	---	10-24	4.5-6.0	0
	16-41	27-35	---	9-18	4.5-5.5	0
	41-67	27-35	---	7-11	4.5-5.5	0
Ladybird	0-7	18-27	---	18-24	4.5-6.0	0
	7-15	18-35	---	10-23	4.5-5.5	0
	15-55	25-35	---	8-18	4.5-5.5	0
	55-60	18-27	---	5-9	4.5-5.5	0
592:						
Sisterrocks	0-7	20-27	---	11-24	4.5-5.5	0
	7-13	20-30	---	7-16	4.5-5.5	0
	13-32	27-35	---	8-14	4.5-5.5	0
	32-60	23-35	---	6-11	4.5-5.5	0
Ladybird	0-2	---	---	50-100	4.5-5.6	0
	2-16	18-27	---	18-24	4.5-6.0	0
	16-23	18-35	---	10-23	4.5-5.5	0
	23-53	25-35	---	8-18	4.5-5.5	0
	53-60	18-27	---	5-9	4.5-5.5	0
Footstep	0-7	18-27	---	12-27	4.5-5.5	0
	7-14	23-35	---	10-23	4.5-5.5	0
	14-28	23-35	---	10-18	4.5-5.5	0
	28-79	---	---	---	---	---

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
593:						
Sasquatch	0-1	---	---	50-100	4.5-5.6	0
	1-20	20-27	---	14-24	5.0-5.5	0
	20-40	27-35	---	9-18	4.5-5.5	0
	40-61	27-40	---	7-14	4.5-5.5	0
Yeti	0-1	---	---	50-100	4.5-5.6	0
	1-16	27-33	---	12-22	4.5-5.5	0
	16-43	35-45	---	11-20	4.5-5.5	0
	43-67	30-50	---	9-15	4.5-5.5	0
Sisterrocks	0-2	---	---	50-100	4.5-5.6	0
	2-16	20-27	---	10-24	4.5-5.5	0
	16-22	20-30	---	7-16	4.5-5.5	0
	22-47	27-35	---	8-16	4.5-5.5	0
	47-60	27-35	---	7-11	4.5-5.5	0
594:						
Sisterrocks	0-1	---	---	50-100	4.5-5.6	0
	1-8	20-27	---	10-24	4.5-5.5	0
	8-16	20-30	---	7-16	4.5-5.5	0
	16-47	27-35	---	8-16	4.5-5.5	0
	47-60	23-35	---	6-11	4.5-5.5	0
Sasquatch	0-2	---	---	50-100	4.5-5.6	0
	2-20	20-27	---	12-21	4.5-6.0	0
	20-41	27-35	---	8-18	4.5-5.5	0
	41-79	27-40	---	7-12	4.5-5.5	0
Houda	0-1	---	---	50-100	4.5-5.6	0
	1-8	20-27	14-30	---	5.6-6.5	0
	8-15	28-32	14-30	---	5.6-6.5	0
	15-33	28-35	11-22	---	5.6-6.5	0
	33-53	28-35	10-16	---	5.6-6.5	0
	53-60	28-35	10-16	---	5.6-7.0	0
595:						
Battery	0-13	27-33	---	14-23	5.1-5.5	0
	13-70	27-35	---	5-9	5.1-5.5	0
	70-79	27-35	---	5-8	4.5-5.5	0
Catchings	0-16	20-26	---	7-22	5.1-5.5	0
	16-39	23-33	---	5-13	4.5-5.5	0
	39-52	10-20	---	5-13	4.5-5.5	0
	52-63	5-20	---	1-5	4.5-5.5	0
	63-69	10-25	---	1-5	4.5-5.5	0
596:						
Flintrock	0-10	27-32	14-29	---	5.6-6.5	0
	10-19	27-35	15-25	---	5.6-6.5	0
	19-31	27-35	15-25	---	5.6-6.5	0
	31-38	27-35	12-20	---	5.6-6.5	0
	38-63	27-40	12-17	---	5.6-6.5	0
Highprairie	0-15	27-32	14-29	---	5.6-6.5	0
	15-26	27-35	15-26	---	5.6-6.5	0
	26-55	27-35	12-22	---	5.6-6.5	0
	55-67	27-40	9.0-15	---	5.6-6.5	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
597:						
Tarquin	0-3	---	---	50-85	4.5-5.6	0
	3-20	20-27	---	10-24	5.0-5.5	0
	20-30	27-35	---	8-18	4.5-5.0	0
	30-50	35-40	---	10-16	4.5-5.0	0
	50-60	30-40	---	8-13	4.5-5.0	0
598:						
Ladybird	0-1	---	---	50-100	4.5-5.6	0
	1-9	18-27	---	18-24	4.5-6.0	0
	9-24	18-35	---	10-23	4.5-5.5	0
	24-51	25-35	---	8-18	4.5-5.5	0
	51-76	18-27	---	5-9	4.5-5.5	0
Stonehill	0-1	---	---	50-100	4.5-5.6	0
	1-11	12-20	---	17-22	4.5-5.0	0
	11-32	25-35	---	12-22	4.5-5.0	0
	32-60	---	---	---	---	---
659:						
Raingage	0-17	20-26	---	14-25	5.1-5.5	0
	17-26	25-32	---	10-22	5.1-6.0	0
	26-51	30-35	---	10-15	5.1-6.0	0
	51-59	33-35	12-15	---	6.1-7.8	0
Pigpen	0-6	20-26	18-32	---	5.1-6.0	0
	6-14	27-35	---	12-23	5.1-6.0	0
	14-32	30-35	---	9-15	5.1-5.6	0
	32-59	30-35	11-15	---	6.1-7.8	0
756:						
Oragran	0-1	---	---	50-100	4.5-5.6	0
	1-3	20-27	15-25	---	5.6-7.0	0
	3-13	15-35	10-15	---	5.6-7.0	0
	13-17	---	---	---	---	0
Weitchpec	0-8	15-20	15-20	---	5.6-6.5	0
	8-30	15-35	15-22	---	5.6-6.5	0
	30-35	15-35	15-22	---	5.6-6.5	0
	35-39	---	---	---	---	0
759:						
Jayel, extremely stony	0-1	---	---	50-100	4.5-5.6	0
	1-11	27-35	11-15	---	6.1-7.0	0
	11-32	35-45	12-16	---	6.1-7.0	0
	32-39	---	---	---	---	0
Walnett, extremely stony	0-1	---	---	50-100	4.5-5.6	0
	1-5	22-27	9.0-12	---	5.6-6.6	0
	5-43	27-35	10-14	---	5.6-6.6	0
	43-61	25-35	7.0-10	---	5.6-6.6	0
	61-65	---	---	---	---	0
Oragran	0-1	---	---	50-100	4.5-5.6	0
	1-3	20-27	15-25	---	5.6-7.0	0
	3-19	23-35	10-15	---	5.6-7.0	0
	19-23	---	---	---	---	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Cation-exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	In	*Pct*	*meq/100g*	*meq/100g*	*pH*	*dS/m*
760:						
Jayel, extremely stony-----	0-1	---	---	50-100	4.5-5.6	0
	1-11	27-35	11-15	---	6.1-7.0	0
	11-32	35-45	12-16	---	6.1-7.0	0
	32-39	---	---	---	---	0
Oragran-----	0-1	---	---	50-100	4.5-5.6	0
	1-3	20-27	15-25	---	5.6-7.0	0
	3-13	15-35	10-15	---	5.6-7.0	0
	13-17	---	---	---	---	0
Walnett, extremely stony---	0-1	---	---	50-100	4.5-5.6	0
	1-5	22-27	9.0-13	---	5.6-6.6	0
	5-43	27-35	10-14	---	5.6-6.6	0
	43-61	25-35	7.0-10	---	5.6-6.6	0
	61-65	---	---	---	---	0
761:						
Gasquet, extremely stony---	0-1	---	---	50-100	4.5-5.6	0
	1-10	23-27	9.0-12	---	5.6-6.5	0
	10-61	35-45	11-17	---	6.1-7.3	0
	61-65	---	---	---	---	0
Walnett, extremely stony---	0-1	---	---	50-100	4.5-5.6	0
	1-5	22-27	9.0-12	---	5.6-6.6	0
	5-43	27-35	10-14	---	5.6-6.6	0
	43-61	25-35	7.0-10	---	5.6-6.6	0
	61-65	---	---	---	---	0
Jayel-----	0-12	30-40	11-15	---	6.1-7.0	0
	12-39	35-45	12-16	---	6.1-7.0	0
	39-60	---	---	---	---	0

Table 19.--Soil Features

[See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
100:						
Riverwash	---	---	---	None	Low	Moderate
102:						
Fluvents	---	---	---	None	Low	Moderate
110:						
Weott	---	---	---	None	High	Low
116:						
Swainslough	---	---	---	None	High	Low
119:						
Arlynda	---	---	---	None	High	Low
126:						
Loleta	---	---	---	None	High	Moderate
155:						
Samoa	---	---	---	None	Low	Moderate
Clambeach	---	---	---	None	High	Moderate
Dune land	---	---	---	None	Low	Low
157:						
Beaches	---	---	---	None	Low	Low
Samoa	---	---	---	None	High	Moderate
Dune land	---	---	---	None	Low	Low
171:						
Worswick	---	---	---	None	High	Low
Arlynda	---	---	---	None	High	Low
172:						
Bigriver, fine sandy loam	---	---	---	None	Low	Low
173:						
Bigriver, silt loam	---	---	---	None	Low	Low
Ferndale	---	---	---	Low	Moderate	Low
Russ	---	---	---	None	Low	Moderate
174:						
Bigtree	---	---	---	None	Low	Moderate
Mystery	---	---	---	None	Moderate	Moderate
177:						
Battery, dry	---	---	---	None	Moderate	Moderate
178:						
Battery	---	---	---	None	Moderate	Moderate

Table 19.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
191:						
Talawa	---	---	---	None	Moderate	Moderate
192:						
Aubell	---	---	---	None	High	Moderate
194:						
Tsunami	---	---	---	None	Low	Moderate
220:						
Ferndale	---	---	---	None	Low	Low
222:						
Ferndale, moderately well drained	---	---	---	Moderate	Moderate	Moderate
251:						
Surpur	---	---	---	Low	Moderate	High
289:						
Espa	---	---	---	None	Moderate	Moderate
290:						
Surpur	---	---	---	None	Moderate	Moderate
Mettah	---	---	---	None	High	Moderate
291:						
Ossagon	---	---	---	None	Moderate	High
Squashan	---	---	---	None	Low	High
292:						
Ossagon	---	---	---	None	Moderate	High
Squashan	---	---	---	None	Moderate	Moderate
293:						
Ossagon	---	---	---	None	Low	High
Goldbluffs	---	---	---	None	Low	Moderate
Squashan	---	---	---	None	Moderate	Moderate
294:						
Ossagon	---	---	---	None	Low	High
Goldbluffs	---	---	---	None	Low	Moderate
Squashan	---	---	---	None	Low	Moderate
462:						
Mooncreek	---	---	---	Moderate	Moderate	Moderate
Noisy	---	---	---	Moderate	Low	High
Tossup	---	---	---	Moderate	Moderate	High
463:						
Mooncreek	---	---	---	Moderate	Moderate	Moderate
Noisy	---	---	---	Moderate	Moderate	High

Table 19.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
463:						
Sidehill	Lithic bedrock	20-39	Strongly cemented	Moderate	Low	High
464:						
Mooncreek	---	---	---	Moderate	Moderate	Moderate
Tossup	---	---	---	Moderate	Moderate	Moderate
Noisy	---	---	---	Moderate	Moderate	High
Sidehill	Lithic bedrock	20-39	Strongly cemented	Moderate	Low	High
Oakside	Lithic bedrock	10-20	Strongly cemented	Moderate	Low	Moderate
Darkwoods	---	---	---	Moderate	Low	Moderate
473:						
Highoaks	---	---	---	None	Moderate	High
Noisy	---	---	---	None	Moderate	Moderate
Mudhorse	---	---	---	None	High	Moderate
480:						
Dolason	---	---	---	Moderate	Low	Moderate
Countshill	Paralithic bedrock	20-36	Moderately cemented	Moderate	Low	Moderate
Airstrip	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
481:						
Dolason	---	---	---	None	Low	Moderate
Airstrip	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Countshill	Paralithic bedrock	20-35	Moderately cemented	None	Low	Moderate
	Lithic bedrock	35-40	Indurated			
482:						
Dolason	---	---	---	Moderate	Low	Moderate
Countshill	Paralithic bedrock	24-35	Moderately cemented	Moderate	Low	Moderate
483:						
Doolyville	---	---	---	Moderate	High	Low
Pasturerock	---	---	---	Moderate	Moderate	Moderate
484:						
Elkcamp	---	---	---	Moderate	Moderate	Moderate
Dolason	---	---	---	Moderate	Low	Moderate
Airstrip	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate

Table 19.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
485:						
Pasturerock	---	---	---	Moderate	Moderate	Moderate
Coyoterock	---	---	---	Moderate	High	Moderate
Maneze	---	---	---	Moderate	Moderate	Moderate
531:						
Atwell	---	---	---	None	High	Moderate
Coppercreek	---	---	---	None	Moderate	Moderate
532:						
Atwell	---	---	---	None	High	Moderate
Ladybird	---	---	---	None	Moderate	Moderate
533:						
Coppercreek	---	---	---	None	Moderate	Moderate
Ahpah	Paralithic bedrock	20-39	Moderately cemented	None	Moderate	Moderate
	Lithic bedrock	39-60	Indurated			
534:						
Coppercreek	---	---	---	None	Moderate	Moderate
Ahpah	Paralithic bedrock	20-39	Moderately cemented	None	Low	Moderate
Lackscreek	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
535:						
Wiregrass	---	---	---	None	Moderate	Moderate
Scaath	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
536:						
Coppercreek	---	---	---	None	Moderate	Moderate
Ahpah	Paralithic bedrock	20-39	Moderately cemented	None	Moderate	Moderate
Lackscreek	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
537:						
Wiregrass	---	---	---	None	Moderate	Moderate
Scaath	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
538:						
Wiregrass	---	---	---	None	Moderate	Moderate
Pittplace	---	---	---	None	Moderate	High
539:						
Wiregrass	---	---	---	None	Moderate	Moderate
Scaath	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
541:						
Wiregrass	---	---	---	None	Moderate	Moderate

Table 19.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
541:						
Rockysaddle	---	---	---	None	Moderate	Moderate
542:						
Coppercreek	---	---	---	None	Moderate	Moderate
Slidecreek, gravelly loam	---	---	---	None	Moderate	Moderate
Lackscreek	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
543:						
Wiregrass	---	---	---	None	Moderate	Moderate
Rockysaddle	---	---	---	None	Moderate	Moderate
Scaath	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
544:						
Coppercreek	---	---	---	None	Moderate	Moderate
Tectah	---	---	---	None	High	High
Lackscreek	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
545:						
Devilscreek	---	---	---	None	High	Moderate
Panthercreek	---	---	---	None	Low	Low
Coppercreek	---	---	---	None	Moderate	Moderate
546:						
Lackscreek	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
Coppercreek	---	---	---	None	Moderate	Moderate
549:						
Scaath	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
Rockysaddle	---	---	---	None	Moderate	Moderate
Wiregrass	---	---	---	None	Moderate	Moderate
550:						
Scaath	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
Rockysaddle	---	---	---	None	Moderate	Moderate
Wiregrass	---	---	---	None	Moderate	Moderate
553:						
Ladybird	---	---	---	None	Moderate	Moderate
Stonehill	Lithic bedrock	20-40	Indurated	None	Low	High
554:						
Ladybird	---	---	---	None	Low	Moderate
Trailhead	---	---	---	None	Moderate	Moderate
555:						
Panthercreek	---	---	---	None	Low	Low

Table 19.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
555:						
Coppercreek	---	---	---	None	Moderate	Moderate
Devilscreek	---	---	---	None	High	Moderate
556:						
Rodgerpeak	Lithic bedrock	14-20	Indurated	None	Low	Moderate
Wiregrass	---	---	---	None	Moderate	Moderate
557:						
Ustic Palehumults	---	---	---	None	Moderate	Moderate
558:						
Tectah	---	---	---	None	Moderate	Moderate
Coppercreek	---	---	---	None	Moderate	Moderate
Trailhead	---	---	---	None	High	Moderate
559:						
Trailhead	---	---	---	None	High	Moderate
560:						
Trailhead	---	---	---	None	High	Moderate
561:						
Trailhead	---	---	---	None	High	Moderate
562:						
Trailhead	---	---	---	None	High	Moderate
Fortyfour	Paralithic bedrock	20-40	Moderately cemented	None	High	Moderate
563:						
Trailhead	---	---	---	None	High	Moderate
Fortyfour	Paralithic bedrock	20-40	Moderately cemented	None	High	Moderate
580:						
Coppercreek	---	---	---	None	Moderate	High
Tectah	---	---	---	None	Moderate	High
Slidecreek	---	---	---	None	Moderate	High
581:						
Coppercreek	---	---	---	None	Moderate	High
Slidecreek	---	---	---	None	Moderate	High
Tectah	---	---	---	None	High	High
582:						
Slidecreek	---	---	---	None	Moderate	High
Lackscreek	Lithic bedrock	20-40	Indurated	None	Moderate	Moderate
Coppercreek	---	---	---	None	Moderate	High

Table 19.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
583:						
Trailhead	---	---	---	None	High	High
Wiregrass	---	---	---	None	Moderate	High
584:						
Wiregrass	---	---	---	None	Moderate	High
Pittplace	---	---	---	None	Moderate	High
Scaath	Lithic bedrock	20-40	Indurated	None	Moderate	High
585:						
Wiregrass	---	---	---	None	Moderate	High
Rockysaddle	---	---	---	None	Moderate	High
586:						
Wiregrass	---	---	---	None	Moderate	Moderate
Rockysaddle	---	---	---	None	Moderate	High
Trailhead	---	---	---	None	High	High
587:						
Childshill	---	---	---	None	Moderate	High
588:						
Surpur	---	---	---	None	Moderate	High
590:						
Sasquatch	---	---	---	None	Moderate	Moderate
Yeti	---	---	---	None	Moderate	High
Footstep	Lithic bedrock	20-39	Indurated	None	Moderate	High
591:						
Sasquatch	---	---	---	None	Moderate	Moderate
Sisterrocks	---	---	---	None	Moderate	High
Ladybird	---	---	---	None	Moderate	Moderate
592:						
Sisterrocks	---	---	---	None	Moderate	High
Ladybird	---	---	---	None	Moderate	Moderate
Footstep	Lithic bedrock	20-40	Indurated	None	Moderate	High
593:						
Sasquatch	---	---	---	None	Moderate	High
Yeti	---	---	---	None	Moderate	High
Sisterrocks	---	---	---	None	Moderate	High
594:						
Sisterrocks	---	---	---	None	Moderate	High
Sasquatch	---	---	---	None	Moderate	High

Table 19.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
594:						
Houda	---	---	---	None	Moderate	Moderate
595:						
Battery	---	---	---	None	Moderate	Moderate
Catchings	---	---	---	None	Low	High
596:						
Flintrock	---	---	---	None	Moderate	Moderate
Highprairie	---	---	---	None	Moderate	Moderate
597:						
Tarquin	---	---	---	None	High	High
598:						
Ladybird	---	---	---	None	Moderate	Moderate
Stonehill	Lithic bedrock	20-40	Indurated	None	Moderate	High
659:						
Raingage	---	---	---	None	High	Moderate
Pigpen	---	---	---	None	High	Moderate
756:						
Oragran	Lithic bedrock	10-20	Very strongly cemented	Low	Low	Moderate
Weitchpec	Lithic bedrock	20-40	Very strongly cemented	Low	Low	Moderate
759:						
Jayel, extremely stony	Lithic bedrock	20-39	Very strongly cemented	Low	High	Low
Walnett, extremely stony	Lithic bedrock	60-79	Very strongly cemented	Low	Moderate	Low
Oragran	Lithic bedrock	10-20	Very strongly cemented	Low	Low	Moderate
760:						
Jayel, extremely stony	Lithic bedrock	20-39	Very strongly cemented	Low	High	Low
Oragran	Lithic bedrock	10-20	Very strongly cemented	Low	Low	Moderate
Walnett, extremely stony	Lithic bedrock	60-79	Very strongly cemented	Low	Moderate	Low
761:						
Gasquet, extremely stony	Lithic bedrock	60-79	Very strongly cemented	Low	Moderate	Low
Walnett, extremely stony	Lithic bedrock	60-79	Very strongly cemented	Low	Moderate	Low
Jayel	Lithic bedrock	20-39	Very strongly cemented	Low	High	Low

Table 20.--Water Features

[Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
100:									
Riverwash	A/D								
		Jan-Apr	0.0-3.3	>6.0	---	---	None	Very long	Frequent
		May-Jul	1.6-4.9	>6.0	---	---	None	Very long	Frequent
		Aug-Sept	1.6-4.9	>6.0	---	---	None	---	---
		October	1.6-4.9	>6.0	---	---	None	Very long	Frequent
		Nov-Dec	0.0-3.3	>6.0	---	---	None	Very long	Frequent
102:									
Fluvents	A/D								
		Jan-Apr	0.0	5.0-5.0	---	---	None	Brief	Frequent
		May	0.8-3.3	---	---	---	None	---	---
		Jun-Oct	2.5-5.0	5.0-5.0	---	---	None	---	---
		Nov-Dec	0.0	5.0-5.0	---	---	None	Brief	Frequent
110:									
Weott	B/D								
		Jan-Feb	0.0-0.3	>6.0	0.0-0.5	Long	Frequent	Brief	Occasional
		March	0.0-0.3	>6.0	0.0-0.5	Long	Frequent	---	---
		April	0.5-2.0	>6.0	---	---	---	---	---
		May-Jun	1.0-3.0	>6.0	---	---	---	---	---
		Jul-Nov	3.0-5.0	>6.0	---	---	---	---	---
		December	0.5-2.0	>6.0	---	---	---	Brief	Occasional
116:									
Swainslough	C/D								
		Jan-Feb	0.0-0.3	>6.0	0.0-0.5	Long	Frequent	Brief	Occasional
		March	0.0-0.3	>6.0	0.0-0.5	Long	Frequent	---	---
		April	0.5-2.0	>6.0	---	---	---	---	---
		May-Jun	1.0-3.0	>6.0	---	---	---	---	---
		Jul-Nov	3.0-5.4	>6.0	---	---	---	---	---
		December	0.5-2.0	>6.0	0.0-0.5	Long	Frequent	Brief	Occasional
119:									
Arlynda	C/D								
		Jan-Feb	0.0-0.3	>6.0	0.0-2.0	Long	Frequent	Brief	Occasional
		Mar-Apr	0.0-0.3	>6.0	0.0-2.0	Long	Frequent	---	---
		May	0.5-3.0	>6.0	---	---	---	---	---
		Jun-Jul	1.0-3.0	>6.0	---	---	---	---	---
		Aug-Nov	3.0-5.2	>6.0	---	---	---	---	---
		December	0.0-0.5	>6.0	0.0-2.0	Long	Frequent	Brief	Occasional
126:									
Loleta	C								
		Jan-Apr	0.3-0.8	>6.0	---	---	None	---	None
		May	0.3-3.3	>6.0	---	---	None	---	None
		Jun-Nov	---	---	---	---	None	---	None
		December	0.3-3.3	>6.0	---	---	None	---	None
155:									
Samoa	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
155:									
Clambeach	A/D								
		Jan-Mar	0.0-0.3	>6.0	0.0-0.5	Long	Frequent	---	None
		April	0.5-2.0	>6.0	---	---	None	---	None
		May-Jun	1.0-3.0	>6.0	---	---	None	---	None
		Jul-Nov	3.0-5.0	>6.0	---	---	None	---	None
		December	0.5-2.0	>6.0	---	---	None	---	None
Dune land	A	Jan-Dec	---	---	---	---	None	---	None
157:									
Beaches	A	Jan-Dec	---	---	---	---	None	Very brief	Very frequent
Samoa	A	Jan-Dec	---	---	---	---	None	---	None
Dune land	A	Jan-Dec	---	---	---	---	None	---	None
171:									
Worswick	B/D								
		Jan-Apr	0.8-1.6	5.2-5.2	0.0-0.5	Brief	Occasional	Brief	Occasional
		May	0.8-1.6	5.2-5.2	---	---	---	---	---
		Jun-Oct	0.8-5.2	5.2-5.2	---	---	---	---	---
		November	0.8-1.6	5.2-5.2	---	---	---	---	---
		December	0.8-1.6	5.2-5.2	0.0-0.5	Brief	Occasional	Brief	Occasional
Arlynda	B/D								
		Jan-Apr	0.1-1.6	5.0-5.0	0.0-0.7	Brief	Frequent	Brief	Occasional
		May	0.1-1.6	5.0-5.0	---	---	---	---	---
		June	1.1-5.0	5.0-5.0	---	---	---	---	---
		Jul-Oct	0.8-5.0	5.0-5.0	---	---	---	---	---
		November	0.1-1.6	5.0-5.0	---	---	---	---	---
		December	0.1-1.6	5.0-5.0	0.0-0.7	Brief	Frequent	Brief	Occasional
172:									
Bigriver, fine sandy loam	B								
		Jan-Apr	---	---	---	---	None	Brief	Occasional
		May-Nov	---	---	---	---	---	---	---
		December	---	---	---	---	None	Brief	Occasional
173:									
Bigriver, silt loam	B								
		Jan-Apr	---	---	---	---	None	Brief	Occasional
		May-Nov	---	---	---	---	---	---	---
		December	---	---	---	---	None	Brief	Occasional
Ferndale	B								
		Jan-Apr	2.5-3.3	5.0-5.0	---	---	None	Brief	Rare
		May	2.5-3.3	5.0-5.0	---	---	None	---	---
		November	2.5-3.3	5.0-5.0	---	---	None	---	---
		December	2.5-3.3	5.0-5.0	---	---	None	Brief	Rare
Russ	B								
		Jan-Apr	3.3-5.0	5.0-5.0	---	---	None	Brief	Occasional
		May-Nov	---	---	---	---	---	---	---
		December	---	---	---	---	None	Brief	Occasional

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
174:									
Bigtree	B								
		Jan-Mar	---	---	---	---	None	Very brief	Rare
		Apr-Nov	---	---	---	---	---	---	---
		December	---	---	---	---	None	Very brief	Rare
Mystery	B								
		January	0.0-5.0	5.0-5.0	---	---	None	Very brief	Occasional
		February	0.0-3.3	5.0-5.0	---	---	None	Very brief	Occasional
		March	0.0-5.0	5.0-5.0	---	---	None	Very brief	Occasional
		April	---	---	---	---	None	Very brief	Occasional
		Nov-Dec	---	---	---	---	None	Very brief	Occasional
177:									
Battery, dry	C	Jan-Dec	---	---	---	---	None	---	None
178:									
Battery	C	Jan-Dec	---	---	---	---	None	---	None
191:									
Talawa	B/D								
		Jan-Mar	0.0-1.6	5.2-5.2	---	---	None	---	None
		Apr-May	1.6-2.5	5.2-5.2	---	---	None	---	None
		June	2.5-3.9	5.2-5.2	---	---	None	---	None
		Jul-Oct	---	---	---	---	None	---	None
		Nov-Dec	1.6-2.5	5.2-5.2	---	---	None	---	None
192:									
Aubell	D								
		Jan-Mar	0.0-1.3	5.0-5.0	---	---	None	---	None
		Apr-May	1.6-2.5	5.0-5.0	---	---	None	---	None
		June	2.0-3.3	5.0-5.0	---	---	None	---	None
		Jul-Oct	---	---	---	---	None	---	None
		Nov-Dec	1.6-2.5	5.0-5.0	---	---	None	---	None
194:									
Tsunami	B	Jan-Dec	---	---	---	---	None	---	None
220:									
Ferndale	C								
		Jan-Feb	4.0-5.0	>6.0	---	---	None	Brief	Rare
		March	---	---	---	---	None	Brief	Rare
		Apr-Nov	---	---	---	---	---	---	---
		December	---	---	---	---	None	Brief	Rare
222:									
Ferndale, moderately well drained	B/D								
		Jan-Feb	0.8-1.6	5.0-5.0	---	---	None	Brief	Rare
		Mar-Apr	1.6-5.0	5.0-5.0	---	---	None	Brief	Rare
		May	1.6-5.0	5.0-5.0	---	---	None	---	---
		Jun-Nov	---	---	---	---	---	---	---
		December	1.6-5.0	5.0-5.0	---	---	None	Brief	Rare
251:									
Surpur	C	Jan-Dec	---	---	---	---	None	---	None
289:									
Espa	B	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
290:									
Surpur	C	Jan-Dec	---	---	---	---	None	---	None
Mettah	D	Jan-Dec	---	---	---	---	None	---	None
291:									
Ossagon	C	Jan-Dec	---	---	---	---	None	---	None
Squashan	B	Jan-Dec	---	---	---	---	None	---	None
292:									
Ossagon	C	Jan-Dec	---	---	---	---	None	---	None
Squashan	B	Jan-Dec	---	---	---	---	None	---	None
293:									
Ossagon	C	Jan-Dec	---	---	---	---	None	---	None
Goldbluffs	B	Jan-Dec	---	---	---	---	None	---	None
Squashan	C	Jan-Dec	---	---	---	---	None	---	None
294:									
Ossagon	B	Jan-Dec	---	---	---	---	None	---	None
Goldbluffs	B	Jan-Dec	---	---	---	---	None	---	None
Squashan	B	Jan-Dec	---	---	---	---	None	---	None
462:									
Mooncreek	C	Jan-Dec	---	---	---	---	None	---	None
Noisy	C	Jan-Dec	---	---	---	---	None	---	None
Tossup	D	Jan-Dec	---	---	---	---	None	---	None
463:									
Mooncreek	B	Jan-Dec	---	---	---	---	None	---	None
Noisy	B	Jan-Dec	---	---	---	---	None	---	None
Sidehill	C	Jan-Dec	---	---	---	---	None	---	None
464:									
Mooncreek	C	Jan-Dec	---	---	---	---	None	---	None
Tossup	D	Jan-Dec	---	---	---	---	None	---	None
Noisy	C	Jan-Dec	---	---	---	---	None	---	None
465:									
Sidehill	C	Jan-Dec	---	---	---	---	None	---	None
Oakside	D	Jan-Dec	---	---	---	---	None	---	None
Darkwoods	C	Jan-Dec	---	---	---	---	None	---	None
473:									
Highoaks	C	Jan-Dec	---	---	---	---	None	---	None
Noisy	C	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
473:									
Mudhorse	C								
		Jan-Mar	1.6-3.3	>6.0	---	---	None	---	None
		Apr-May	3.3-4.9	>6.0	---	---	None	---	None
		Jun-Oct	---	---	---	---	None	---	None
		Nov-Dec	4.9-6.6	>6.0	---	---	None	---	None
480:									
Dolason	B	Jan-Dec	---	---	---	---	None	---	None
Countshill	C	Jan-Dec	---	---	---	---	None	---	None
Airstrip	C	Jan-Dec	---	---	---	---	None	---	None
481:									
Dolason	C	Jan-Dec	---	---	---	---	None	---	None
Airstrip	B	Jan-Dec	---	---	---	---	None	---	None
Countshill	C	Jan-Dec	---	---	---	---	None	---	None
482:									
Dolason	B	Jan-Dec	---	---	---	---	None	---	None
Countshill	C	Jan-Dec	---	---	---	---	None	---	None
483:									
Doolyville	D								
		Jan-Apr	1.0-1.6	5.1-5.1	---	---	None	---	None
		May-Oct	---	---	---	---	None	---	None
		Nov-Dec	1.0-1.6	5.1-5.1	---	---	None	---	None
Pasturerock	C	Jan-Dec	---	---	---	---	None	---	None
484:									
Elkcamp	C								
		Jan-Apr	3.3-5.4	5.4-5.4	---	---	None	---	None
		May-Oct	---	---	---	---	None	---	None
		Nov-Dec	3.3-5.4	5.4-5.4	---	---	None	---	None
Dolason	B	Jan-Dec	---	---	---	---	None	---	None
Airstrip	B	Jan-Dec	---	---	---	---	None	---	None
485:									
Pasturerock	C	Jan-Dec	---	---	---	---	None	---	None
Coyoterock	D								
		Jan-May	2.3-3.3	5.0-5.0	---	---	None	---	None
		Jun-Oct	---	---	---	---	None	---	None
		Nov-Dec	2.3-3.3	5.0-5.0	---	---	None	---	None
Maneze	C								
		Jan-May	3.3-5.3	5.3-5.3	---	---	None	---	None
		Jun-Oct	---	---	---	---	None	---	None
		Nov-Dec	3.3-5.3	5.3-5.3	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
531:									
Atwell----------	D								
		Jan-May	2.3-3.3	>6.0	---	---	None	---	None
		June	3.3-4.9	>6.0	---	---	None	---	None
		Jul-Oct	---	---	---	---	None	---	None
		Nov-Dec	2.5-4.1	>6.0	---	---	None	---	None
Coppercreek------	C								
		Jan-Apr	4.9-6.6	>6.0	---	---	None	---	None
		May-Oct	---	---	---	---	None	---	None
		Nov-Dec	4.9-6.6	>6.0	---	---	None	---	None
532:									
Atwell----------	D								
		Jan-May	2.3-3.3	>6.0	---	---	None	---	None
		June	3.3-4.9	>6.0	---	---	None	---	None
		Jul-Sept	---	---	---	---	None	---	None
		October	3.3-4.9	>6.0	---	---	None	---	None
		Nov-Dec	2.3-3.3	>6.0	---	---	None	---	None
Ladybird---------	C								
		Jan-Feb	3.9-4.9	5.9-5.9	---	---	None	---	None
		Mar-Dec	---	---	---	---	None	---	None
533:									
Coppercreek------	C	Jan-Dec	---	---	---	---	None	---	None
Ahpah------------	C	Jan-Dec	---	---	---	---	None	---	None
534:									
Coppercreek------	C	Jan-Dec	---	---	---	---	None	---	None
Ahpah------------	B	Jan-Dec	---	---	---	---	None	---	None
Lackscreek-------	C	Jan-Dec	---	---	---	---	None	---	None
535:									
Wiregrass--------	C	Jan-Dec	---	---	---	---	None	---	None
Scaath-----------	C	Jan-Dec	---	---	---	---	None	---	None
536:									
Coppercreek------	C	Jan-Dec	---	---	---	---	None	---	None
Ahpah------------	C	Jan-Dec	---	---	---	---	None	---	None
Lackscreek-------	C	Jan-Dec	---	---	---	---	None	---	None
537:									
Wiregrass--------	C	Jan-Dec	---	---	---	---	None	---	None
Scaath-----------	C	Jan-Dec	---	---	---	---	None	---	None
538:									
Wiregrass--------	C	Jan-Dec	---	---	---	---	None	---	None
Pittplace--------	D	Jan-Dec	---	---	---	---	None	---	None
539:									
Wiregrass--------	C	Jan-Dec	---	---	---	---	None	---	None
Scaath-----------	C	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
541:									
Wiregrass--------	C	Jan-Dec	---	---	---	---	None	---	None
Rockysaddle------	C	Jan-Dec	---	---	---	---	None	---	None
542:									
Coppercreek------	C	Jan-Dec	---	---	---	---	None	---	None
Slidecreek, gravelly loam---	C	Jan-Dec	---	---	---	---	None	---	None
Lackscreek-------	C	Jan-Dec	---	---	---	---	None	---	None
543:									
Wiregrass--------	C	Jan-Dec	---	---	---	---	None	---	None
Rockysaddle------	C	Jan-Dec	---	---	---	---	None	---	None
Scaath-----------	C	Jan-Dec	---	---	---	---	None	---	None
544:									
Coppercreek------	C	Jan-Dec	---	---	---	---	None	---	None
Tectah-----------	D	Jan-Dec	---	---	---	---	None	---	None
Lackscreek-------	C	Jan-Dec	---	---	---	---	None	---	None
545:									
Devilscreek------	C								
		Jan-Apr	2.0-3.3	5.6-5.6	---	---	None	---	None
		May-Sept	---	---	---	---	None	---	None
		Oct-Dec	2.0-3.3	5.6-5.6	---	---	None	---	None
Panthercreek-----	B								
		Jan-Apr	2.6-5.6	5.6-5.6	---	---	None	---	None
		May-Sept	---	---	---	---	None	---	None
		Oct-Dec	2.6-5.6	5.6-5.6	---	---	None	---	None
Coppercreek------	C	Jan-Dec	---	---	---	---	None	---	None
546:									
Lackscreek-------	C	Jan-Dec	---	---	---	---	None	---	None
Coppercreek------	C	Jan-Dec	---	---	---	---	None	---	None
549:									
Scaath-----------	C	Jan-Dec	---	---	---	---	None	---	None
Rockysaddle------	C	Jan-Dec	---	---	---	---	None	---	None
Wiregrass--------	C	Jan-Dec	---	---	---	---	None	---	None
550:									
Scaath-----------	C	Jan-Dec	---	---	---	---	None	---	None
Rockysaddle------	C	Jan-Dec	---	---	---	---	None	---	None
Wiregrass--------	C	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
553:									
Ladybird	C	Jan-Dec	---	---	---	---	None	---	None
Stonehill	C	Jan-Dec	---	---	---	---	None	---	None
554:									
Ladybird	C	Jan-Dec	---	---	---	---	None	---	None
Trailhead	C	Jan-Dec	---	---	---	---	None	---	None
555:									
Panthercreek	B	Jan-Dec	---	---	---	---	None	---	None
Coppercreek	C	Jan-Dec	---	---	---	---	None	---	None
Devilscreek	C								
		Jan-Apr	2.0-3.3	5.9-5.9	---	---	None	---	None
		May-Sept	---	---	---	---	None	---	None
		Oct-Dec	2.0-3.3	5.9-5.9	---	---	None	---	None
556:									
Rodgerpeak	D	Jan-Dec	---	---	---	---	None	---	None
Wiregrass	C	Jan-Dec	---	---	---	---	None	---	None
557:									
Ustic Palehumults	C	Jan-Dec	---	---	---	---	None	---	None
558:									
Tectah	D	Jan-Dec	---	---	---	---	None	---	None
Coppercreek	C	Jan-Dec	---	---	---	---	None	---	None
Trailhead	C	Jan-Dec	---	---	---	---	None	---	None
559:									
Trailhead	C	Jan-Dec	---	---	---	---	None	---	None
560:									
Trailhead	C	Jan-Dec	---	---	---	---	None	---	None
561:									
Trailhead	C	Jan-Dec	---	---	---	---	None	---	None
562:									
Trailhead	C	Jan-Dec	---	---	---	---	None	---	None
Fortyfour	D	Jan-Dec	---	---	---	---	None	---	None
563:									
Trailhead	C	Jan-Dec	---	---	---	---	None	---	None
Fortyfour	D	Jan-Dec	---	---	---	---	None	---	None
580:									
Coppercreek	C	Jan-Dec	---	---	---	---	None	---	None
Tectah	D	Jan-Dec	---	---	---	---	None	---	None
Slidecreek	C	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
581:									
Coppercreek	C	Jan-Dec	---	---	---	---	None	---	None
Slidecreek	C	Jan-Dec	---	---	---	---	None	---	None
Tectah	D	Jan-Dec	---	---	---	---	None	---	None
582:									
Slidecreek	C	Jan-Dec	---	---	---	---	None	---	None
Lackscreek	C	Jan-Dec	---	---	---	---	None	---	None
Coppercreek	C	Jan-Dec	---	---	---	---	None	---	None
583:									
Trailhead	D	Jan-Dec	---	---	---	---	None	---	None
Wiregrass	C	Jan-Dec	---	---	---	---	None	---	None
584:									
Wiregrass	C	Jan-Dec	---	---	---	---	None	---	None
Pittplace	D	Jan-Dec	---	---	---	---	None	---	None
Scaath	C	Jan-Dec	---	---	---	---	None	---	None
585:									
Wiregrass	C	Jan-Dec	---	---	---	---	None	---	None
Rockysaddle	D	Jan-Dec	---	---	---	---	None	---	None
586:									
Wiregrass	C	Jan-Dec	---	---	---	---	None	---	None
Rockysaddle	C	Jan-Dec	---	---	---	---	None	---	None
Trailhead	D	Jan-Dec	---	---	---	---	None	---	None
587:									
Childshill	C	Jan-Dec	---	---	---	---	None	---	None
588:									
Surpur	C	Jan-Dec	---	---	---	---	None	---	None
590:									
Sasquatch	C	Jan-Dec	---	---	---	---	None	---	None
Yeti	D	Jan-Dec	---	---	---	---	None	---	None
Footstep	C	Jan-Dec	---	---	---	---	None	---	None
591:									
Sasquatch	C	Jan-Dec	---	---	---	---	None	---	None
Sisterrocks	C	Jan-Dec	---	---	---	---	None	---	None
Ladybird	C	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
592:									
Sisterrocks	C	Jan-Dec	---	---	---	---	None	---	None
Ladybird	C	Jan-Dec	---	---	---	---	None	---	None
Footstep	C	Jan-Dec	---	---	---	---	None	---	None
593:									
Sasquatch	B	Jan-Dec	---	---	---	---	None	---	None
Yeti	D	Jan-Dec	---	---	---	---	None	---	None
Sisterrocks	C	Jan-Dec	---	---	---	---	None	---	None
594:									
Sisterrocks	C	Jan-Dec	---	---	---	---	None	---	None
Sasquatch	C	Jan-Dec	---	---	---	---	None	---	None
Houda	C								
		Jan	---	---	---	---	None	---	None
		Feb	2.3-3.3	5.0-5.0	---	---	None	---	None
		Mar-Dec	---	---	---	---	None	---	None
595:									
Battery	C	Jan-Dec	---	---	---	---	None	---	None
Catchings	C	Jan-Dec	---	---	---	---	None	---	None
596:									
Flintrock	D	Jan-Dec	---	---	---	---	None	---	None
Highprairie	C	Jan-Dec	---	---	---	---	None	---	None
597:									
Tarquin	D								
		Jan-May	2.0-2.6	5.0-5.0	---	---	None	---	None
		June	3.3-4.9	5.0-5.0	---	---	None	---	None
		Jul-Oct	---	---	---	---	None	---	None
		November	2.5-4.1	5.0-5.0	---	---	None	---	None
		December	2.3-3.3	5.0-5.0	---	---	None	---	None
598:									
Ladybird	C	Jan-Dec	---	---	---	---	None	---	None
Stonehill	C	Jan-Dec	---	---	---	---	None	---	None
659:									
Raingage	C								
		Jan-Apr	1.6-2.5	4.9-4.9	---	---	None	---	None
		May-Oct	---	---	---	---	None	---	None
		Nov-Dec	1.6-2.5	4.9-4.9	---	---	None	---	None
Pigpen	C/D								
		Jan-Apr	1.0-1.6	4.9-4.9	---	---	None	---	None
		May-Oct	---	---	---	---	None	---	None
		Nov-Dec	1.0-1.6	4.9-4.9	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
756:									
Oragran	D	Jan-Dec	---	---	---	---	None	---	None
Weitchpec	B	Jan-Dec	---	---	---	---	None	---	None
759:									
Jayel, extremely stony	D	Jan-Dec	---	---	---	---	None	---	None
Walnett, extremely stony-	C	Jan-Dec	---	---	---	---	None	---	None
Oragran	D	Jan-Dec	---	---	---	---	None	---	None
760:									
Jayel, extremely stony	D	Jan-Dec	---	---	---	---	None	---	None
Oragran	D	Jan-Dec	---	---	---	---	None	---	None
Walnett, extremely stony-	C	Jan-Dec	---	---	---	---	None	---	None
761:									
Gasquet, extremely stony-	D	Jan-Dec	---	---	---	---	None	---	None
Walnett, extremely stony-	C	Jan-Dec	---	---	---	---	None	---	None
Jayel	D	Jan-Dec	---	---	---	---	None	---	None

Table 21.--Selected Soil and Site Features

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
100:								
Riverwash	90	0-4	30-354	60-90	Mountains	Active channels	Stratified alluvium derived from mixed sources	None assigned
102:								
Fluvents	75	2-5	0-574	60-75	Mountains	Terraces and flood plains near margin of the active channel	Overbank alluvium derived from mixed sources	None assigned
110:								
Weott	85	0-2	0-66	35-80	Alluvial plains	Lower backswamps; depressions; low flood-plain steps	Alluvium derived from mixed sources	None assigned
116:								
Swainslough	90	0-2	0-164	35-80	Alluvial plains	Backswamps; depressions; low flood-plain steps; reclaimed salt marshes	Alluvium derived from mixed sources	None assigned
119:								
Arlynda	85	0-2	0-164	35-80	Alluvial plains	Backswamps; depressions; low flood-plain steps; meander scars	Alluvium derived from mixed sources	None assigned
126:								
Loleta	85	2-5	10-164	35-80	Alluvial plains	Alluvial fans; fan remnants	Alluvium derived from mixed sources	None assigned
155:								
Samoa	50	2-50	0-66	35-80	Dune fields; coastal plains	Recently stabilized dunes	Eolian and marine sand derived from mixed sources	None assigned
Clambeach	30	0-2	0-66	35-80	Dune fields; coastal plains	Deflation basins; depressions	Eolian and marine sand derived from mixed sources	None assigned

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
155:								
Dune land	15	2-50	0-66	35-80	Dune fields; coastal plains	Unvegetated dunes; foredunes	Eolian and marine sand derived from mixed sources	None assigned
157:								
Beaches	35	0-20	0-10	35-80	Coastal plains	Coastal beaches	Beach sand and gravel derived from mixed sources	None assigned
Samoa	35	0-50	0-66	35-80	Dune fields; coastal plains	Recently stabilized dunes	Eolian and marine sand derived from mixed sources	None assigned
Dune land	25	0-50	0-66	35-80	Coastal plains; dune fields	Unvegetated dunes; unvegetated foredunes	Eolian and marine sand derived from mixed sources	None assigned
171:								
Worswick	40	0-2	0-810	60-75	Mountains	Backswamps and low flood-plain steps along valley floors	Alluvium derived from mixed sources	Sequoia sempervirens /Polystichum munitum-Oxalis oregana, F004BX111CA
Arlynda	35	0-2	3-810	60-75	Mountains	Depressions and low flood-plain steps on valley floors	Alluvium derived from mixed sources	Sequoia sempervirens /Polystichum munitum-Oxalis oregana, F004BX111CA
172:								
Bigriver, fine sandy loam	80	2-5	3-748	60-75	Mountains	Lower alluvial flats and on flood plains	Alluvium derived from mixed sources	Sequoia sempervirens /Polystichum munitum-Oxalis oregana, F004BX111CA
173:								
Bigriver, silt loam	55	2-5	36-148	60-75	Mountains	Lower alluvial flats and on flood plains	Alluvium derived from mixed sources	Sequoia sempervirens /Polystichum munitum-Oxalis oregana, F004BX111CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
173:								
Ferndale	20	2-5	36-148	60-75	Mountains	High flood-plain steps	Alluvium derived from mixed sources	None assigned
Russ	15	2-5	36-148	60-75	Mountains	Lower alluvial flats and on flood plains	Alluvium derived from mixed sources	None assigned
174:								
Bigtree	50	2-9	7-673	60-75	Mountains	Alluvial fans; fan remnants; low terraces	Alluvium derived from mixed sources	Sequoia sempervirens /Polystichum munitum-Oxalis oregana, F004BX111CA
Mystery	25	2-9	7-673	60-75	Mountains	Alluvial fans; fan remnants; low terraces	Overbank alluvium derived from mixed sources	Sequoia sempervirens /Polystichum munitum-Oxalis oregana, F004BX111CA
177:								
Battery, dry	75	15-50	223-919	65-85	Mountains	Upper, gentler portion of uplifted stream terraces	Alluvium derived from mixed sources	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
178:								
Battery	85	15-50	56-305	65-85	Mountains	Uplifted, dissected stream terraces	Alluvium derived from mixed sources	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
191:								
Talawa	85	0-2	59-82	60-80	Alluvial plains	Dissected remnants of marine terraces	Fluviomarine deposits derived from mixed sources	None assigned
192:								
Aubell	85	2-9	69-141	60-80	Alluvial plains	Dissected fan remnants	Alluvium derived from mixed sources	None assigned
194:								
Tsunami	85	2-9	13-125	60-80	Alluvial plains	Fan remnants; fan terraces	Alluvium derived from mixed sources	None assigned

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
220:								
Ferndale----------	85	0-2	10-164	35-80	Alluvial plains	High flood-plain steps	Alluvium derived from mixed sources	None assigned
222:								
Ferndale, moderately well drained----------	75	0-5	30-187	60-75	Alluvial plains	High flood-plain steps	Alluvium derived from mixed sources	None assigned
251:								
Surpur----------	75	2-9	764-1,329	80-90	Mountains	Moderately broad ridges	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX104CA
289:								
Espa----------	80	2-9	161-745	60-75	Hills	Upland, dissected marine terrace remnants	Colluvium and residuum derived from weakly consolidated fluvial, beach, and dune deposits	Sequoia sempervirens /Polystichum munitum, F004BX107CA
290:								
Surpur----------	50	9-30	971-2,264	70-90	Mountains	Moderately broad ridges	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX104CA
Mettah----------	35	9-30	971-2,264	70-90	Mountains	Upper mountain slopes; moderately broad ridges	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX104CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
291:								
Ossagon	65	9-30	285-1,516	70-90	Hills; mountains	Hillslopes; mountain slopes	Colluvium and residuum derived from older, weakly consolidated fluvial, beach, and dune deposits from mixed sources	Sequoia sempervirens /Polystichum munitum, F004BX107CA
Squashan	20	9-30	285-1,516	70-90	Hills; mountains	Narrow ridges and hillslopes; mountain slopes	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens /Polystichum munitum, F004BX107CA
292:								
Ossagon	65	30-50	190-1,946	70-90	Hills; mountains	Hillslopes; mountain slopes	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens /Polystichum munitum, F004BX107CA
Squashan	20	30-50	190-1,946	70-90	Hills; mountains	Narrow ridges and hillslopes; mountain slopes	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens /Polystichum munitum, F004BX107CA
293:								
Ossagon	50	9-30	20-1,014	60-80	Hills	Broad ridgetops and upper hillslopes	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens /Polystichum munitum, F004BX107CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
293:								
Goldbluffs--------	25	9-30	20-1,014	60-80	Hills	Narrow ridges on hillslopes	Colluvium and residuum from weakly consolidated fluvial and beach deposits derived from mixed sources	Sequoia sempervirens-Pseudotsuga menziesii /Vaccinium ovatum /Polystichum munitum, F004BX106CA
Squashan----------	15	9-30	20-1,010	60-80	Hills	Upper hillslopes	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens /Polystichum munitum, F004BX107CA
294:								
Ossagon-----------	35	30-50	20-1,014	60-80	Hills	Hillslopes	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens /Polystichum munitum, F004BX107CA
Goldbluffs--------	20	30-50	20-1,014	60-80	Hills	Narrow ridges on hillslopes	Colluvium and residuum from weakly consolidated fluvial and beach deposits derived from mixed sources	Sequoia sempervirens-Pseudotsuga menziesii /Vaccinium ovatum /Polystichum munitum, F004BX106CA
Squashan----------	15	30-50	20-1,014	60-80	Hills	Hillslopes	Colluvium and residuum from weakly consolidated fluvial, beach, and dune deposits derived from mixed sources	Sequoia sempervirens /Polystichum munitum, F004BX107CA
462:								
Mooncreek---------	35	9-30	246-4,987	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB101CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
462:								
Noisy	25	9-30	246-4,987	49-80	Mountains	Ridges and upper mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB102CA
Tossup	15	9-30	246-4,987	49-80	Mountains	Upper mountain slopes and broad ridges	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB101CA
463:								
Mooncreek	25	30-75	49-4,757	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB101CA
Noisy	20	30-75	49-4,757	49-80	Mountains	Upper mountain slopes and ridges	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB102CA
Sidehill	20	30-75	49-4,757	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB102CA
464:								
Mooncreek	40	15-50	49-4,790	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB101CA
Tossup	20	15-50	49-4,790	49-80	Mountains	Upper mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB101CA
Noisy	15	15-50	49-4,790	49-80	Mountains	Ridges	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB102CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
465:								
Sidehill	35	50-100	66-4,757	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB102CA
Oakside	25	50-100	66-4,757	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Quercus chrysolepis /Lithocarpus densiflorus var. echinoides, F005XB103CA
Darkwoods	20	50-75	66-4,757	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Lithocarpus densiflorus/Lithocarpus densiflorus, F005XB102CA
473:								
Highoaks	30	30-50	115-3,904	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from mudstone and sandstone	Quercus garryana /Cynosurus echinatus, F004BX114CA
Noisy	25	30-50	115-3,904	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from mudstone	Quercus garryana /Cynosurus echinatus, F004BX114CA
Mudhorse	15	30-50	115-3,904	49-80	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Quercus garryana /Cynosurus echinatus, F004BX114CA
480:								
Dolason	50	9-30	502-3,386	90-100	Mountains	Ridges	Colluvium and residuum weathered from sandstone	Upper prairie, mountain slopes, sandstone and mudstone, clay loam, R004BX101CA
Countshill	25	9-30	502-3,386	90-100	Mountains	Gently convex ridgetops and spur ridges on mountain slopes; gently convex ridges	Colluvium and residuum weathered from siltstone and sandstone	Upper prairie, mountain slopes, sandstone and mudstone, clay loam, R004BX101CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
480:								
Airstrip----------	20	9-30	502-3,386	90-100	Mountains	Convex areas on ridge	Colluvium and residuum weathered from sandstone and siltstone	Upper prairie, mountain slopes, sandstone and mudstone, clay loam, R004BX101CA
481:								
Dolason----------	45	15-50	1,115-3,127	85-100	Mountains	Mountain slopes	Colluvium and residuum weathered from siltstone and sandstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Airstrip----------	25	15-50	1,115-3,127	85-100	Mountains	Steeper slopes adjacent to drainageways; narrow spur ridges	Colluvium and residuum weathered from sandstone and siltstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Countshill--------	20	15-50	1,115-3,127	85-100	Mountains	Convex slopes and spur ridges	Colluvium and residuum weathered from siltstone and sandstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
482:								
Dolason----------	55	30-50	1,138-3,278	90-100	Mountains	Mountain slopes	Colluvium and residuum weathered from siltstone and sandstone	Upper prairie, mountain slopes, sandstone and mudstone, clay loam, R004BX101CA
Countshill--------	30	30-50	1,138-3,278	90-100	Mountains	Convex slopes and spur ridges	Colluvium and residuum weathered from siltstone and sandstone	Upper prairie, mountain slopes, sandstone and mudstone, clay loam, R004BX101CA
483:								
Doolyville--------	40	30-50	174-2,953	70-85	Mountains	Smooth to rounded slopes and along poorly incised drainages; earthflows	Earthflow deposits derived from mudstone and sandstone	Quercus garryana/Dactylis glomerata, F004BX112CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
483:								
Pasturerock-------	35	30-50	174-2,953	70-85	Mountains	On raised areas and along well incised streams; mountain slopes	Colluvium derived from sandstone and mudstone	Quercus garryana /Cynosurus echinatus, F004BX114CA
484:								
Elkcamp-----------	50	15-50	614-3,232	90-100	Mountains	Irregular mountain slopes	Earthflow deposits derived from sandstone, mudstone, and siltstone	Middle prairie, mountain slopes, sandstone and mudstone, gravelly clay loam, R004BX104CA
Dolason-----------	30	15-50	614-3,232	90-100	Mountains	Mountain slopes	Colluvium and residuum weathered from siltstone and sandstone	Upper prairie, mountain slopes, sandstone and mudstone, clay loam, R004BX101CA
Airstrip----------	15	15-50	614-3,232	90-100	Mountains	Narrow spur ridges	Colluvium and residuum weathered from sandstone and siltstone	Upper prairie, mountain slopes, sandstone and mudstone, clay loam, R004BX101CA
485:								
Pasturerock-------	40	15-50	518-3,163	90-100	Mountains	Shoulders of spur ridges and near deeply incised drainages; mountain slopes	Colluvium derived from sandstone and mudstone	Quercus garryana /Cynosurus echinatus, F004BX114CA
Coyoterock--------	25	15-50	518-3,163	90-100	Mountains	Poorly incised drainages; hillslope hollows; and on lower mountain slopes	Colluvium derived from sandstone, mudstone and siltstone	Quercus garryana /Cynosurus echinatus, F004BX114CA
Maneze------------	15	15-50	518-3,163	90-100	Mountains	Spur ridges and convex slopes on mountain slopes	Colluvium derived from sandstone, mudstone and siltstone	Quercus garryana /Cynosurus echinatus, F004BX114CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
531:								
Atwell	45	30-50	171-2,867	70-85	Mountains	Around streams and draws on earthflows; steep, wet, irregular mountain slopes	Earthflow deposits derived from sheared sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Coppercreek	40	30-50	171-2,867	70-85	Mountains	Raised areas on mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
532:								
Atwell	75	30-50	59-1,923	70-90	Mountains	Around streams and draws on earthflows; steep, wet, irregular mountain slopes	Earthflow deposits derived from sheared sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Ladybird	15	30-50	59-1,923	70-90	Mountains	Raised areas on mountain slopes	Earthflow deposits derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
533:								
Coppercreek	60	15-30	381-2,769	80-95	Mountains	Shoulders of broad ridges	Colluvium and residuum derived from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX101CA
Ahpah	15	15-30	381-2,769	80-95	Mountains	Tops of ridges	Residuum and colluvium derived from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX101CA
534:								
Coppercreek	40	15-30	417-2,497	90-100	Mountains	Shoulders of broad ridges	Colluvium and residuum derived from sandstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
534:								
Ahpah	20	15-30	417-2,497	90-100	Mountains	Tops of ridges	Residuum and colluvium derived from sandstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Lackscreek	20	15-30	417-2,497	90-100	Mountains	Locally steep or strongly convex areas on ridges	Colluvium and residuum derived from sandstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
535:								
Wiregrass	60	15-30	1,204-2,592	90-100	Mountains	Shoulders of broad ridges	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Scaath	25	15-30	1,204-2,592	90-100	Mountains	Narrow ridges and strongly convex areas on mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
536:								
Coppercreek	45	30-50	62-3,038	75-100	Mountains	Mountain slopes	Colluvium and residuum weathered from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX101CA
Ahpah	20	30-50	62-3,038	75-100	Mountains	Spur ridges and at convex slope breaks on mountain slopes	Residuum and colluvium derived from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX101CA
Lackscreek	15	30-50	62-3,038	75-100	Mountains	Narrow ridges and steeper, more convex mountain slopes	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Sequoia sempervirens /Vaccinium ovatum, F004BX115CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
537:								
Wiregrass	50	15-30	1,736-2,398	90-100	Mountains	Shoulders of ridges	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Scaath	20	15-30	1,736-2,398	90-100	Mountains	Narrow ridges and strongly convex areas on mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
538:								
Wiregrass	60	15-30	1,371-2,782	80-100	Mountains	Shoulders of broad ridges	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Pittplace	15	15-30	1,371-2,782	80-100	Mountains	Upper mountain slope; broad ridges	Residuum and colluvium weathered from schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
539:								
Wiregrass	50	30-50	449-2,779	80-100	Mountains	Uniform to gently rounded mountain slopes	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Scaath	30	30-50	449-2,779	80-100	Mountains	Narrow ridges and strongly convex areas on mountain slope	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
541:								
Wiregrass	60	30-50	331-2,966	75-95	Mountains	Uniform to gently rounded mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Rockysaddle	20	30-50	331-2,966	75-95	Mountains	Uniform to gently rounded mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
542:								
Coppercreek-------	45	30-50	154-2,520	70-100	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Slidecreek, gravelly loam----	30	30-50	154-2,520	70-100	Mountains	Mountain slopes	Colluvium derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Lackscreek--------	15	30-50	154-2,520	70-100	Mountains	Strongly rounded mountain slopes; spur ridges	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
543:								
Wiregrass---------	40	30-50	495-3,189	80-100	Mountains	Uniform to gently rounded mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Rockysaddle-------	30	30-50	495-3,189	80-100	Mountains	Uniform to gently rounded mountain slopes	Colluvium derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Scaath------------	15	30-50	495-3,189	80-100	Mountains	Narrow ridges and strongly convex areas on mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
544:								
Coppercreek-------	40	30-50	604-1,680	80-90	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
544:								
Tectah	20	30-50	604-1,680	80-90	Mountains	Shoulders of ridges	Residuum and colluvium derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Lackscreek	15	30-50	604-1,680	80-90	Mountains	Spur ridges and strongly rounded mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
545:								
Devilscreek	45	30-50	49-2,484	70-100	Mountains	Near drainage headwaters on mountain slopes	Colluvium derived from schist	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Panthercreek	20	30-50	49-2,484	70-100	Mountains	Recent debris flow; near lower axis of wet hollows and on mountain slopes	Debris flow deposits derived from schist	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Coppercreek	15	30-50	49-2,484	70-100	Mountains	Better drained areas on mountain slopes	Colluvium and residuum derived from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
546:								
Lackscreek	65	50-75	266-2,526	75-100	Mountains	Convex to uniform and convex mountain slopes	Colluvium and residuum weathered from schist	Pseudotsuga menziesii-Sequoia sempervirens /Vaccinium ovatum, F004BX115CA
Coppercreek	15	50-75	266-2,526	75-100	Mountains	Mountain slopes	Colluvium and residuum derived from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX101CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
549:								
Scaath	40	50-75	561-2,664	75-90	Mountains	Narrow ridges and convex to uniform upper mountain slopes	Colluvium and residuum derived from sandstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Rockysaddle	25	50-75	561-2,664	75-90	Mountains	Concave to uniform scars from debris avalanche; around rock outcrop and on toeslopes of mountain slopes	Colluvium derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Wiregrass	20	50-75	561-2,664	75-90	Mountains	Shoulders of broad ridge	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
550:								
Scaath	40	50-75	479-2,920	80-100	Mountains	Narrow ridges and convex to uniform upper mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Rockysaddle	30	50-75	479-2,920	80-100	Mountains	Concave to uniform scars from debris avalanche; around rock outcrop and on toeslopes of mountain slopes	Colluvium derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Wiregrass	20	50-75	479-2,920	80-100	Mountains	Shoulders of broad ridges	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
553:								
Ladybird	60	30-50	16-1,775	70-85	Mountains	Mountain slopes	Colluvium and residuum derived from schist	Sequoia sempervirens /Polystichum munitum, F004BX108CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
553:								
Stonehill---------	20	30-50	16-1,775	70-85	Mountains	Steeper, more strongly convex mountain slopes	Residuum and colluvium derived from schist	Sequoia sempervirens /Polystichum munitum, F004BX108CA
554:								
Ladybird----------	50	15-30	49-1,089	70-80	Mountains	Shoulders of narrow ridges	Colluvium and residuum derived from schist	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Trailhead---------	25	15-30	49-1,089	70-80	Mountains	Along tops of ridges	Residuum and colluvium derived from schist	Sequoia sempervirens /Polystichum munitum, F004BX108CA
555:								
Panthercreek------	35	50-75	52-2,155	70-90	Mountains	On scars and deposits from recent debris flow and debris slides	Debris slide deposits derived from schist	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Devilscreek-------	20	50-75	52-2,155	70-90	Mountains	Near drainage headwaters on mountain slopes	Fault gouged colluvium derived from schist	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Coppercreek-------	20	50-75	52-2,155	70-90	Mountains	Small ridges and better drained areas on mountain slopes	Colluvium and residuum derived from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
556:								
Rodgerpeak--------	50	0-15	2,677-2,782	90-100	Mountains	Gently convex to planar areas on ridges	Residuum derived from quartz-mica schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
Wiregrass---------	30	0-15	2,677-2,782	90-100	Mountains	Bedrock concavities and shoulders of broad ridges	Colluvium derived from mica schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
557:								
Ustic Palehumults-	90	15-50	1,532-2,028	75-95	Mountains	Gently convex mountain slopes	Colluvium and residuum derived from metadacite	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus, F004BX102CA
558:								
Tectah	45	0-30	617-2,185	80-90	Mountains	Tops of broad ridges	Residuum and colluvium derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Coppercreek	25	15-30	617-2,185	80-90	Mountains	Moderately steep areas on broad ridges	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Trailhead	15	0-9	617-2,185	80-90	Mountains	Gently sloping areas of ridges	Residuum and colluvium derived from sandstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX104CA
559:								
Trailhead	85	0-9	1,289-2,382	90-100	Mountains	Broad, undulating ridges	Residuum weathered from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX104CA
560:								
Trailhead	80	15-30	541-2,503	75-100	Mountains	Broad, undulating ridges	Residuum weathered from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX104CA
561:								
Trailhead	75	15-30	1,348-2,641	85-100	Mountains	Broad, undulating ridges	Residuum weathered from schist	Pseudotsuga menziesii-Lithocarpus densiflorus/Vaccinium ovatum, F004BX105CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
562:								
Trailhead---------	65	30-50	295-2,559	70-100	Mountains	Uniform mountain slopes	Residuum weathered from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX104CA
Fortyfour---------	15	30-50	295-2,559	70-100	Mountains	Spur ridges and convex mountain slopes	Colluvium and residuum weathered from schist	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX104CA
563:								
Trailhead---------	65	30-50	92-2,326	80-100	Mountains	Uniform mountain slopes	Residuum weathered from schist	Pseudotsuga menziesii-Lithocarpus densiflorus/Vaccinium ovatum, F004BX105CA
Fortyfour---------	15	30-50	92-2,326	80-100	Mountains	Spur ridges and convex mountain slopes	Colluvium and residuum weathered from schist	Pseudotsuga menziesii-Lithocarpus densiflorus/Vaccinium ovatum, F004BX105CA
580:								
Coppercreek-------	40	9-30	295-2,303	70-100	Mountains	Moderately steep areas on broad ridges	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Tectah------------	30	9-30	295-2,303	70-100	Mountains	Tops of broad ridges	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Slidecreek--------	20	9-30	295-2,303	70-100	Mountains	Ridges	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
581:								
Coppercreek-------	40	30-50	79-2,172	70-100	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Slidecreek--------	30	30-50	79-2,172	70-100	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Tectah------------	15	30-50	79-2,172	70-100	Mountains	Linear to concave positions on mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
582:								
Slidecreek--------	40	50-75	180-2,274	70-100	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Lackscreek--------	25	50-75	180-2,274	70-100	Mountains	Narrow ridges and convex to uniform upper mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Coppercreek-------	15	50-75	180-2,274	70-100	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
583:								
Trailhead---------	65	9-30	157-2,047	80-100	Mountains	Gently sloping areas of ridges	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Lithocarpus densiflorus/Vaccinium ovatum, F004BX105CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
583:								
Wiregrass---------	25	9-30	157-2,047	80-100	Mountains	Moderately steep areas on broad ridges	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA
584:								
Wiregrass---------	40	9-30	994-2,034	80-100	Mountains	Broad ridges	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA
Pittplace---------	25	9-30	994-2,034	80-100	Mountains	Upper mountain slopes; broad ridges	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA
Scaath------------	20	15-30	994-2,034	80-100	Mountains	Narrow ridges and strongly convex areas on mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA
585:								
Wiregrass---------	45	30-50	669-2,215	80-100	Mountains	Uniform to gently rounded mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA
Rockysaddle-------	40	30-50	669-2,215	80-100	Mountains	Uniform to gently rounded mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA
586:								
Wiregrass---------	40	30-50	279-2,188	80-100	Mountains	Mountain slopes	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
586:								
Rockysaddle-------	30	30-50	279-2,188	80-100	Mountains	Uniform to gently rounded mountain slopes	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA
Trailhead---------	15	30-50	279-2,188	80-100	Mountains	Upper mountain slopes	Colluvium and residuum derived from schist	Pseudotsuga menziesii-Sequoia sempervirens /Lithocarpus densiflorus-Vaccinium ovatum, F004BX109CA
587:								
Childshill--------	65	5-30	1,788-2,352	80-100	Mountains	Moderately broad ridges	Colluvium and residuum from weakly consolidated fluvial deposits	Pseudotsuga menziesii-Chrysolepis chrysophylla /Vaccinium ovatum, F004BX113CA
588:								
Surpur------------	75	2-15	1,220-2,247	80-100	Mountains	Broad ridges and upper mountain slopes	Colluvium and residuum from weakly consolidated fluvial, beach and dune deposits derived from mixed sources	Pseudotsuga menziesii-Chrysolepis chrysophylla /Vaccinium ovatum, F004BX113CA
590:								
Sasquatch---------	45	5-30	184-1,296	65-90	Mountains	Broad ridges	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Yeti---------------	20	5-30	184-1,296	65-90	Mountains	Broad ridges and upper mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Footstep----------	15	5-30	184-1,296	65-90	Mountains	Narrow ridges and convex to uniform upper mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
591:								
Sasquatch---------	45	30-50	16-1,854	65-90	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Sisterrocks-------	25	30-50	16-1,854	65-90	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Ladybird----------	15	30-50	16-1,854	65-90	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
592:								
Sisterrocks-------	35	50-75	16-1,699	65-90	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Ladybird----------	30	50-75	16-1,699	65-90	Mountains	Mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
Footstep----------	20	50-75	16-1,699	65-90	Mountains	Narrow ridges and convex to uniform upper mountain slopes	Colluvium and residuum derived from sandstone and mudstone	Sequoia sempervirens /Polystichum munitum, F004BX108CA
593:								
Sasquatch---------	50	15-30	10-840	65-90	Hills	Hillslopes	Colluvium and residuum derived from sandstone and mudstone	Picea sitchensis-Alnus rubra/Rubus spectabilis-Polystichum munitum, F004BX110CA
Yeti---------------	20	15-30	10-840	65-90	Hills	Broad ridges and upper hillslopes	Colluvium and residuum derived from sandstone and mudstone	Picea sitchensis-Alnus rubra/Rubus spectabilis-Polystichum munitum, F004BX110CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
593:								
Sisterrocks-------	15	15-30	10-840	65-90	Hills	Hillslopes	Colluvium and residuum derived from sandstone and mudstone	Picea sitchensis-Alnus rubra/Rubus spectabilis-Polystichum munitum, F004BX110CA
594:								
Sisterrocks-------	45	30-75	7-965	70-80	Hills	Hillslopes	Colluvium and residuum derived from sandstone and mudstone	Picea sitchensis-Alnus rubra/Rubus spectabilis-Polystichum munitum, F004BX110CA
Sasquatch---------	20	30-75	7-965	70-80	Hills	Hillslopes	Colluvium and residuum derived from sandstone and mudstone	Picea sitchensis-Alnus rubra/Rubus spectabilis-Polystichum munitum, F004BX110CA
Houda-------------	20	30-75	7-965	70-80	Hills	Stabilized debris slides on hillslopes	Debris slide deposits derived from sandstone and mudstone	Picea sitchensis-Alnus rubra/Rubus spectabilis-Polystichum munitum, F004BX110CA
595:								
Battery-----------	50	5-30	79-846	75-90	Mountains	Uplifted, dissected remnants of stream terraces	Alluvium derived from mixed sources	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
Catchings---------	30	5-30	79-846	75-90	Mountains	Uplifted, dissected remnants of stream terraces	Alluvium derived from mixed sources	Sequoia sempervirens-Pseudotsuga menziesii /Rhododendron macrophyllum, F004BX103CA
596:								
Flintrock---------	40	15-75	0-699	60-80	Hills	Unstable, lower hillslopes	Debris flow colluvium derived from sandstone and mudstone	Coastal scrub and prairie, hills, sandstone and mudstone, gravelly clay loam, R004BX102CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
596:								
Highprairie-------	30	15-75	0-699	60-80	Hills	Upper hillslopes	Colluvium and residuum derived from sandstone and mudstone	Coastal scrub and prairie, hills, sandstone and mudstone, gravelly clay loam, R004BX102CA
597:								
Tarquin-----------	70	9-30	164-650	75-90	Hills	Dissected fan remnants	Colluvium and residuum derived from weakly consolidated siltstone and conglomerate	Sequoia sempervirens /Polystichum munitum, F004BX108CA
598:								
Ladybird----------	60	30-50	16-1,775	70-85	Mountains	Mountain slopes	Colluvium and residuum derived from schist	Picea sitchensis-Alnus rubra/Rubus spectabilis-Polystichum munitum, F004BX110CA
Stonehill---------	20	30-50	16-1,775	70-85	Mountains	Steeper, more strongly convex mountain slopes	Residuum and colluvium derived from schist	Picea sitchensis-Alnus rubra/Rubus spectabilis-Polystichum munitum, F004BX110CA
659:								
Raingage----------	65	15-50	220-3,186	70-90	Mountains	Lower mountain slopes on earthflows	Earthflow deposits derived from mudstone and sandstone	Lower prairie, earthflows, sandstone and mudstone, gravelly loam, R004BX103CA
Pigpen------------	20	15-50	220-3,186	70-90	Mountains	On steeper, more hummocky or irregular portion of earthflows	Earthflow deposits derived from mudstone and sandstone	Lower prairie, earthflows, sandstone and mudstone, gravelly loam, R004BX103CA
756:								
Oragran-----------	40	30-50	850-2,139	90-120	Mountains	Mountain slopes	Residuum weathered from serpentinized peridotite	Pinus jeffreyi/Quercus vacciniifolia, F005XB104CA
Weitchpec---------	25	30-50	850-2,139	90-120	Mountains	Mountain slopes	Residuum weathered from serpentinite	Pinus jeffreyi/Quercus vacciniifolia, F005XB104CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
759:								
Jayel, extremely stony	35	30-50	180-3,012	90-120	Mountains	Mountain slopes; broad ridges	Colluvium and residuum weathered from serpentinized peridotite	Pinus jeffreyi/Quercus vacciniifolia, F005XB104CA
Walnett, extremely stony	20	30-75	180-3,012	90-120	Mountains	Mountain slopes	Colluvium and residuum weathered from serpentinized peridotite	Pinus jeffreyi/Quercus vacciniifolia, F005XB104CA
Oragran	20	30-75	180-3,012	90-120	Mountains	Mountain slopes	Residuum weathered from serpentinized peridotite	Pinus jeffreyi/Quercus vacciniifolia, F005XB104CA
760:								
Jayel, extremely stony	30	9-30	1,539-2,411	90-120	Mountains	Mountain slopes; broad ridges	Colluvium and residuum weathered from serpentinized peridotite	Pinus jeffreyi/Quercus vacciniifolia, F005XB104CA
Oragran	25	9-30	1,539-2,411	90-120	Mountains	Mountain slopes; broad ridges	Residuum weathered from serpentinized peridotite	Pinus jeffreyi/Quercus vacciniifolia, F005XB104CA
Walnett, extremely stony	25	9-30	1,539-2,411	90-120	Mountains	Mountain slopes; broad ridges	Colluvium and residuum weathered from serpentinized peridotite	Pinus jeffreyi/Quercus vacciniifolia, F005XB104CA
761:								
Gasquet, extremely stony	30	9-50	512-2,520	90-120	Mountains	Mountain slopes	Colluvium and residuum weathered from serpentinized peridotite	Pseudotsuga menziesii-Lithocarpus densiflorus/Quercus vacciniifolia, F005XB105CA

Table 21.--Selected Soil and Site Features--Continued

Map symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material	Ecological site
	Pct	*Pct*	*Ft*	*In*				
761:								
Walnett, extremely stony	25	9-50	512-2,520	90-120	Mountains	Mountain slopes	Colluvium and residuum weathered from serpentinized peridotite	Pseudotsuga menziesii-Lithocarpus densiflorus/Quercus vacciniifolia, F005XB105CA
Jayel	20	9-50	512-2,520	90-120	Mountains	Mountain slopes	Colluvium and residuum weathered from serpentinized peridotite	Pseudotsuga menziesii-Lithocarpus densiflorus/Quercus vacciniifolia, F005XB105CA
W:								
Water	100	---	---	---	---	---	---	---

Table 22.--Taxonomic Classification of the Soils

[An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series]

Soil name	Family or higher taxonomic class
Ahpah	Fine-loamy, mixed, active, isomesic Typic Dystrudepts
Airstrip	Loamy-skeletal, mixed, superactive, mesic Humic Dystroxerepts
*Airstrip	Loamy-skeletal, mixed, superactive, isomesic Humic Dystrudepts
Arlynda	Fine-silty, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts
*Arlynda	Fine-loamy, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts
Atwell	Fine, mixed, active, isomesic Oxyaquic Hapludalfs
Aubell	Fine, mixed, active, mesic Oxyaquic Dystrudepts
Battery	Fine-loamy, mixed, semiactive, isomesic Typic Palehumults
*Battery	Fine-loamy, mixed, semiactive, isomesic Ustic Palehumults
Bigriver	Coarse-loamy, mixed, superactive, nonacid, isomesic Typic Udifluvents
Bigtree	Fine-loamy, isotic, isomesic Andic Dystrudepts
Catchings	Loamy-skeletal, mixed, semiactive, isomesic Typic Haplohumults
Childshill	Fine-loamy, mixed, semiactive, isomesic Ustic Palehumults
Clambeach	Mixed, isomesic Typic Psammaquents
Coppercreek	Fine-loamy, mixed, semiactive, isomesic Typic Palehumults
Countshill	Fine-loamy, mixed, superactive, mesic Humic Dystroxerepts
*Countshill	Fine-loamy, mixed, superactive, isomesic Humic Dystrudepts
Coyoterock	Fine, mixed, active, mesic Ultic Haploxeralfs
Darkwoods	Loamy-skeletal, mixed, active, mesic Typic Haploxerults
Devilscreek	Fine-loamy, mixed, semiactive, isomesic Oxyaquic Dystrudepts
Dolason	Fine-loamy, mixed, superactive, mesic Humic Dystroxerepts
*Dolason	Fine-loamy, mixed, superactive, isomesic Humic Pachic Dystrudepts
Doolyville	Fine-loamy, mixed, superactive, mesic Aquultic Haploxeralfs
Elkcamp	Fine-loamy, mixed, superactive, mesic Ultic Palexeralfs
Espa	Fine-loamy, mixed, superactive, isomesic Typic Haplohumults
Ferndale	Fine-silty, mixed, superactive, nonacid, mesic Typic Udifluvents
*Ferndale	Fine-loamy, mixed, superactive, mesic Oxyaquic Dystrudepts
*Ferndale	Fine-silty, mixed, superactive, nonacid, mesic Oxyaquic Udifluvents
Flintrock	Loamy-skeletal, mixed, superactive, isomesic Typic Hapludolls
Fluvents	Isomesic Fluvents
Footstep	Loamy-skeletal, mixed, superactive, isomesic Typic Haplohumults
Fortyfour	Fine, parasesquic, isomesic Typic Hapludults
*Fortyfour	Fine, parasesquic, isomesic Typic Haplustults
Gasquet	Fine, parasesquic, mesic Typic Haploxerults
Goldbluffs	Loamy-skeletal, isotic, isomesic Typic Dystrudepts
Highoaks	Fine-loamy, mixed, superactive, mesic Xeric Palehumults
Highprairie	Fine-loamy, mixed, superactive, isomesic Pachic Hapludolls
Houda	Loamy-skeletal, mixed, superactive, isomesic Oxyaquic Eutrudepts
Jayel	Fine, parasesquic, mesic Typic Dystroxerepts
Lackscreek	Loamy-skeletal, mixed, active, isomesic Typic Haplohumults
Ladybird	Fine-loamy, mixed, superactive, isomesic Typic Haplohumults
Loleta	Fine-loamy, mixed, superactive, isomesic Fluvaquentic Endoaquolls
Maneze	Loamy-skeletal, mixed, superactive, mesic Humic Dystroxerepts
Mettah	Fine, parasesquic, isomesic Andic Palehumults
Mooncreek	Fine-loamy, mixed, active, mesic Typic Palexerults
Mudhorse	Fine-loamy, mixed, active, mesic Oxyaquic Palehumults
Mystery	Coarse-loamy, mixed, superactive, isomesic Oxyaquic Eutrudepts
Noisy	Loamy-skeletal, mixed, active, mesic Typic Haploxerults
Oakside	Loamy-skeletal, mixed, superactive, mesic Lithic Haploxerolls
Oragran	Loamy, magnesic, mesic Lithic Haploxerepts
Ossagon	Fine-loamy, mixed, superactive, isomesic Typic Haplohumults
Panthercreek	Loamy-skeletal, mixed, semiactive, isomesic Typic Eutrudepts
Pasturerock	Fine-loamy, mixed, active, mesic Ultic Haploxeralfs
Pigpen	Loamy-skeletal, mixed, superactive, thermic Aquultic Haploxeralfs
Pittplace	Fine, mixed, semiactive, isomesic Ustic Palehumults
Raingage	Fine-loamy, mixed, superactive, thermic Aquultic Haploxeralfs
Rockysaddle	Loamy-skeletal, mixed, semiactive, isomesic Ustic Palehumults
Rodgerpeak	Loamy, mixed, active, isomesic Lithic Dystrustepts
Russ	Coarse-loamy, mixed, superactive, nonacid, mesic Typic Udifluvents
Samoa	Mixed, mesic Typic Udipsamments

Table 22.--Taxonomic Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Sasquatch	Fine-loamy, mixed, superactive, isomesic Typic Palehumults
Scaath	Loamy-skeletal, mixed, active, isomesic Ustic Haplohumults
Sidehill	Loamy-skeletal, mixed, superactive, mesic Humic Dystroxerepts
Sisterrocks	Loamy-skeletal, mixed, superactive, isomesic Typic Palehumults
Slidecreek	Loamy-skeletal, mixed, semiactive, isomesic Typic Palehumults
Squashan	Loamy-skeletal, isotic, isomesic Typic Haplohumults
Stonehill	Fine-loamy, mixed, superactive, isomesic Typic Haplohumults
Surpur	Fine-loamy, mixed, semiactive, isomesic Typic Haplohumults
*Surpur	Fine-loamy, mixed, semiactive, isomesic Ustic Haplohumults
Swainslough	Fine, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts
Talawa	Coarse-loamy, mixed, superactive, isomesic Oxyaquic Dystrudepts
Tarquin	Fine-loamy, mixed, superactive, isomesic Oxyaquic Palehumults
Tectah	Fine, mixed, semiactive, isomesic Typic Palehumults
Tossup	Fine, mixed, semiactive, mesic Typic Palexerults
Trailhead	Fine, parasesquic, isomesic Typic Palehumults
*Trailhead	Fine, parasesquic, isomesic Ustic Palehumults
Tsunami	Fine-loamy, mixed, superactive, isomesic Fluventic Humic Dystrudepts
Ustic Palehumults	Loamy-skeletal, mixed, semiactive, isomesic Ustic Palehumults
Walnett	Loamy-skeletal, parasesquic, mesic Ultic Haploxeralfs
Weitchpec	Loamy-skeletal, magnesic, mesic Typic Haploxerepts
Weott	Fine-silty, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts
Wiregrass	Fine-loamy, mixed, semiactive, isomesic Ustic Palehumults
Worswick	Coarse-loamy, mixed, superactive, nonacid, isomesic Fluvaquentic Endoaquepts
Yeti	Fine, mixed, superactive, isomesic Typic Palehumults

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