Ecological Sites

An ecological site description is a document that contains details about the characteristic soils, plant community, different ecological states and transitions that are expected, and site interpretations. For full ecological site descriptions that include a state and transition model, refer to the Natural Resources Conservation Service Ecological Site and Information System: https://esis.sc.egov.usda.gov. You may also refer to the ecological site description report for Capitol Reef National Park:

> United States Department of Agriculture, Natural Resources Conservation Service. 2013. Ecological sites of Capitol Reef National Park, Utah.

The ecological sites in Capitol Reef National Park are briefly described in this section.

Every soil component is correlated to a rangeland or riparian ecological site classification. Ecological sites are the fundamental unit of a potential-based land classification system. Their purpose is to classify similar types of land based on their ability to produce particular plant communities which respond similarly to management. For rangelands, ecological sites are correlated to soil components based on the potential of the soil component to produce a particular kind and amount of vegetation that responds in a certain way to disturbance and management. For riparian areas, ecological sites are also correlated to soil components; however, the correlation is based on associated valley types and stream types that produce a distinctive complex of riparian plant communities that respond in a certain way to disturbance and management.

Ecological site classifications on rangelands are defined primarily by their soil-geomorphic and climate features, which are the primary determinants of the native plant communities that a site is capable of supporting. In particular, the potential native plant communities differ among ecological sites as a result of soil features (such as texture, depth to restrictive layer, chemistry, subsurface horizons, and percent rock fragments) and topographic features (such as elevation, slope, aspect, and landscape position) within a particular climate zone. Each soil component is correlated to one ecological site within this soil survey. However, an ecological site may be correlated to more than one soil component as long as the potential vegetation and response to disturbance are similar among soil components.

Rangeland is typically defined as a type of land that supports vegetation suitable for grazing (grasses, forbs, and shrubs) that is managed by ecological, rather than agronomic, methods. For this survey, however, the term rangeland is used to describe all land that produces rangeland or woodland vegetation and is managed by ecological rather than agronomic methods.

Ecological site classifications in riparian areas differ from rangelands because they are influenced primarily by water flowing in an adjacent stream, rather than inherent soil features. Riparian complex ecological sites are defined by concepts of fluvial geomorphology, which classifies streams based on valley type and stream type designations. The Rosgen stream classification system is used to define riparian complex ecological sites.

The correlation of riparian complex ecological sites to soil components is based on the valley type and stream type of the riparian system. Since valley type and stream type information is not generally included in soil map unit descriptions, the correlation is often coincidental, without reference to any particular soil features. Riparian complex ecological sites are capable of producing multiple plant communities, which are each influenced by horizontal distance to the stream and vertical distance to ground water. These plant communities typically occur in a linear pattern, with different plant communities occurring on stream banks, flood plains, and terraces as distance from the stream channel increases.

In Capitol Reef National Park, six different riparian complex ecological sites were identified and correlated to soil components. These represent combinations of different valley types and streams types, which combine to produce multiple plant communities that respond to the dynamics of the riparian system.

Table 6 displays information about climate, landform, geology, parent material, and ecological site for each soil in the map units.

Percent of the map unit is the extent of the named soil in the map unit.

Slope is 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. The table shows the low and high range of slope for the named component or soil.

Elevation is the height of an object or area on the earth's surface in reference to a fixed reference point, such as mean sea level. The typical low and high range of elevation is displayed for each soil.

MAP is the mean annual precipitation for areas of the soil in the map unit.

Landform is a specific shape of the earth in the area where a soil typically occurs. Examples are a mountain summit and a valley bottom.

Geology includes the lithology and name and geologic age of the formation.

Parent material is the material in which soils formed. Examples are the underlying geological material (including bedrock), a surficial deposit (such as volcanic ash), and organic material. Soils inherit their chemical and physical properties from the parent material.

Ecological site name and number is the ecological site name and unique reference number that are correlated to the named soil in the map unit.

Table 7 includes details for each map unit component suitable for rangeland, including the ecological site; estimated total annual production of the existing vegetation in favorable, normal, and unfavorable years; existing vegetation at the time of the survey; and typical percentage of dominant species measured by annual production.

Total production is the amount of vegetation that can be expected to grow annually in a well managed area that supports the existing plant community at the time of the survey. It includes all current year's vegetative growth of leaves, twigs, flowers, and fruits, whether or not it is palatable to grazing animals. It does not include the increase in stem diameter of trees and shrubs. Estimated total annual production values, in pounds per acre of air-dry vegetation, is given for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Characteristic plants reports the dominant grasses, forbs, shrubs, and trees by annual production of the existing plant community at the time of the survey.

Composition for rangeland gives the typical percentage of the total annual production for the dominant species of the existing vegetation. The amount that can be used as forage depends on the grazing animals and grazing season.

Information about rangeland management, including range similarity index and rangeland trend, is available in chapter 4 of the "National Range and Pasture Handbook," available on the Internet at http://www.glti.nrcs.usda.gov/technical/publications/nrph.htm.

Tables 8 and 9 show the common plants in the survey area. In table 8 they are sorted by plant symbol, and in table 9 they are listed in order of local common name.

Below are brief descriptions of the ecological sites, arranged by ID number, in Capitol Reef National Park. Sites R034XY209UT, R034XY221UT, and R034XY233UT occur in MLRA 34B and occupy a very small portion of Capitol Reef National Park (about 8 acres total). Data for these sites is therefore extremely limited.

Ecological Site Descriptions

R034XY209UT—Semidesert Loam (Salina Wildrye). No site concept data is available for this ecological site.

R034XY221UT—Semidesert Shallow Clay (Utah Juniper). This ecological site occurs on eroded bench slopes and side slopes of hills and benches at elevations between 5,500 and 6,800 feet. The soils are shallow and channery and formed in mancos shale and/or sandstone. Annual precipitation ranges from 10 to 12 inches. This site is primarily dominated by Salina wildrye (*Leymus salinus*) and James' galleta (*Pleuraphis jamesii)*. Shadscale (*Atriplex confertifolia*) and Utah juniper (*Juniperus osteosperma*) are typically present on the site but fairly sparse. Cheatgrass (*Bromus tectorum*) is the most common invasive species.

R034XY233UT—Semidesert Shallow Loam (Utah Juniper-Pinyon). This ecological site occurs on pediments and hillslopes at elevations between 4,900 and 7,200 feet. The soils are shallow loams with a mesic temperature regime and a ustic aridic moisture regime. Annual precipitation ranges from 10 to 12 inches. This site is primarily dominated by Salina wildrye (*Leymus salinus*) and James' galleta (*Pleuraphis jamesii)*. Black sagebrush (*Artemisia nova*), twoneedle pinyon (*Pinus edulis*), and Utah juniper (*Juniperus osteosperma*) are typically present on the site but fairly sparse. Cheatgrass (*Bromus tectorum*) is the most common invasive species.

R035XB216AZ—Sandy Wash 6-10" p.z. This ecological site (fig. 362) occurs in MLRA 35.2—the Colorado Plateau Shrub – Grasslands. Elevations range from 3,800 to 5,800 feet. Annual precipitation averages 6 to 10 inches. The soils are deep sands or sandy loams with few rock fragments. They commonly have thin, loamy strata associated with flooding events. The soil temperature regime is mesic, and the soil moisture regime is typic aridic. Vegetation includes shadscale (*Atriplex confertifolia*), fourwing saltbush (*Atriplex canescens*), Torrey Mormon tea (*Ephedra torreyana*), blackbrush (*Cologyne ramosissima*), Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, blue grama (*Bouteloua gracilis*), and black grama (*Bouteloua eriopoda*). This site is susceptible to invasion by tamarisk (*Tamarix*), Russian olive (*Elaeagnus angustifolia* L.), and annual herbaceous species.

R035XB255AZ—Sandstone Rockland 6-10" p.z. This ecological site (fig. 363) occurs in MLRA 35.2—the Colorado Plateau Shrub – Grasslands. It is in relatively flat areas of sandstone bedrock and has widely scattered vegetation growing in shallow depressions and fractures in the bedrock. Elevations range from 3,800 to 5,800 feet. Annual precipitation averages 6 to 10 inches. The soils are mostly shallow to very shallow. The soil temperature regime is mesic, and the soil moisture regime is typic aridic. Vegetation includes shadscale (*Atriplex confertifolia*), fourwing saltbush (*Atriplex canescens*), Torrey Mormon tea (*Ephedra torreyana*), blackbrush (*Cologyne ramosissima*), Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, blue grama (*Bouteloua gracilis*), and black grama (*Bouteloua eriopoda*).

Figure 362.—Sandy Wash 6-10” p.z. ecological site (R035XB216AZ).

Figure 363.—Sandstone Rockland 6-10” p.z. ecological site (R035XB255AZ).

Figure 364.—Alkali Bottom (Greasewood) ecological site (R035XY003UT).

R035XY003UT—Alkali Bottom (Greasewood). This ecological site (fig. 364) occurs on gently sloping valley bottoms and stream terraces. The soils are saline and typically loamy with very few rock fragments. They are deep, have a high or moderate water-holding capacity, and receive extra water in the form of runoff from surrounding uplands. Annual precipitation ranges from 7 to 12 inches. Greasewood (*Sarcobatus vermiculatus*) and native bunchgrasses are very productive and dominant on this site. Common plants are alkali sacaton (*Sporobolus airoides*), mesa dropseed (*Sporobolus flexuosus*), Indian ricegrass (*Achnatherum hymenoides*), needle and thread (*Hesperostipa comate*), James' galleta (*Pleuraphis jamesii)*, gooseberryleaf globemallow (*Sphaeralcea grossulariifolia*), plains pricklypear (*Opuntia polyacantha*), and Pursh seepweed (*Suaeda calceoliformis*).

R035XY009UT—Alkali Flat (Greasewood). This ecological site (fig. 365) occurs on gently sloping high stream terraces and alluvial fans. The soils are saline and typically loamy with very few rock fragments. They are deep, have a low or moderate water-holding capacity, and receive extra water in the form of runoff from surrounding uplands. Annual precipitation ranges from 7 to 12 inches. Greasewood (*Sarcobatus vermiculatus*) and native bunchgrasses dominate this site. Common plants are alkali sacaton (*Sporobolus airoides*), Indian ricegrass (*Achnatherum hymenoides*), blue grama (*Bouteloua gracilis*), James' galleta (*Pleuraphis jamesii)*, plains pricklypear (*Opuntia polyacantha*), and Pursh seepweed (*Suaeda calceoliformis*).

R035XY011UT—Loamy Bottom (Basin Big Sagebrush). This ecological site (fig. 366) occurs on gently sloping stream terraces in valley bottoms. The soils are typically sandy loam with very few rock fragments. They are deep, have a moderate water-holding capacity, and receive extra water in the form of runoff from surrounding uplands. Annual precipitation ranges from 8 to 12 inches. Basin big sagebrush (*Artemisia tridentata* var. *tridentata*) and native bunchgrasses are very productive and

Figure 365.— Alkali Flat (Greasewood) ecological site (R035XY009UT).

Figure 366.—Loamy Bottom (Basin Big Sagebrush) ecological site (R035XY011UT).

Figure 367.—Sandy Bottom (Fourwing Saltbush) ecological site (R035XY015UT).

dominant on this site. Common plants are needle and thread (*Hesperostipa comate*), mesa dropseed (*Sporobolus flexuosus*), Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, scarlet globemallow (*Sphaeralcea coccinea*), plains pricklypear (*Opuntia polyacantha*), and rubber rabbitbrush (*Ericameria nauseosa*).

R035XY015UT—Sandy Bottom (Fourwing Saltbush). This ecological site (fig. 367) occurs on gently sloping high stream terraces in valley bottoms and in narrow canyons. The soils are loamy sand or sandy loam with very few rock fragments. They are deep, have a moderate water-holding capacity, and receive extra water in the form of runoff from surrounding uplands and cliffs. Annual precipitation ranges from 8 to 12 inches. Fourwing saltbush (*Atriplex canescens*) and native bunchgrasses are very productive and dominant on this site. Common plants are needle and thread (*Hesperostipa comate*), mesa dropseed (*Sporobolus flexuosus*), Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, and plains pricklypear (*Opuntia polyacantha*).

R035XY018UT—Talus Slope (Blackbrush-Shadscale). This ecological site (fig. 368) occurs on rocky, talus hillsides with slopes ranging from 10 to 80 percent. The soils are deep and loamy with high amounts of rock fragments. Mean annual precipitation is 9.5 inches. This site is typically dominated by blackbrush (*Cologyne ramosissima*) and shadscale (*Atriplex confertifolia*) in the overstory and James' galleta (*Pleuraphis jamesii)* and Indian ricegrass (*Achnatherum hymenoides*) in the understory.

R035XY019UT—Shallow Sand Rock Pocket (Utah Juniper/Two-Needle Pinyon). This ecological site (fig. 369) occurs in areas that have a high percentage of rock outcrop. The soils are typically sandy and shallow and thus have a very low

Figure 368.—Talus Slope (Blackbrush-Shadscale) ecological site (R035XY018UT).

Figure 369.—Shallow Sand Rock Pocket (Utah Juniper/Two-Needle Pinyon) ecological site (R035XY019UT).

Figure 370.—Colorado Plateau Riparian Complex Perennial (Valley Type IV – B4c Stream Type) ecological site (R035XY020UT).

water-holding capacity. However, they receive extra water in the form of runoff from surrounding rock outcrop and cliffs. Slopes range from 2 to 30 percent, and steep, rugged cliffs are common. Common plant species include littleleaf mountain mahogany (*Cercocarpus intricatus*), Utah serviceberry (*Amelanchier utahensis*), Stansbury cliffrose (*Purshia stansburiana*), Utah juniper (*Juniperus osteosperma*), twoneedle pinyon (*Pinus edulis*), skunkbrush sumac (*Rhus aromatic* var. *trilobata*), Bigelow sage (*Artemisia bigelovii)*, singleleaf ash (*Fraxinus anomala*), and a wide variety of native grasses.

R035XY020UT—Colorado Plateau Riparian Complex Perennial (Valley Type IV – B4c Stream Type)*.* This ecological site (fig. 370) developed within a natural gorge/canyon (Valley Type IV) and has a narrow but continuous ribbon of riparian vegetation. It is characterized by a B4c stream channel that has bed material consisting dominantly of gravel with components of sand and cobbles. This site has grade control due to bedrock within the channel and bedrock from the canyon walls. It has two native plant community components that generally occur in a continuous narrow ribbon throughout the riparian corridor. The plant community closest to the stream is dominantly composed of Baltic rush (*Juncus arcticus* ssp. *littoralis*), coyote willow (*Salix exigua*), and common threesquare (*Schoenoplectus pungens*). The second plant community is dominantly composed of Fremont cottonwood (*Populus fremontii)*.

R035XY021UT—Colorado Plateau Riparian Complex Perennial (Valley Type VIII - B4c Stream Type)*.* This ecological site (fig. 371) occurs in wide alluvial valleys (Valley Type VIII). It is characterized by a B4c stream type that has bed material consisting dominantly of gravel with components of sand and cobbles. The parent material is composed of alluvium derived from mixed materials. The canyon bottoms have a single thread channel with associated flood plains and flood-plain steps. The

Figure 371.—Colorado Plateau Riparian Complex Perennial (Valley Type VIII - B4c Stream Type) ecological site (R035XY021UT).

Figure 372.—Colorado Plateau Riparian Complex Perennial (Valley Type IV – C4/F4 Stream Type) ecological site (R035XY022UT).

Figure 373.—Colorado Plateau Riparian Complex Perennial (Valley Type II - B3 Stream Type) ecological site (R035XY023UT).

site has two native plant community components that generally occur in a continuous narrow ribbon throughout the riparian corridor. The first plant community is located closest to the stream and is dominantly composed of Baltic rush (*Juncus arcticus* ssp. *littoralis*) and coyote willow (*Salix exigua*). The second plant community, located on the flood-plain step, is predominantly composed of Fremont cottonwood (*Populus fremontii)*. A third plant community has developed as the result of channel downcutting. This community occurs on terraces and is predominantly composed of basin big sagebrush (*Artemisia tridentata* var. *tridentata*).

R035XY022UT—Colorado Plateau Riparian Complex Perennial (Valley Type IV – C4/F4 Stream Type)*.* This ecological site (fig. 372) occurs in a natural gorge (Valley Type IV) that is wide enough to allow the stream to meander in the valley bottom. The dominant channel type is C4, and the stream bed material is composed dominantly of gravel and sand. The site has three plant community components. The first plant community consists of common reed (*Phragmites australis*) and coyote willow (*Salix exigua*) and occurs on streambanks and flood plains. The second plant community is composed of Fremont cottonwood (*Populus fremontii)* and occurs on flood-plain steps. The third plant community is composed of basin big sagebrush (*Artemisia tridentata* var. *tridentata*) and occurs on terraces.

R035XY023UT—Colorado Plateau Riparian Complex Perennial (Valley Type II - B3 Stream Type)*.* This ecological site (fig. 373) occurs in colluvial valleys (Valley Type II). The dominant channel type is B4 with a gravelly or cobbly stream bed. This site supports shrub vegetation taller than that on other sites. It has three plant community components. The first plant community, located closest to the channel, consists of scouringrush horsetail (*Equisetum hyemale*), thinleaf alder (*Alnus tenuifolia*), and water birch (*Betula occidentalis*). The second plant community is composed of coyote willow (*Salix exigua*), yellow rabbitbrush (*Chrysothamnus viscidiflorus*), and

Figure 374.—Colorado Plateau Riparian Complex (Valley Type IV - F1/G1 Stream Type) ecological site (R035XY029UT).

boxelder (*Acer negundo*) and occurs on the flood-plain step. The third plant community is composed of coyote willow (*Salix exigua*) and basin big sagebrush (*Artemisia tridentata* var. *tridentata*) and occurs on terraces.

R035XY029UT—Colorado Plateau Riparian Complex (Valley Type IV - F1/G1 Stream Type). This ecological site (fig. 374) occurs in very narrow natural gorges (Valley Type IV) where the stream does not have enough room to meander and deposit sediment on an annual cycle. The stream channel is controlled by bedrock. Large floods moving through the canyon scour sediment and any vegetation that may establish itself close to the stream channel. No plant community components are associated with this site.

R035XY030UT—Colorado Plateau Riparian Complex Discontinuous (Valley Type VIII - B5c Stream Type). This ecological site (fig. 375) occurs in wide alluvial

valleys (Valley Type VIII) with a B5c stream type and is characterized by discontinuous stream flow that is influenced by springs. The predominant material of the stream bed is sand with some gravel deposits. Water flows year-round in the channel where springs come to the surface, but the water quickly infiltrates into the channel bottom after the springs stop. The plant community components within this site are narrow and patchy, only occurring close to the spring source. The plant community consists of common threesquare (*Schoenoplectus pungens*) and common reed (*Phragmites australis*) on streambanks and alkali sacaton (*Sporobolus airoides*) and coyote willow (*Salix exigua*) on flood-plain steps.

R035XY032UT—Ephemeral Canyon Scrub. This plant community (fig. 376) occurs in natural gorges (Valley Type IV) where floodwaters only run intermittently during the summer monsoon season. Common plant species are Apache plume (*Fallugia paradoxa*), littleleaf mountain mahogany (*Cercocarpus intricatus*), Utah serviceberry (*Amelanchier utahensis*), little bluestem (*Schizachyrium scoparium*), Indian ricegrass (*Acnatherum hymenoides*), and needle and thread (*Hesperostipa comata*).

R035XY101UT—Desert Alkali Sandy Loam (Alkali Sacaton). This ecological site (fig. 377) occurs in valley bottoms on very gentle slopes. The soils are deep sandy loam or loam with very few rock fragments and are typically alkali. Annual precipitation ranges from 9 to 13 inches. This site is typically grassland and is dominated by alkali sacaton (*Sporobolus airoides*). Other common plants are Indian ricegrass (*Acnatherum hymenoides*), needle and thread (*Hesperostipa comate*), James' galleta (*Pleuraphis jamesii)*, blue grama (*Bouteloua gracilis*), greasewood (*Sarcobatus*

Figure 375.—Colorado Plateau Riparian Complex Discontinuous (Valley Type VIII - B5c Stream Type) ecological site (R035XY030UT).

Figure 376.—Ephemeral Canyon Scrub ecological site (R035XY032UT).

Figure 377.—Desert Alkali Sandy Loam (Alkali Sacaton) ecological site (R035XY101UT).

Figure 378.—Desert Clay (Castle Valley Saltbush) ecological site (R035XY103UT).

vermiculatus), fourwing saltbush (*Atriplex canescens*), rubber rabbitbrush (*Ericameria nauseosa*), and various buckwheat species.

R035XY103UT—Desert Clay (Castle Valley Saltbush). This ecological site (fig. 378) occurs on escarpments, hills, and alluvial flats. Slopes range from very gentle to very steep. The soils are clay or clay loam with few rock fragments. They are moderately deep to shale bedrock. Annual precipitation ranges from 6 to 9 inches. Mat saltbush (*Atriplex corrugata*) or valley saltbush (*Atriplex cuneata*) dominate the site. Other plants include Indian ricegrass (*Acnatherum hymenoides*), desert trumpet (*Eriogonum inflatum*), and shadscale (*Atriplex confertifolia*).

R035XY106UT—Desert Gypsum Loam (Torrey's Jointfir). This ecological site (fig. 379) occurs on gently sloping hills and pediments. Soils are moderately deep or deep loam and are affected by low or moderate amounts of gypsum. Rock fragments are few. Annual precipitation ranges from 6 to 9 inches. Torrey's jointfir (*Ephedra torreyana*), shadscale (*Atriplex confertifolia*), and crispleaf buckwheat (*Eriogonum corymbosum*) are the most abundant plants. Other common plants are Indian ricegrass (*Achnatherum hymenoides*) and James' galleta (*Pleuraphis jamesii)*.

R035XY109UT—Desert Loam (Shadscale). This ecological site (fig. 380) occurs on valley flats and slopes of less than 15 percent. The soils are moderately deep or deep loam and are slightly saline. Rock fragments are few. Annual precipitation ranges from 6 to 9 inches. Shadscale (*Atriplex confertifolia*) dominates the site. Other common plants are Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, winterfat (*Krascheninnikovia lanata*), and valley saltbush (*Atriplex cuneata*).

Figure 379.—Desert Gypsum Loam (Torrey's Jointfir) ecological site (R035XY106UT).

Figure 380.—Desert Loam (Shadscale) ecological site (R035XY109UT).

Figure 381.—Desert Sandy Loam (Blackbrush) ecological site (R035XY121UT).

R035XY121UT—Desert Sandy Loam (Blackbrush). This ecological site (fig. 381) occurs on structural benches. Slopes are less than 20 percent. The soils are loamy sand or sandy loam and are moderately deep or deep. Annual precipitation ranges from 6 to 9 inches. Blackbrush (*Coleogyne ramosissima*) is the dominant plant. Other common plants include Torrey's jointfir (*Ephedra torreyana*), rubber rabbitbrush (*Ericameria nauseosa*), plains pricklypear (*Opuntia polyacantha*), and James' galleta (*Pleuraphis jamesii)*.

R035XY122UT—Desert Shallow Loam (Shadscale). This ecological site (fig. 382) occurs on rolling hills and escarpments. The soils are shallow loam. The water-holding capacity is very low, and water flow patterns are visible on the soil surface. Rock fragments are few. Annual precipitation ranges from 6 to 9 inches. Total production on this site is very low. Torrey's jointfir (*Ephedra torreyana*), shadscale (*Atriplex confertifolia*), and crispleaf buckwheat (*Eriogonum corymbosum*) are the most abundant plants on this site. Other common plants are Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, and valley saltbush (*Atriplex cuneata*).

R035XY124UT—Desert Shallow Clay (Mat Saltbush). This ecological site (fig. 383) occurs on escarpments, hills, and alluvial flats. Slopes range from very gentle to very steep. The soils are clay or clay loam and shallow to shale bedrock. Rock fragments are few. Annual precipitation ranges from 6 to 9 inches. Mat saltbush (*Atriplex corrugata*) dominates the site. Other plants include Indian ricegrass (*Acnatherum hymenoides*), desert trumpet (*Eriogonum inflatum*), shadscale (*Atriplex confertifolia*), and galleta (*Pleuraphis jamesii)*.

Figure 382.—Desert Shallow Loam (Shadscale) ecological site (R035XY122UT).

Figure 383.—Desert Shallow Clay (Mat Saltbush) ecological site (R035XY124UT).

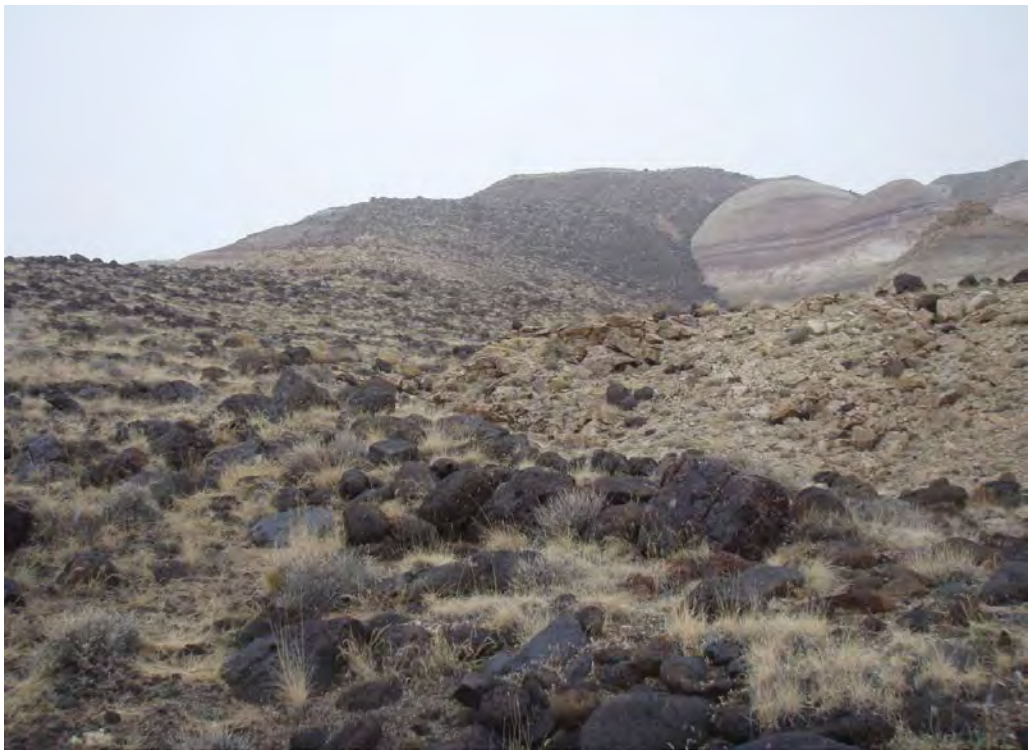

Figure 384.—Desert Shallow Clay (Shadcale) ecological site (R035XY125UT).

R035XY125UT—Desert Shallow Clay (Shadcale). This ecological site (fig. 384) occurs on shale hills and structural benches at elevations between 4,000 and 6,000 feet. Annual precipitation ranges from 7 to 9.5 inches, of which about half occurs as convective thunderstorms during July through October. The plant community is dominated by shadscale (*Atriplex confertifolia*), and James' galleta (*Pleuraphis jamesii)* is the most common understory grass species. The reference plant community is resistant to change due to a harsh soil environment, the inability of vegetation to carry fire, and the grazing resistance of shadscale.

R035XY126UT—Desert Shallow Gypsum (Torrey's Jointfir). This ecological site (fig. 385) occurs on hills. Slopes range from 5 to 50 percent. The soils are shallow loam and are affected by low or moderate amounts of gypsum. The water-holding capacity and total production of this site are very low. Annual precipitation ranges from 6 to 9 inches. Torrey's jointfir (*Ephedra torreyana*) and shadscale (*Atriplex confertifolia*) are the most abundant plants. Other common plants are Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, Bigelow sage (*Artemisia bigelovii)*, and low rabbitbrush (*Chrysothamnus viscidiflorus*).

R035XY130UT—Desert Shallow Sandy Loam (Shadscale). This ecological site (fig. 386) occurs at elevations between 3,600 and 6,000 feet. The soils are shallow and sandy loam. Average annual precipitation ranges from 5 to 8 inches. The soil moisture regime is aridic, and the soil temperature regime is mesic. Vegetation is scarce on this site, and plants are widely spaced. Typical native plant species include shadscale saltbush (*Atriplex confertifolia*), Torrey's jointfir (*Ephedra torreyana*), Indian ricegrass (*Achnatherum hymenoides*), Jones' pepperweed (*Lepidium montanum* var. *jonesii)*, and James' galleta (*Pleuraphis jamesii)*.

Figure 385.—Desert Shallow Gypsum (Torrey's Jointfir) ecological site (R035XY126UT).

Figure 386.—Desert Shallow Sandy Loam (Shadscale) ecological site (R035XY130UT).

Figure 387.—Desert Shallow Sandy Loam (Blackbrush) ecological site (R035XY133UT).

R035XY133UT—Desert Shallow Sandy Loam (Blackbrush). This ecological site (fig. 387) occurs on dissected pediments and structural benches. The soils are loamy sand or sandy loam and shallow. Annual precipitation ranges from 6 to 9 inches. Blackbrush (*Coleogyne ramosissima*) is the dominant plant. Other common plants include Torrey's jointfir (*Ephedra torreyana*), shadscale (*Atriplex confertifolia*), narrowleaf yucca (*Yucca angustissima*), and James' galleta (*Pleuraphis jamesii)*.

R035XY136UT—Desert Stony Loam (Shadscale-Bud Sagebrush). This ecological site (fig. 388) occurs on terraces, pediments, rolling hills, and escarpments. The soils are loamy-skeletal and typically have more than 50 percent rock fragments throughout. Annual precipitation ranges from 5 to 7 inches. Shadscale (*Atriplex confertifolia*) and James' galleta (*Pleuraphis jamesii)* are the most abundant plants on this site. Other common plants are Indian ricegrass (*Achnatherum hymenoides*) and bud sagebrush (*Picrothamnus desertorum*).

R035XY139UT—Desert Stony Loam (Blackbrush). This ecological site (fig. 389) occurs on bouldery hillsides. Slopes range from 15 to 50 percent. The soils are loamy and have many rock fragments on the surface and throughout the profile. Annual precipitation ranges from 6 to 9 inches. Blackbrush (*Coleogyne ramosissima*) is the dominant plant. Other common plants include Torrey's jointfir (*Ephedra torreyana*), Bigelow sage (*Artemisia bigelovii)*, rubber rabbitbrush (*Ericameria nauseosa*), and James' galleta (*Pleuraphis jamesii)*.

R035XY142UT—Desert Very Shallow Gypsum (Torrey's Jointfir). This ecological site (fig. 390) occurs on hills. Slopes range from 5 to 50 percent. The soils are very

Figure 388.—Desert Stony Loam (Shadscale-Bud Sagebrush) ecological site (R035XY136UT).

Figure 389.—Desert Stony Loam (Blackbrush) ecological site (R035XY139UT).

Figure 390.—Desert Very Shallow Gypsum (Torrey's Jointfir) ecological site (R035XY142UT).

shallow loam and are affected by moderate amounts of gypsum. The water-holding capacity and total production of this site are very low. Annual precipitation ranges from 6 to 9 inches. Torrey's jointfir (*Ephedra torreyana*), Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, and crispleaf buckwheat (*Eriogonum corymbosum*) are common on this site.

R035XY146UT—Desert Very Steep Stony Loam (Shadscale). This ecological site (fig. 391) occurs on bouldery hillsides. Slopes range from 45 to 65 percent. The soils are loamy and have abundant rock fragments on the surface and throughout the profile. The water-holding capacity and total production of this site are very low. Annual precipitation ranges from 6 to 9 inches. Shadscale (*Atriplex confertifolia*) is the most abundant plant on this site. Other common plants are Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, Bigelow sage (*Artemisia bigelovii)*, mesa dropseed (*Sporobolus flexuosus*), princesplume (*Stanleya pinnata*), and other perennial native forbs.

R035XY206UT—Semidesert Gravelly Loam (Utah Juniper-Pinyon). This ecological site (fig. 392) occurs on rocky hillsides. Slopes range from 10 to 40 percent. The soils are deep and loamy and have a moderate amount of rock fragments. Annual precipitation ranges from 9 to 13 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Blue grama (*Bouteloua gracilis*) is the most common grass. Other common plants are Torrey's jointfir (*Ephedra torreyana*), shadscale (*Atriplex confertifolia*), roundleaf buffaloberry (*Shepherdia rotundifolia*), and pretty buckwheat (*Eriogonum bicolor*).

R035XY209UT—Semidesert Loam (Wyoming Big Sagebrush). This ecological site (fig. 393) occurs on gently sloping alluvial flats, alluvial fans, and structural

Figure 391.—Desert Very Steep Stony Loam (Shadscale) ecological site (R035XY146UT).

Figure 392.—Semidesert Gravelly Loam (Utah Juniper-Pinyon) ecological site (R035XY206UT).

Figure 393.—Semidesert Loam (Wyoming Big Sagebrush) ecological site (R035XY209UT).

benches. The soils are typically deep and loamy with very few rock fragments. Annual precipitation ranges from 9 to 13 inches. This site is historically dominated by Wyoming big sagebrush (*Artemisia tridentata* var. *wyomingensis*) but has been invaded by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*) in many areas. Russian wildrye (*Psathyrostachys juncea*) was introduced and maintains dominance in the Onion Flats area. Other common plants are Torrey's jointfir (*Ephedra torreyana*), Indian ricegrass (*Acnatherum hymenoides*), and blue grama (*Bouteloua gracilis*).

R035XY210UT—Semidesert Sand (Blackbrush). This ecological site (fig. 394) occurs on stabilized dunes on mesas and structural benches. Slopes range from 2 to 12 percent. The soils are very deep and sandy with very few rock fragments. Annual precipitation ranges from 9 to 13 inches. Blackbrush (*Coleogyne ramosissima*) is the dominant plant. Other common plants include sand sagebrush (*Artemisia filifolia*), Cutler's jointfir (*Ephedra cutleri)*, Indian ricegrass (*Acnatherum hymenoides*), and James' galleta (*Pleuraphis jamesii)*.

R035XY212UT—Semidesert Sand (Fourwing Saltbush). This ecological site (fig. 395) occurs on sandy flats and gently sloping dunes on mesas and structural benches. The soils are deep and sandy with very few rock fragments. Annual precipitation ranges from 9 to 13 inches. Fourwing saltbush (*Atriplex canescens*) and native bunchgrasses are very productive and dominant on this site. Other common plants are needle and thread (*Hesperostipa comate*), mesa dropseed (*Sporobolus flexuosus*), Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, and plains pricklypear (*Opuntia polyacantha*).

Figure 394.—Semidesert Sand (Blackbrush) ecological site (R035XY210UT).

Figure 395.—Semidesert Sand (Fourwing Saltbush) ecological site (R035XY212UT).

Figure 396.—Semidesert Sandy Loam (Fourwing Saltbush) ecological site (R035XY215UT).

R035XY215UT—Semidesert Sandy Loam (Fourwing Saltbush). This ecological site (fig. 396) occurs on valley bottoms, high stream terraces, and mesa tops. Slopes are typically less than 10 percent. The soils are deep sandy loam or loamy fine sand with very few rock fragments. Annual precipitation ranges from 9 to 13 inches. Native bunchgrasses are very productive and typically dominate this site. Other common plants are fourwing saltbush (*Atriplex canescens*), needle and thread (*Hesperostipa comate*), mesa dropseed (*Sporobolus flexuosus*), Indian ricegrass (*Achnatherum hymenoides*), blue grama (*Bouteloua gracilis*), James' galleta (*Pleuraphis jamesii)*, sandhill muhly (*Muhlenbergia pungens*), and plains pricklypear (*Opuntia polyacantha*).

R035XY216UT—Semidesert Sandy Loam (Wyoming Big Sagebrush). This ecological site (fig. 397) occurs on gently sloping alluvial flats, alluvial fans, and structural benches. The soils are typically deep sandy loam with very few rock fragments. Annual precipitation ranges from 9 to 13 inches. This site is historically dominated by Wyoming big sagebrush (*Artemisia tridentata* var. *wyomingensis*) but has been invaded by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*) in some areas. Other common plants are fourwing saltbush (*Atriplex canescens*), Wright's bird's beak (*Cordylanthus wrightii)*, Indian ricegrass (*Acnatherum hymenoides*), and blue grama (*Bouteloua gracilis*).

R035XY218UT—Semidesert Sandy Loam (Blackbrush). This ecological site (fig. 398) occurs on structural benches and mesas. Runoff is high. Typically, slopes range from 2 to 15 percent. The soils on this site are moderately deep and well drained. The available water capacity is low. Typical native plant species are blackbrush (*Coleogyne ramosissima*), fourwing saltbush (*Atriplex canescens*),

Figure 397.—Semidesert Sandy Loam (Wyoming Big Sagebrush) ecological site (R035XY216UT).

Figure 398.—Semidesert Sandy Loam (Blackbrush) ecological site (R035XY218UT).

Figure 399.—Semidesert Shallow Loam (Torrey's Jointfir) ecological site (R035XY220UT).

shadscale saltbush (*Atriplex confertifolia*), Torrey Mormon tea (*Ephedra torreyana*), Indian ricegrass (*Achnatherum hymenoides*), needle and thread (*Hesperostipa comate*), Jones' pepperweed (*Lepidium montanum* var. *jonesii)*, and James' galleta (*Pleuraphis jamesii)*.

R035XY220UT—Semidesert Shallow Loam (Torrey's Jointfir). This ecological site (fig. 399) occurs on hills. Slopes range from 5 to 20 percent. The soils are shallow loam. The water-holding capacity and total production of this site are very low. Annual precipitation ranges from 9 to 13 inches. Torrey's jointfir (*Ephedra torreyana*), James' galleta (*Pleuraphis jamesii)*, Bigelow sage (*Artemisia bigelovii)*, low rabbitbrush (*Chrysothamnus viscidiflorus*), and crispleaf buckwheat (*Eriogonum corymbosum*) are common on this site.

R035XY221UT—Semidesert Shallow Loam (Utah Juniper-Pinyon). This ecological site (fig. 400) occurs on dissected structural benches and rocky hillsides. Slopes range from 10 to 65 percent. The soils are shallow and loamy and have a high amount of rock fragments. Annual precipitation ranges from 9 to 13 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Other common plants are James' galleta (*Pleuraphis jamesii)*, roundleaf buffaloberry (*Shepherdia rotundifolia*), Fremont's mahonia (*Mahonia fremontii)*, and Bigelow sage (*Artemisia bigelovii)*.

R035XY223UT—Semidesert Shallow Clay (Mat Saltbush). This ecological site (fig. 401) occurs on hillslopes, ridges, and breaks. Slopes range from 20 to 50 percent. The soils are shallow clays derived primarily from shale. They have few rock fragments. Annual precipitation ranges from 9 to 13 inches. The soil moisture regime

Figure 400.—Semidesert Shallow Loam (Utah Juniper-Pinyon) ecological site (R035XY221UT).

Figure 401.—Semidesert Shallow Clay (Mat Saltbush) ecological site (R035XY223UT).

Figure 402.—Semidesert Shallow Sand (Blackbrush) ecological site (R035XY224UT).

is ustic aridic, and the soil temperature regime is mesic. This site is dominated by mat saltbush (*Atriplex corrugata*) or valley saltbush (*Atriplex cuneata*). Other common plants are Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, desert trumpet (*Eriogonum inflatum*), and shadescale (*Atriplex confertifolia*).

R035XY224UT—Semidesert Shallow Sand (Blackbrush). This ecological site (fig. 402) is most commonly on structural benches, at elevations between 5,000 and 6,000 feet. Slopes range from 2 to 15 percent. Annual precipitation ranges from 7.5 to 10 inches. The soils are shallow fine sand with few rock fragments on the surface and throughout the profile. The soil moisture regime is ustic aridic, and the soil temperature regime is mesic. The reference plant community is dominated by blackbrush (*Coleogyne ramosissima*). James' galleta (*Pleuraphis jamesii)* and Indian ricegrass (*Achnatherum hymenoides*) are the most common understory grass species.

R035XY227UT—Semidesert Shallow Sand (Utah Juniper-Pinyon). This ecological site (fig. 403) occurs on dissected hillsides. Slopes range from 5 to 50 percent. The soils are shallow sand or sandy loam and typically have a high amount of rock fragments. Annual precipitation ranges from 9 to 13 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Other common plants are James' galleta (*Pleuraphis jamesii)*, roundleaf buffaloberry (*Shepherdia rotundifolia*), Wright's bird's beak (*Cordylanthus wrightii)*, Fremont's mahonia (*Mahonia fremontii)*, and Bigelow sage (*Artemisia bigelovii)*.

R035XY230UT—Semidesert Shallow Sandy Loam (Shadscale). This ecological site (fig. 404) occurs on hillsides. Slopes range from 10 to 50 percent. The soils are

Figure 403.—Semidesert Shallow Sand (Utah Juniper-Pinyon) ecological site (R035XY227UT).

Figure 404.—Semidesert Shallow Sandy Loam (Shadscale) ecological site (R035XY230UT).

Figure 405.—Semidesert Shallow Sandy Loam (Blackbrush) ecological site (R035XY233UT).

shallow sandy loam or loamy sand. Annual precipitation ranges from 9 to 13 inches. Shadscale (*Atriplex confertifolia*), Torrey's jointfir (*Ephedra torreyana*), and broom snakeweed (*Gutierrezia sarothrae*) are the most abundant plants. Other common plants are Indian ricegrass (*Achnatherum hymenoides*) and James' galleta (*Pleuraphis jamesii)*.

R035XY233UT—Semidesert Shallow Sandy Loam (Blackbrush). This ecological site (fig. 405) occurs on structural benches and hills. Slopes are less than 10 percent. The soils are shallow sandy loam and have few rock fragments. Annual precipitation ranges from 9 to 13 inches. Blackbrush (*Coleogyne ramosissima*) is the dominant plant. Other common plants are Cutler's jointfir (*Ephedra cutleri)* and Indian ricegrass (*Achnatherum hymenoides*).

R035XY234UT—Semidesert Shallow Shale (Utah Juniper-Pinyon). This ecological site (fig. 406) occurs on dissected hillsides. Slopes range from 5 to 35 percent. The soils are shallow loam and have a moderate amount of rock fragments. Annual precipitation ranges from 9 to 13 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Other common plants are Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, roundleaf buffaloberry (*Shepherdia rotundifolia*), low rabbitbrush (*Chrysothamnus viscidiflorus*), crispleaf buckwheat (*Eriogonum corymbosum*), and Bigelow sage (*Artemisia bigelovii)*.

R035XY235UT—Semidesert Very Shallow Gravelly Loam (Utah Juniper). This ecological site (fig. 407) occurs on hillsides. Slopes range from 25 to 50 percent. The soils are very shallow loam and have a moderate amount of rock fragments. Annual

Figure 406.—Semidesert Shallow Shale (Utah Juniper-Pinyon) ecological site (R035XY234UT).

Figure 407.—Semidesert Very Shallow Gravelly Loam (Utah Juniper) ecological site (R035XY235UT).

Figure 408.—Semidesert Shallow Sandy Loam (Utah Juniper, Blackbrush) ecological site (R035XY236UT).

precipitation ranges from 9 to 13 inches. Common plants on this site are Utah juniper (*Juniperus osteosperma*), blackbrush (*Coleogyne ramosissima*), Mormon tea (*Ephedra viridis*), James' galleta (*Pleuraphis jamesii)*, roundleaf buffaloberry (*Shepherdia rotundifolia*), low rabbitbrush (*Chrysothamnus viscidiflorus*), and skunkbrush sumac (*Rhus aromatic* var. *trilobata*).

R035XY236UT—Semidesert Shallow Sandy Loam (Utah Juniper, Blackbrush). This ecological site (fig. 408) occurs on structural benches and hillsides. Slopes range from 5 to 45 percent. The soils are very shallow sandy loam and have a moderate amount of rock fragments. Annual precipitation ranges from 9 to 13 inches. Common plants on this site are Utah juniper (*Juniperus osteosperma*), blackbrush (*Coleogyne ramosissima*), Mormon tea (*Ephedra viridis*), James' galleta (*Pleuraphis jamesii)*, littleleaf mountain mahogany (*Cercoarpus intricatus*), and twoneedle pinyon (*Pinus edulis*).

R035XY237UT—Semidesert Shallow Gypsum (Mormontea). This ecological site (fig. 409) occurs on dissected gypsum hills. Slopes range from 15 to 70 percent. The soils are very shallow loam and are affected by moderate amounts of gypsum. The water-holding capacity and total production on this site are very low. Annual precipitation ranges from 9 to 13 inches. Torrey's jointfir (*Ephedra torreyana*), Indian ricegrass (*Achnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, crispleaf buckwheat (*Eriogonum corymbosum*), and shadscale (*Atriplex confertifolia*) are common on this site.

R035XY239UT—Semidesert Shallow Clay (Shadscale-Utah Juniper). This ecological site (fig. 410) occurs on hills. Slopes are less than 25 percent. The soils are

Figure 409.—Semidesert Shallow Gypsum (Mormontea) ecological site (R035XY237UT).

Figure 410.—Semidesert Shallow Clay (Shadscale-Utah Juniper) ecological site (R035XY239UT).

Figure 411.—Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon) ecological site (R035XY240UT).

shallow clay or clay loam and have a moderate amount of rock fragments in the profile. Annual precipitation ranges from 9 to 13 inches. Shadscale (*Atriplex confertifolia*), broom snakeweed (*Gutierrezia sarothrae*), Utah juniper (*Juniperus osteosperma*), Torrey's jointfir (*Ephedra torreyana*), and James' galleta (*Pleuraphis jamesii)* are common on this site.

R035XY240UT—Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon). This ecological site (fig. 411) occurs on steep hillsides. Slopes range from 35 to 70 percent. The soils are shallow loam and have a moderate amount of rock fragments. Annual precipitation ranges from 9 to 13 inches. Common plants on this site are Utah juniper (*Juniperus osteosperma*), Salina wildrye (*Leymus salinus*), desert needlegrass (*Achnatherum speciosum*), Mormon tea (*Ephedra viridis*), James' galleta (*Pleuraphis jamesii)*, Indian ricegrass (*Achnatherum hymenoides*), roundleaf buffaloberry (*Shepherdia rotundifolia*), and twoneedle pinyon (*Pinus edulis*).

R035XY242UT—Semidesert Loam (Shadscale). This ecological site (fig. 412) occurs on gently sloping toeslopes and mesatops and on hillsides. Slopes are less than 35 percent. The soils are deep loam and may have a large amount of rock fragments. Annual precipitation ranges from 9 to 13 inches. Dominant plants are shadscale (*Atriplex confertifolia*) and James' galleta (*Pleuraphis jamesii)*. Other common plants are blue grama (*Bouteloua gracilis*), broom snakeweed (*Gutierrezia sarothrae*), Indian ricegrass (*Achnatherum hymenoides*), desert needlegrass (*Achnatherum speciosum*), Torrey's jointfir (*Ephedra torreyana*), and cleftleaf wildheliotrophe (*Phacelia crenulata*).

Figure 412.—Semidesert Loam (Shadscale) ecological site (R035XY242UT).

Figure 413.—Semidesert Stony Loam (Blackbrush) ecological site (R035XY243UT).

Figure 414.—Semidesert Stony Loam (Utah Juniper-Pinyon) ecological site (R035XY246UT).

R035XY243UT—Semidesert Stony Loam (Blackbrush). This ecological site (fig. 413) is characterized by deep, very cobbly loam soils. It occurs on steep to gently sloping landforms at elevations between 5,000 and 6,000 feet. The soil moisture regime is ustic aridic, and the soil temperature regime is mesic. Blackbrush (*Coleogyne ramosissima*) and Torrey's jointfir (*Ephedra torreyana*) dominate the overstory while Indian ricegrass (*Achnatherum hymenoides*) and James' galleta (*Pleuraphis jamesii)* dominate the understory.

R035XY246UT—Semidesert Stony Loam (Utah Juniper-Pinyon). This ecological site (fig. 414) occurs on hillsides. Slopes range from 20 to 50 percent. The soils are deep loam. A large amount of rock fragments occur in the profile, and fragments are commonly visible on the soil surface. Annual precipitation ranges from 9 to 13 inches. Common plants on this site are Utah juniper (*Juniperus osteosperma*), twoneedle pinyon (*Pinus edulis*), blue grama (*Bouteloua gracilis*), needle and thread (*Hesperostipa comata*), Mormon tea (*Ephedra viridis*), James' galleta (*Pleuraphis jamesii)*, Indian ricegrass (*Achnatherum hymenoides*), roundleaf buffaloberry (*Shepherdia rotundifolia*), and cleftleaf wildheliotrophe (*Phacelia crenulata*).

R035XY260UT—Semidesert Very Steep Stony Loam (Salina Wildrye). This ecological site (fig. 415) occurs primarily on very steep, very rocky slopes. It developed in a continental climate receiving 7 to 11 inches of mostly late-summer precipitation annually. The soils are poorly developed and very rocky throughout. The soil temperature regime is mesic, and the soil moisture regime is ustic aridic. The historic climax plant community is dominated by Salina wildrye (*Leymus salinus*), Indian ricegrass (*Achnatherum hymenoides*), and shadscale (*Atriplex confertifolia*). This site is susceptible to invasion by cheatgrass (*Bromus tectorum*).

Figure 415.—Semidesert Very Steep Stony Loam (Salina Wildrye) ecological site (R035XY260UT).

Figure 416.—Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper) ecological site (R035XY263UT).

Figure 417. —Semidesert Gypsum (Torrey's Jointfir) ecological site (R035XY264UT).

R035XY263UT—Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper). This ecological site (fig. 416) occurs on very steep hillsides. Slopes are more than 50 percent. The soils are deep loam. A large amount of rock fragments occur in the profile, and fragments are commonly visible on the soil surface. Annual precipitation ranges from 9 to 13 inches. Common plants on this site are Utah juniper (*Juniperus osteosperma*), twoneedle pinyon (*Pinus edulis*), blue grama (*Bouteloua gracilis*), Salina wildrye (*Leymus salinus*), Mormon tea (*Ephedra viridis*), desert needlegrass (*Acnatherum speciosum*), Indian ricegrass (*Achnatherum hymenoides*), roundleaf buffaloberry (*Shepherdia rotundifolia*), and Spanish bayonet (*Yucca harrimaniae*).

R035XY264UT—Semidesert Gypsum (Torrey's Jointfir). This ecological site (fig. 417) occurs on hilltops and hillsides. Slopes range from 5 to 30 percent. The soils are deep loam with few rock fragments. Annual precipitation ranges from 9 to 13 inches. Torrey's jointfir (*Ephedra torreyana*), James' galleta (*Pleuraphis jamesii)*, and Bigelow sage (*Artemisia bigelovii)* are the dominant plants. Other common plants are broom snakeweed (*Gutierrezia sarothrae*), Indian ricegrass (*Achnatherum hymenoides*), and alkali sacaton (*Sporobolus airoides*).

R035XY307UT—Upland Sand (Mountain Big Sagebrush). This ecological site (fig. 418) occurs on gently sloping mesa tops and high valley bottoms. The soils are deep sand with very few rock fragments. Annual precipitation ranges from 12 to 16 inches. The dominant plants are needle and thread (*Hesperostipa comata*), brittle pricklypear (*Opuntia fragilis*), and blue grama (*Bouteloua gracilis*). Other common plants are Indian ricegrass (*Acnatherum hymenoides*), sandhill muhly (*Muhlenbergia pungens*), winterfat (*Krascheninnikovia lanata*), buckwheat (*Eriogonum* spp.), and fourwing saltbush (*Atriplex canescens*).

Figure 418.—Upland Sand (Mountain Big Sagebrush) ecological site (R035XY307UT).

Figure 419.—Upland Loam (Mountain Big Sagebrush) ecological site (R035XY308UT).

Figure 420.—Upland Shallow Sand (Pinyon-Utah Juniper) ecological site (R035XY314UT).

R035XY308UT—Upland Loam (Mountain Big Sagebrush). This ecological site (fig. 419) occurs on gently sloping hills. Slopes are less than 15 percent. The soils are typically deep sandy loam with very few rock fragments. Annual precipitation ranges from 13 to 16 inches. This site is historically dominated by Wyoming big sagebrush (*Artemisia tridentata* var. *wyomingensis*) but has been invaded by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*) in some areas. Other common plants are needle and thread (*Hesperostipa comate*), gooseberryleaf globemallow (*Spaeralcea grossulariifolia*), Indian ricegrass (*Acnatherum hymenoides*), plains pricklypear (*Opuntia polyacantha*), and blue grama (*Bouteloua gracilis*).

R035XY314UT—Upland Shallow Sand (Pinyon-Utah Juniper). This ecological site (fig. 420) occurs on dissected structural benches on moderate slopes. The soils are shallow and sandy with few rock fragments. Annual precipitation ranges from 13 to 16 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Other common plants are Utah serviceberry (*Amelanchier utahensis*), littleleaf mountain mahogany (*Cercocarpus intricatus*), plains pricklypear (*Opuntia polyacantha*), and Mormon tea (*Ephedra viridis*).

R035XY315UT—Upland Shallow Loam (Pinyon-Utah Juniper). This ecological site (fig. 421) occurs on hillsides and mesa tops or on slopes ranging from 25 to 45 percent. Soils are shallow and loamy with few rock fragments. Annual precipitation ranges from 13 to 16 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Other common plants are Utah serviceberry (*Amelanchier utahensis*), littleleaf mountain mahogany (*Cercocarpus intricatus*), Fremont's mahonia (*Mahonia fremontii)*, and Mormon tea (*Ephedra viridis*).

Figure 421.—Upland Shallow Loam (Pinyon-Utah Juniper) ecological site (R035XY315UT).

Figure 422.—Upland Steep Stony Loam (Utah Juniper-Pinyon) ecological site (R035XY317UT).

Figure 423.—Upland Stony Loam (Pinyon-Utah Juniper) ecological site (R035XY321UT).

R035XY317UT—Upland Steep Stony Loam (Utah Juniper-Pinyon). This ecological site (fig. 422) occurs on hillsides. Slopes range from 45 to 65 percent. The soils are shallow and loamy with abundant rock fragments. Annual precipitation ranges from 13 to 16 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Other common plants are birchleaf mountain mahogany (*Cercocarpus montanus*), Indian ricegrass (*Acnatherum hymenoides*), blue grama (*Bouteloua gracilis*), Fremont's mahonia (*Mahonia fremontii)*, Spanish bayonet (*Yucca harrimaniae*), and roundleaf buffaloberry (*Shepherdia rotundifolia*).

R035XY321UT—Upland Stony Loam (Pinyon-Utah Juniper). This ecological site (fig. 423) occurs on hillsides. Slopes range from 2 to 35 percent. The soils are moderately deep or deep and are loamy with abundant rock fragments. Annual precipitation ranges from 13 to 16 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Other common plants are Geyer's sedge (*Carex geyeri)*, brittle pricklypear (*Opuntia fragilis*), blue grama (*Bouteloua gracilis*), Navajo tea (*Thelesperma subnudum*), and Utah penstemon (*Penstemon utahensis*).

R035XY323UT—Upland Stony Sand (Utah Juniper-Pinyon). This ecological site (fig. 424) occurs on hillsides. Slopes range from 45 to 65 percent. The soils are moderately deep or deep and are sandy with abundant rock fragments. Annual precipitation ranges from 13 to 16 inches. This site is dominated by twoneedle pinyon (*Pinus edulis*). Other common plants are Utah juniper (*Juniperus osteosperma*), Salina wildrye (*Leymus salinus*), Indian ricegrass (*Acnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, and roundleaf buffaloberry (*Shepherdia rotundifolia*).

Figure 424.—Upland Stony Sand (Utah Juniper-Pinyon) ecological site (R035XY323UT).

Figure 425.—Upland Sand (Utah Juniper-Pinyon) ecological site (R035XY324UT).

Figure 426.—Upland Very Steep Shallow Loam (Pinyon-Utah Juniper) ecological site (R035XY325UT).

R035XY324UT—Upland Sand (Utah Juniper-Pinyon). This ecological site (fig. 425) occurs on hillsides. Slopes are less than 30 percent. The soils are moderately deep or deep and are sandy with few rock fragments. Annual precipitation ranges from 13 to 16 inches. This site is dominated by twoneedle pinyon (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*). Other common plants are Indian ricegrass (*Acnatherum hymenoides*), James' galleta (*Pleuraphis jamesii)*, blue grama (*Bouteloua gracilis*), littleleaf mountain mahogany (*Cercocarpus intricatus*), and roundleaf buffaloberry (*Shepherdia rotundifolia*).

R035XY325UT—Upland Very Steep Shallow Loam (Pinyon-Utah Juniper). This ecological site (fig. 426) occurs on very steep hillsides with abundant rock outcrop and slopes ranging from 45 to 65 percent. The soils are shallow and loamy with abundant rock fragments. Annual precipitation ranges from 13 to 16 inches. This site is dominated by Utah juniper (*Juniperus osteosperma*) and twoneedle pinyon (*Pinus edulis*). Other common plants are Indian ricegrass (*Acnatherum hymenoides*), Salina wildrye (*Leymus salinus*), littleleaf mountain mahogany (*Cercocarpus intricatus*), and roundleaf buffaloberry (*Shepherdia rotundifolia*).

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 verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact

on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA-SCS, 1961).

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 in all soil surveys.

The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units."

Prime Farmland and Other Important Farmlands

Table 10 lists the map units in the survey area that are considered prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland 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 quality, 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. The water supply is dependable and of adequate quality. Prime farmland 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.

A recent trend in land use in some areas 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.

For some soils identified in the table as prime farmland, 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.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed,

fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Land Management

In table 11, parts I through IV, interpretive ratings are given for various aspects of land management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified land management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the table 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 land management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for *fire damage* and *seedling mortality* are expressed as low, moderate, and high. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

Rating class terms for *hazard of erosion* are expressed as slight, moderate, severe, and very severe. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for erosion is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for land management practices.

Planting

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive

layer, and slope. Ruts form as a result of the operation of planting equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Hazard of Erosion and Suitability for Roads

Ratings in the column *hazard of erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in areas where 50 to 75 percent of the surface has been exposed by different kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Site Preparation

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Site Restoration

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreation

The soils of the park are rated in table 12, parts I and II, according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the table 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 table 12 can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Foot traffic and equestrian 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.

Mountain bike and off-road vehicle 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, depth to a water table, ponding, slope, flooding, and texture of the surface layer.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading “Soil Properties.”

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Dwellings and Small Commercial Buildings

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 13 shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Roads and Streets, Shallow Excavations, and Landscaping

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 14 shows the degree and kind of soil limitations that affect local roads and streets, shallow excavations, and landscaping.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table 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).

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.

Landscaping requires soils on which turf, trees, and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sewage Disposal

Table 15 shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by

special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer 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. Saturated hydraulic conductivity (K_{sat}), 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, saturated hydraulic conductivity (K_{sat}), depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Saturated hydraulic conductivity (K_{sat}) 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 K_{sat} rate of more than 14 micrometers per second 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.

Source of Gravel and Sand

Table 16 gives information about the soils as potential sources of gravel and sand. Normal compaction, minor processing, and other standard construction practices are assumed.

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. Only the likelihood of finding material in suitable quantity is

evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness. The ratings are for the whole soil, from the surface to a depth of about 6 feet.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

Source of Reclamation Material, Roadfill, and Topsoil

Table 17 gives information about the soils as potential sources of reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated *good, fair,* or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the table. Numerical ratings between 0.00 and 0.99 are given after the specified features. These numbers 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.

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).

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.

Ponds and Embankments

Table 18 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the saturated hydraulic conductivity (K_{sat}) of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are

fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, K_{sat} of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering properties, physical and chemical properties, and pertinent soil and water features.

Engineering Properties

Table 19 gives the engineering classifications and the range of engineering properties for the layers of each soil in the park.

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.”

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

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 250 millimeters in diameter and 70 to 250 millimeters 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.

Physical Soil Properties

Table 20 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the park. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, 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, saturated hydraulic conductivity (K_{sat}), 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 linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water

and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on the basis of measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low,* a change of less than 3 percent; *moderate,* 3 to 6 percent; *high,* 6 to 9 percent; and *very high,* greater than 9 percent.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, 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

Table 21 shows estimates of some erosion factors that affect a soil's potential for different uses. These estimates are given for each layer of every soil for K factors and are given as one rating for the entire soil for the T factor, the wind erodibility group, and the wind erodibility index. Values are reported for each soil in the park. Estimates are based on field observations and on test data for these and similar soils.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Soil erosion factors (Kw) and (Kf) quantify soil detachment by runoff and raindrop impact. These erosion factors are indexes used to predict the long-term average soil loss from sheet and rill erosion under crop systems and conservation techniques. Factor K is one of six 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 K_{sat}.

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.

The procedure for determining the Kf factor is outlined in Agriculture Handbook 703, "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," USDA, Agricultural Research Service, 1997.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments. In horizons where total rock fragments are 15 percent or more, by volume, the Kw factor is always less than the Kf factor.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size. Soil horizons that do not have rock fragments are assigned equal Kw and Kf factors.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey 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.

Soil Features

Table 22 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, 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, saturated hydraulic conductivity (K_{sat}), 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 23 gives estimates of various soil 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 a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 23 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. The table 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.

Chemical Soil Properties

Table 24 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the park. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the

salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced saturated hydraulic conductivity (K_{sat}) and aeration, and a general degradation of soil structure.

Formation and Classification of the Soils

This section relates the soils in Capitol Reef National Park (Capitol Reef NP) to the major factors of soil formation and describes the system of soil classification.

Factors of Soil Formation

Soil formation, or pedogenesis, consists of the physical and chemical processes that determine the characteristics and properties of soils. There are several conceptual models of soil formation, the most well known of which is the factors of soil formation. This model was first formulated by V.V. Dokuchaev, a 19th century Russian pedologist, and later formalized by Hans Jenny. In 1941, Jenny published “Factors of Soil Formation,” in which he described soil as a function of five soil-forming factors, namely, climate, organisms, relief, parent material, and time. This model, developed from thousands of observations of archived soils, postulated that soils that formed under similar circumstances tended to have similar properties, such as clay content, depth of solum, and pH. As soils can be incredibly varied across a landscape, using the factors of soil formation to inference soil-forming processes can help predict the occurrence of similar soils or patterns of soils on a landscape. Awareness of these relationships is important for understanding and using soil surveys and managing the land.

Climate refers to the amount and type of precipitation and the temperature at which a soil forms. The timing of the precipitation (i.e, during warm or cold seasons or during the growing season for most plants) can also be very important in differentiating soils. Organisms include all living things present in or acting upon the soil, from the macro scale to the microscopic. Relief describes the landscape on which the soil occurs and includes steepness and aspect of slopes. Parent material is the material in which a soil forms. This material may be geologic or organic and residual or transported. Climate, organisms, relief, and parent material act over time, from the present to millions of years ago, to produce the soils observed today.

Historically, soil scientists have tried to isolate the factors of soil formation into chronofunctions or sequences that hold one variable constant in a developmental sequence so that its effect on pedogenesis can be studied. Although these developmental sequences can be useful for understanding the formative processes occurring in the soil, in practice, the factors of soils formation are often interrelated and are difficult to isolate. Many scientists, including Jenny, later generalized the factors of soil formation into a theory of energy fluxes: S — f(Lo, Px, t). The resulting soil is a function of the initial conditions (Lo) and flux factors (Px) over time. This general model is better able to incorporate divergence of soil properties in soils with similar factors of soil formation and convergence of soil properties in soils with disparate factors of soil formation. Many weathering processes are conceptually realized as energy inputs necessary to effect a change. For example, hydrolysis during mineral weathering (the process of converting primary, or rock minerals, into secondary, or pedogenic minerals) requires energy to break and reform chemical bonds. Similarly, soils with little pedogenic development, such as Entisols, are considered to have had minimal energy inputs that order and form the soil into its component morphological features and horizons.

Figure 427.—Calcium carbonate pendants in the Moab soil in map unit 46 (Moab-Abra family complex, 1 to 12 percent slopes). Rock fragments facilitate the accumulation of carbonates on their lower surfaces as water adheres to the bottom after leaching, eventually evaporating and leaving the precipitated carbonate. The rock is 20 centimeters in length.

Soil scientists also use geomorphic properties to determine age relationships and possible mechanisms of formation. For example, on stream terraces, the youngest soils are near the existing stream channel and progressively older soils occur in positions further away and upwards from the channel. Three basic tenets of geomorphology help to determine relative ages of surfaces: (1) younger materials overlie older materials, (2) surfaces are younger than the sediments on which they occur, and (3) surfaces that cut layers are younger than all the layers which they transect (Birkeland, 1984). Sedimentary strata, such as those composing the majority of parent materials in Capitol Reef NP, follow similar rules.

Soils develop three-dimensionally on a landscape and may vary across a continuum of properties. In soil taxonomy, these properties are constrained into discreet categories to help understand the processes occurring during pedogenesis. In a soil survey, map units may contain a range of properties around the central concept of the “typical” soil described within that map unit. Pedons are described by horizons, or horizontal layers, within a soil that have similar properties. Most soil materials are divided into three general morphologic horizon types: A, B, and C horizons. The A horizon is commonly at the soil surface and exhibits an accumulation of organic matter which gives it a darker color than underlying horizons. This horizon is an eluvial horizon, or a horizon from which materials, such as clay, carbonates, cations, or iron oxides, are removed and translocated. The B horizon is a zone of alteration and can exhibit many properties, such as the accumulation of clay or carbonates or changes in color or structure compared to the unaltered parent material. B horizons are considered illuvial horizons, or zones in which translocated materials may accumulate. The C horizon consists of relatively unaltered, unconsolidated parent material. R horizons consist of bedrock.

Soil scientists also designate surface and subsurface diagnostic horizons, which may encompass part of one to several morphologic horizons. In Capitol Reef NP, soils commonly have ochric horizons at the surface. These diagnostic horizons exhibit some degree of change, but they are not dark enough or are too thin to indicate the accumulation of organic material necessary for a mollic horizon. In the subsurface soil, common diagnostic horizons in the park include calcic horizons, indicating accumulation of calcium carbonates (fig. 427); argillic horizons, indicating clay accumulation; natric horizons, indicating clay and sodium accumulation and dispersion of soil particles (fig. 428); gypsic horizons, indicating accumulation of gypsum (fig. 429); salic horizons, indicating accumulation of soluble salts (fig. 430); and cambic

Figure 428.—A soil in Hartnet Draw showing development of columnar structure and accumulation of clay, sodium salts, and carbonates in a natric horizon. Scale is in centimeters.

Figure 429.—Pedogenic gypsum.

horizons, which are zones of change that exhibit increased clay content, redder colors, or stronger structure than the parent material but that are too weakly developed to meet the requirements for the other subsurface diagnostic horizons.

Parent Material

Parent material refers to the original material from which a soil formed through physical and chemical weathering processes. This material may be geologic or organic in nature and unconsolidated or cemented to varying degrees. The inherent properties of the parent material, such as grain size, color, and chemistry, have a profound effect on the properties of the soils that subsequently develop. In general, soils reflect the characteristics of parent materials more strongly in arid climates than in humid climates because chemical weathering and leaching occur at a faster rate in humic climates. For describing soil formation, geologic parent material is typically separated based on mode of deposition. In Capitol Reef NP, there are four main types of parent material: (1) eolian material, which is carried by wind; (2) alluvium, which is material transported by moving water; (3) colluvium, which is material transported downslope by gravity, such as rockfall or landslides; and (4) residuum, which is bedrock that has weathered in place.

Transported parent materials may have origins in local sources or may be carried long distances before deposition. Typically, more viscous fluids are capable of transporting larger particles, but the size of the transported particles also depends on depositional energy. Transported materials also tend to be better sorted as the viscosity of the transporting fluid decreases.

Eolian, or windblown, material is very well sorted, and soils that formed in these deposits typically have fine sandy loam textures and very few coarse fragments (fig. 431). Eolian deposits may form dunes with very deep profiles (as with Mido and

Calladito soils) or shallow sand sheets over bedrock (as with Arches and Nalcase soils). The eolian soils that develop from this material are the result of episodic deposition over a long period of time. Some samples in nearby Canyonlands National Park have been dated to 46,000 years ago, with depositional events continuing up to the present day in varying degrees of intensity (Reynolds et al., 2006).

Alluvium, or water-transported material, is also typically well sorted, and the size of the material depends on the depositional energy of the stream (fig. 432). Fast-moving water can carry larger particles than slower-moving water, and a high-sediment load increases the capacity of the stream to transport larger particles. Alluvial soils occur in canyons and drainages throughout Capitol Reef NP. Most of the flood-plain and terrace soils, including Kwakina and Begay, along the perennial waterways in the

Figure 430.—Accumulation of soluble salts in a salic horizon. The white salts are visible at the top of this horizon where they have dried (at a depth of about 50 centimeters). Scale is in centimeters.

Figure 431.—Profile of a soil that formed in eolian sand deposits on a dune. The soil has uniform textures of fine sand throughout. Scale is in centimeters.

park are composed of sandy or loamy layers. In some areas, they contain larger fragments, such as stones or boulders, evidence of the powerful floods that frequently wash through the canyons. Soils with skeletal particle-size classes, such as Notom and Radnik, are common in areas of high-energy stream deposition. Alluvial fans are another common landform in the park. In some soils, such as Chilton, the parent material that was deposited as streams flowed off mountains and escarpments and then rapidly lost energy is commonly gravelly.

The third transported parent material in Capitol Reef is colluvium, or material transported by gravity. Colluvium occurs on steep talus slopes and scarp slopes throughout the park and is common on the upper slopes of the Chinle Formation, visible along Scenic Drive (fig. 433). Soils that developed from colluvium typically have many rocks, ranging from gravel to boulders, throughout their profiles and on

the surface. The textures of the soils depend largely on the geological origin of the colluvial material. Sandstones, such as the Wingate Sandstone, typically develop into sandy soils (such as Mathis), while siltstones, such as the Moenkopi Formation, typically develop into loamier soils (such as Simel).

In contrast to the soils with transported parent materials, soils that formed in residuum weathered in place from the existing bedrock (fig. 434). Although few soils weather solely from the underlying rocks, many have a residual component in the lower portion of their profile. These soils reflect the general chemistry and textural

Figure 432.—Profile of a soil that formed in alluvium from Pleasant Creek. (Scale is in centimeters.) In young soils relatively close to the channel, alternating layers of gravelly or cobbly and clast-free soil material are common. The stream meanders over time, and deposits alternate between over-bank and over-channel. Within a single depositional event, sediments often exhibit a fining upward sequence as flood waters lose energy.

Figure 433.—Colluvium of the Wingate Sandstone mantles the upper slopes of the Chinle Formation. Depending on the depth of the colluvium, soils that formed in areas such as these may have sandy surface layers over loamy or clayey subsurface layers that reflect the different lithologies of the parent materials.

composition of the parent rocks and commonly have a layer of weathered paralithic material above the bedrock. Soils that formed in residuum include Emco and Quezcan (clayey soils that formed in bentonitic mudstones within the Morrison and Chinle Formations, respectively) and Reef (skeletal soils that formed in the fractured sandstone of the Moenkopi Formation). Goblin and Retsabal soils that formed in gypsum layers of the Carmel Formation are also residual but may have a cap of eolian material on the surface (fig. 435).

Parent materials are further divided according to rock type and mineralogy. Igneous rocks, which formed from molten lava, can be intrusive or extrusive. Intrusive rocks, such as granite, diorite, and gabbro, have crystals with large sizes due to cooling in

place deep within the earth. Extrusive rocks, including rhyolite, andesite, and basalt, are cooled relatively quickly in volcanic eruptions and have small crystals. Examples of igneous rocks in Capitol Reef NP include the volcanic dikes in Cathedral Valley and the pediment, terrace gravel, and boulder deposits of basaltic origin that cover many of the surfaces in the northern portion of the park. Sedimentary rocks, which make up the majority of the parent materials of soils in the park, formed as material weathered, was transported and deposited, and was eventually cemented either through chemical glues (most commonly carbonates or iron oxides) or by pressure. Sedimentary rock can originate in several depositional environments, including marine deposits (shale and limestone), sand dunes and ocean margins (sandstone), and tidal flats or estuaries (evaporates and interbedded materials). Metamorphic rocks include rocks or sediments that have been altered and undergone recrystallization at high temperatures and pressures and that incorporate a range of chemical and physical characteristics, depending on the original material and the degree of metamorphism. There are no metamorphic rocks in Capitol Reef NP.

Properties of the parent material influence the rates of physical and chemical weathering and, therefore, soil formation. Exposed geologic materials are constantly subject to the erosive forces of gravity, water, wind, and ice and the activities of organisms. Rocks with many fractures or joints may be more susceptible to freeze-thaw processes and may easily accumulate sediment that can foster plant growth

Figure 434.—Profile of a residual soil that formed in the Moenkopi Formation. The soil shows rock structure and orientation inherited from the parent material. Scale is in centimeters.

Figure 435.—Profile of a residual soil that formed in a gypsum-bearing layer of the Carmel Formation. The surface horizon contains inputs of eolian dust. Scale is in centimeters.

and the accompanying physical and rhizosphere weathering. In general, weathering proceeds at faster rates as surface area to volume ratios increase, so small particle sizes are more susceptible to chemical weathering. Felsic minerals (quartz and feldspars) are typically quite resistant to weathering because of bond sharing within the mineral structures. Minerals with a high degree of isomorphous substitution (the replacement of the components of structure with ions or elements of different sizes) are also more susceptible to weathering because the substitution creates stress within the mineral lattice structure. Although these minerals may have been stable when formed at high temperatures and pressures, they are thermodynamically unstable at the earth's surface and weather into secondary minerals. The soil and surface environment is also primarily an oxidizing environment, in contrast to the reducing environment in which many rocks form.

Temperature Regime	Moisture Regime	MAP MAAT (English)	MAP MAAT (Metric)	Frost-Free Days
Mesic	Typic Aridic	6-7-9 in 52-54-55 °F	152-178-229 mm 11.1-12.2-12.7 °C	160-170-180 days
Mesic	Ustic Aridic	9-11-13 in 46-50-52 °F	229-279-330 mm 7.8-10-11.1 °C	140-150-160 days
Mesic	Aridic Ustic	13-14-16 in 45-46-47 °F	330-356-406 mm 7.2-7.8-8.3 °C	125-135-145 days
Frigid	Aridic Ustic	13-14-16 in 44-45-46 °F	330-356-406 mm 6.7-7.2-7.8 °C	120-130-140 days

Figure 436.—The combination of soil temperatures and soil moisture regimes occurring in Capitol Reef National Park.

Climate

Soil temperature and precipitation are important in determining rates of biological activity and mineral weathering. Biological activity tends to increase exponentially with an increase in temperature and nearly stops (except for a few specialized organisms) near freezing (4 degrees C). Rates of chemical mineral weathering also increase at elevated temperatures. This results in the breaking down of primary minerals, such as feldspars, in parent material into secondary minerals, such as clays and oxides. When water is present, freeze-thaw cycles (both seasonal and diurnal) can accelerate physical weathering by forcing apart rocks between joints and fractures or between mineral grains.

Average yearly temperatures at Capitol Reef NP range from 12 degrees C (54 degrees F) at the lowest elevations, in the Halls Creek drainage, to 7 degrees C (45 degrees F) at the highest elevations, on the lower slopes of Thousand Lake Mountain (fig. 436). Data on soil temperature and precipitation were inferred from several nearby weather stations representing the different elevations within the park. Soils in the park fall into two temperature regimes: mesic and frigid. A mesic soil temperature regime has a mean annual soil temperature (MAST) of 8 to 15 degrees C, and a frigid soil temperature has a MAST of less than 8 degrees C. Temperatures for both regimes can differ between summer and winter by more than 6 degrees C.

Average yearly precipitation at Capitol Reef NP ranges from 7 inches (178 millimeters) at the lower elevations to 14 inches (356 millimeters) at the higher elevations. About 50 percent of the precipitation falls during the summer months (July, August, and September), which make up the growing season for vegetation. Snowpacks are generally light and do not persist throughout the winter.

Because of the arid climate of Capitol Reef NP, little excess precipitation is available for leaching and weathering processes within the soil. Since much of the precipitation falls during the growing season, water is also used by vegetation, thus further reducing the amount of precipitation available for leaching. Consequently, although some of the soils may be on old parent materials and in old landscape positions, few exhibit the traditional soil properties associated with intense weathering, such as low pH and base saturation and clay accumulation. Carbonates and soluble salts are common in soils throughout the park and typically accumulate near the surface, indicating very little leaching.

Climate and vegetation are difficult to separate within Capitol Reef. The park has three soil moisture regimes that correspond to different elevations and vegetation types. The Typic Aridic moisture regime is the driest, averaging about 7 inches (178 millimeters) of precipitation annually, and is typically vegetated by small saltbushes and grasses. The Ustic Aridic moisture regime averages about 11 inches (279 millimeters) of precipitation annually and supports a wide variety of vegetation, from grassland to pinyon and juniper, depending on soil type and landscape position. The

Aridic Ustic moisture regime is the wettest in the park, averaging about 14 inches (356 millimeters) of precipitation annually, and includes pinyon and juniper woodland.

Organisms

Living organisms associated with soil include plants, animals, fungi, and bacteria. At the macro scale, trees and other vegetation are important to soils by providing physical structure through their roots and participating in water, nutrient, and gas cycling. The stabilization of the soil provided by plant roots, especially on steep slopes, is important in soil formation. Plants can chemically alter the rhizosphere (the zone of soil surrounding roots) through respiration and photosynthesis, which increase the concentration of carbon dioxide, an acidifier, in the soil by as much as 10 times that of the atmosphere. Root exudates and ion pumps necessary for nutrient uptake also affect chemistry in the rhizosphere. Plants affect the local hydrology by using soil water during photosynthesis and, in some cases, by collecting and channeling water into preferential flow paths. Organic matter generated through leaf litter and root material is essential in nutrient cycling and soil structural stability. The distribution of organic matter within the soil profile is further influenced by vegetation. Soils under grassland (fig. 437) have many small roots, commonly have thicker A horizons, and have organic matter accumulation deeper in the profile than soils under pinyon and juniper woodland (fig. 438), which tend to accumulate organic matter in a thin A horizon and have a litter layer on the soil surface.

Humans are responsible for many changes in soil properties, through farming or grazing activities, recreation, and habitation. Tillage accelerates oxidation of organic matter and can destroy soil structure, leading to erosion. In the fruit orchards of Fruita, irrigation with the sediment-rich waters of the Fremont River has accelerated the formation of argillic horizons in some of the orchard soils over the last 100 years. Humans alter soil and stream hydrology by irrigating crops and constructing roads, dams, buildings, and wells, which divert or consume water flow and compact the soil. Soil chemistry can be altered by fertilization for crop growth or by pollution from manmade substances. In Capitol Reef NP, human effects on soil have been kept to a minimum but the creation of roads, trails, and campgrounds compact the soil, changing water infiltration characteristics and leading to erosion. Humans also cause changes in range health and invasive species through management practices such as grazing.

At the microscopic level, fungi and bacteria perform many of the functions essential to soil formation. These organisms are responsible for the decomposition of organic matter. They perform transformations at a chemical and molecular level that produce plant-available nutrients. Bacteria and fungi also provide food for many mesoscale organisms. The decomposition and respiration of organic matter releases carbon dioxide and transforms fresh organic matter into humus, a stable and complex organic compound which provides soil structure by binding soil particles into aggregates. Organic matter contains organic acids and other functional groups that provide pH-dependent charge and contain a large amount of the soil's cation-exchange capacity (CEC), where essential nutrients are stored. Nitrogen-fixing bacteria often form symbiotic associations with plants in root nodules and convert nitrogen gas from the atmosphere into mineral forms (nitrate or ammonium) usable by vegetation. Mycorrhizal fungi form associations with the roots of many plants (including grasses, shrubs, and trees) and, in effect, extend the reach and surface area of the roots, aiding plant access to water and nutrients, especially immobile nutrients such as phosphorus. Many of the chemical transformations and oxidation-reduction reactions associated with mineral weathering are bacterially mediated. Most bacteria are aerobic (use oxygen as an electron acceptor) and decompose carbon compounds for energy,

Figure 437.—Profile of a soil exhibiting many roots, blocky and granular structure, and slight darkening due to organic matter accumulation throughout (top) under bottlebrush squirreltail grass in Strike Valley (bottom). Scale is in centimeters.

Figure 438.—Profile of a soil exhibiting few roots, weak structure, and accumulation of organic matter in a thin layer on the soil surface (top) under pinyon and juniper forest on Dry Bench (bottom). Scale is in centimeters.

Figure 439.—Profile of a soil with a low-chroma reduced matrix and redox depletions corresponding to the water table depth. This soil is on the flood plain of Polk Creek in South Desert. Scale is in centimeters.

but there are also bacteria that use other compounds for energy in either aerobic or anaerobic (oxygen-free and often saturated) environments. Oxidized iron and manganese are immobile and precipitate out of solution, while the reduced forms are soluble and may be leached, producing redox accumulations and depletions in some soils near perennial streams having seasonal fluctuations in water tables (fig. 439).

In many arid environments (including parts of Capitol Reef NP), commonly in sandy areas or areas with gypsum parent material, associations of cyanobacteria (fig. 440), lichen, and moss colonize the soil surface. These biological crusts perform soil stabilization and nutrient cycling functions in areas where the erosive forces of wind and water can rapidly remove soil material.

Figure 440.—Pinnacled cyanobacteria crust on eolian deposits on Meeks Mesa.

Relief

Relief, or topography, refers to the physical characteristics of the landscape, such as slope and aspect. Aspect, or the direction that the slope faces, determines the amount of energy (in the form of sunlight and precipitation) reaching the soil surface. Because of the angle of the sun in the northern hemisphere, north-facing slopes tend to be cooler and moister than south-facing slopes. This difference is often seen in a pronounced change in vegetation at ridge lines that separate aspects. Trees and forest vegetation occupy the north and northeast slopes, and shrubs or grasses grow on the hotter and drier south and southwest slopes (fig. 441).

The length and shape of slopes are important predictors in determining hydrology and potential for erosion. On flat surfaces (slopes of less than 2 percent), the infiltration of water falling on the soil surface is fairly uniform and the potential for erosion is low. In other words, the soils that formed on flat surfaces have low potential energy and thus are in a stable state compared to soils on steep slopes. As slopes become steeper, the shape of the slope becomes very important in controlling water flow and consequently various soil properties, such as solum depth and clay content. Slopes with concave shapes, both across the slope and upslope or downslope, tend to gather water into the depressions, providing more available water for plant growth and accelerating soil processes such as mineral weathering. Soils on convex slopes tend to shed water, may be drier and shallower, and are generally less stable than similar soils in concave positions. Soils on steeper slopes also have a greater potential for erosion from runoff of excess water, creep of saturated horizons, and, in extreme cases, catastrophic landslides (fig. 442).

In the field, soil scientists use a conceptual model for soil formation on hillslopes. The model divides the hillslope into five areas: the summit, shoulder, backslope,

footslope, and toeslope. This model, known as the Ruhe hillslope model, also divides the hillslope into erosional areas (summit, shoulder, and backslope) and depositional areas (footslope and toeslope) based on soil stability. Soils at the summit, in a fairly stable location, are moderately well developed but are still losing some material downslope. Soils in the shoulder position (typically a convex position) tend to be shallow and weakly developed, losing much soil material downslope. Soils on backslopes, while in a slightly more stable position than those on shoulders, still tend to be shallower than soils on footslopes and toeslopes. Soils on footslopes accumulate material transported, either by water or gravity, from upslope. These soils are deeper and have higher clay contents than soils higher on the hillslope. Soils on toeslopes are even deeper and more developed but have drainage problems because of accumulation of clay and proximity to water tables related to streams (Buol et al., 2003).

In Capitol Reef NP, some of these aspect effects are visible in vegetation changes from north- to south-facing slopes. Thicker forests are commonly on north-facing slopes, while drought-tolerant shrubs are more prevalent on the more sparsely treed, south-facing slopes. Species which prefer higher elevations and colder temperatures may also occur on north-facing slopes at the lower elevations or in canyons (e.g., Douglas firs grow on the north slopes of Coleman and Red Canyons). A special type of water-gathering topography, termed “rock-pocket,” occurs throughout the park on nearly level or gently sloping bedrock (fig. 443). Sites on this topography have very high range production and plant diversity due to the additional water funneled into the concave positions from surrounding rock.

Figure 441.—North-facing slopes (right) are more densely vegetated than south-facing slopes (left) and support Douglas fir, a species that does not normally occur in the arid climate of Capitol Reef National Park.

Figure 442.—Red Slide. This Quaternary landslide originated in the Wingate Sandstone and the Kayenta Formation and slid down across the Navajo Sandstone and into the Halls Creek drainage.

Figure 443.—Rock pocket topography. The accumulation of sediment and water and eolian deposition in concave areas allow for localized growth of vegetation more lush and diverse than expected from amounts of precipitation.

Figure 444.—Stream terraces along Oak Creek. The flood-plain step directly above the channel is frequently flooded, supports rushes and cottonwood, and contains large clasts showing evidence of high-energy flooding. Soil on the first terrace supports sagebrush and rubber rabbitbrush and shows minimal soil development with gravelly layers that are relicts from deposition in the channel. Soil on the second and highest terrace has the beginnings of cambic horizon development, has finer textures than soils in lower positions, and supports sagebrush and immature pinyon and juniper.

Time

Climate, organisms, relief, and parent material interact over time to produce the soils observed in the field. Chronosequences are used to study progressions of soil development over time. Organic matter accumulation is typically the first process: plants begin to colonize parent material. Carbonates then accumulate if the climate is arid. Clay formation and accumulation peaks next, and oxide accumulation follows (Birkeland, 1984). In general, if all other factors of soil formation are equal, older soils will be deeper and have more clay, redder colors, and lower pH than younger soils.

Figure 445.—Calcic horizon development in map unit 46 (Moab-Abra family complex, 1 to 12 percent slopes). Eolian deposition on a rough, gravelly to stony surface has contributed to carbonate accumulation in pediment deposits of basaltic origin. Precipitation has been sufficient to leach carbonates from the upper part (about 25 centimeters) of the soil. Scale is in centimeters.

At Capitol Reef NP, although geologic materials may be as old as Permian (250 to 290 million years ago), the upwarp and faulting that created the Waterpocket Fold and exposed the strata did not occur until about 60 million years ago. Parent material ages vary from a few million years to less than 100 years. Any event that deposits or redistributes soil material resets the soil-forming clock (e.g., periodic floods deposit fresh parent material over existing soils). In areas of streams, younger soils typically occur nearest the channel and older and more developed soils occur in positions progressively higher and further from the channel (fig. 444).

In arid environments, eolian deposition provides another means of accumulating fresh parent material. Eolian processes can contribute clay, silt, and carbonates and also influence iron oxide content and composition (McFadden and Weldon, 1987).

Dust may consist of as much as 25 percent calcium carbonate (Reheis, 1988), which may contribute substantially to calcic horizon development on stable surfaces, such as the mesas and pediments in map unit 46 (fig. 445).

In mountain environments and on steep slopes, surfaces are much more difficult to date and creep of soil material downslope may constantly offset developmental processes within the soil. Soils in stable positions, such as mesa tops and plateaus, have the most B horizon development. Soils on the steeper middle slopes may have some B horizon development, while soils on the steepest lower slopes have minimal B horizon development and clay accumulation compared to the A horizon (Zinke and Colwell, 1965). A complicating factor on steep slopes is the transport and accumulation of pre-weathered material in deposits of colluvium and slope alluvium (fig. 446). Soils in convex areas may be weakly developed because they continually lose soil material (fig. 447), while soils in concave areas typically have a greater solum depth and a greater development of color and structure (fig. 448).

Classification of the Soils

Soils are named and classified on the basis of physical and chemical properties in their horizons (layers). Color, texture, structure, and other properties of the soil to a depth of 2 meters are used to key the soil into a classification system. This system helps people to use soil information and also provides a common language for scientists.

Soils and their horizons differ from one another, depending on how and when they formed. Soil scientists use the five soil-forming factors to help predict where different soils may occur. The degree and expression of the soil horizons reflect the extent of

Figure 446.—An area of the Blue Gate Member of the Mancos Shale. Convex slopes have shallow soils that support sparse vegetation. In concave hollows, deeper soils form from the accumulation of colluvium and pre-weathered soil materials and support more vegetation.

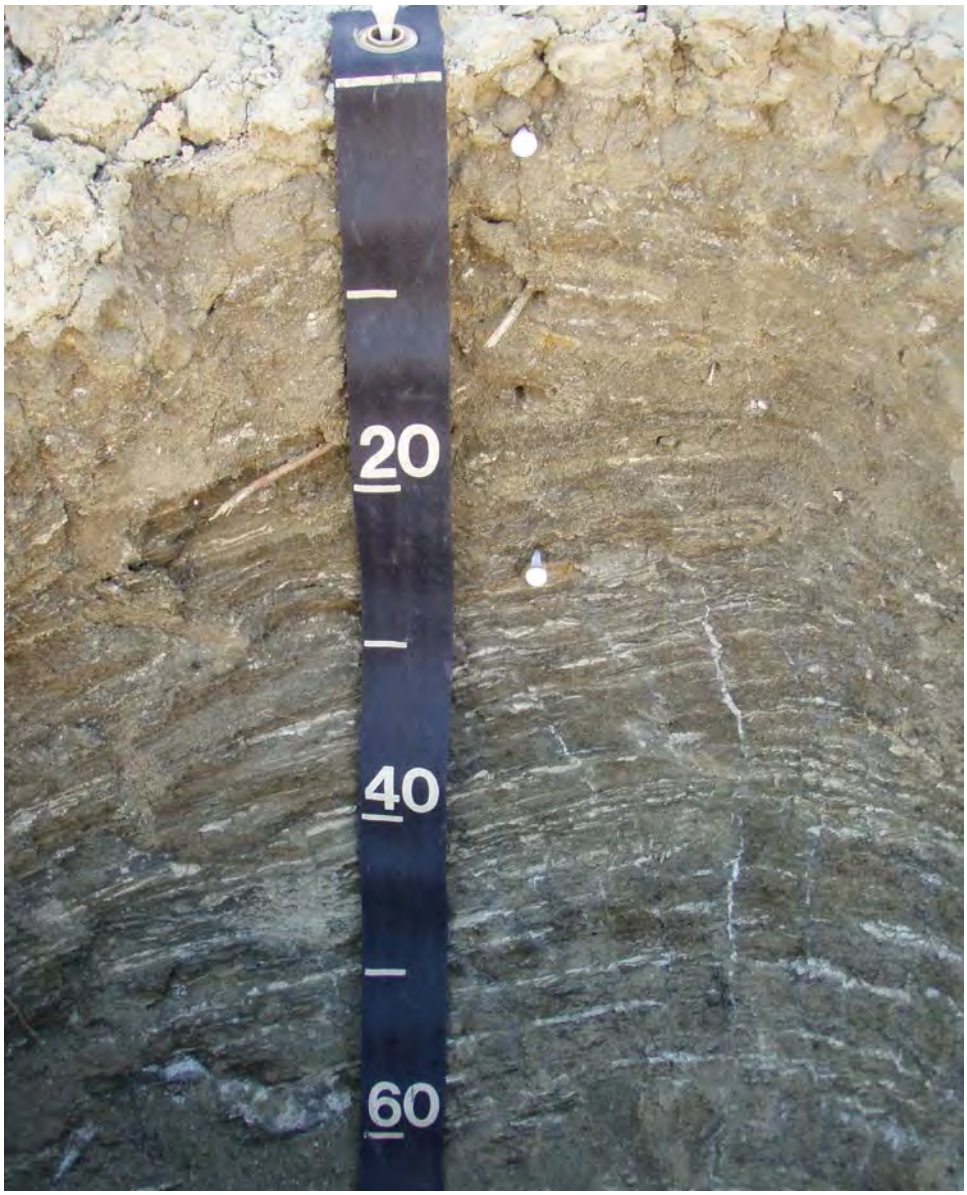

Figure 447.—Profile of a shallow Orthent (25 centimeters thick) over shale bedrock in the convex positions of the escarpment of the Blue Gate Member of the Mancos Shale. Scale is in centimeters.

interaction of the soil-forming factors with one or more of the soil-forming processes (Simonson, 1959).

When mapping soils, a soil scientist looks for areas with similar soil-forming factors to find similar soils. The properties of the soils are described. Soils with the same kind of properties are given taxonomic names. Soils are classified, mapped, and interpreted on the basis of various kinds of soil horizons and their arrangement. The distribution of soil orders corresponds with the general patterns of the soil-forming factors within the park.

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2010). 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. The categories are defined in the following paragraphs.

ORDER. Soil taxonomy at the highest hierarchical level identifies 12 soil orders. The names for the orders and taxonomic soil properties relate to Greek, Latin, or other root words that reveal something about the soil. The differences among orders reflect

Figure 448.—Profile of a very deep Cambid with more colors and structure development than the Orthent on an adjoining ridge. This soil formed from an accumulation of colluvium and pre-weathered soil materials in concave positions and hollows. Scale is in centimeters.

the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol.* An example is Aridisol.

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. Sixty-four suborders are recognized at the next level of classification. The last syllable in the name of a suborder indicates the order. An example is Argid (*Argi,* indicating a horizon of pedogenic clay accumulation, plus *id,* from Aridisol).

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. There are about 300 great groups. 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 Haplargid (*Hapl,* meaning minimal horizonation, plus *argid,* the suborder of the Aridisols that has horizons of clay accumulation).

SUBGROUP. There are more than 2,400 subgroups. Each great group has a typic subgroup. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Other subgroups are intergrades or extragrades. 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 *Ustic* identifies the subgroup that has an aridic soil moisture regime that is transitional to an ustic soil moisture regime. An example is Ustic Haplargids.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties for family placement are those of horizons below a traditional agronomic plow depth. 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, superactive, mesic Ustic Haplargids.

SERIES. The soil series is the lowest category in the soil classification system. 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.

Most parks are mapped to the series level. The names of soil series are selected by the soil scientists during the course of mapping. An example is the Sulphurcreek series, which is classified as a fine-loamy, mixed, superactive, mesic Ustic Haplargid. The series names are commonly geographic place names or are coined. Because of access limitations and soil variability, soils in some remote areas are classified at the great group or subgroup level.

Table 4 indicates the order, suborder, great group, subgroup, and family of the soil series in the park.

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487–00.

Birkeland, P.W. 1984. Soils and geomorphology.

Brady, Nyle C., and Ray R. Weil. 2002. The nature and properties of soils. 13th edition.

Buol, S.W., R.J. Southard, R.C. Graham, and P.A. McDaniel. 2003. Soil genesis and classification.

Cole, R.D., G.E. Moore, A.S. Trevena, R.A. Armin, and M.P. Morton. 1996. Lithofacies definition in Cutler and Honaker Trail Formations, Northeastern Paradox Basin. *In* A.C. Huffman, Jr., W.R. Lund, and L.H Godwin (eds.) Geology and Resources of the Paradox Basin, Utah Geology Association Guidebook 25.

Dubiel, R.F. 1897. Sedimentology of the Upper Triassic Chinle Formation, southeastern Utah. Ph.D. dissertation, University of Colorado.

Hintze, L.H., and B.J. Kowallis. 2009. Geologic history of Utah. Brigham Young University, Geology Studies Special Publication 9.

Huffman, A.C., Jr., W.R. Lund, and L.H. Godwin, editors. 1996. Geology and resources of the Paradox Basin. Utah Geological Association Publication 25:161-172.

Jenny, H. 1941. Factors of soil formation.

Kamola, D.L., and M.A. Chan. 1988. Coastal dune facies, Permian Cutler Formation (White Rim Sandstone), Capitol Reef National Park area, southern Utah. In G. Kocurek (ed.) Late Paleozoic and Mesozoic Eolian Deposits of the Western Interior of the United States, Sedimentary Geology 56:341-356.

McFadden, L.D., and R.J. Weldon II. 1987. Rates and processes of soil development on Quaternary terraces in Cajon Pass, California. Geological Society of America Bulletin 98:280-293.

Miller, R.W., and R.L. Donahue. 1990. Soils: An introduction to soils and plant growth. 6th edition.

Morris, T.H., V.W. Manning, and S.M. Ritter. 2003. Geology of Capitol Reef National Park, Utah. *In* D.A. Sprinkel, T.C. Chidsey, Jr., and P.B. Anderson (editors) Geology of Utah's Parks and Monuments, 2nd edition. Utah Geological Association Publication 28:84-105.

Reheis, M.C. 1988. Dust influx in southern Nevada and California—Preliminary finding. Geological Society of America Abstracts with Programs 20(2):207.

Reynolds, R.L., M.C. Reheis, J.C. Neff, H. Goldstein, and J. Yount. 2006. Late Quaternary eolian dust in surficial deposits of a Colorado Plateau grassland: Controls on distribution and ecologic effects. ScienceDirect - Catena 66.

Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson (editors). 2002. Field book for describing and sampling soils, Version 2.0. United States Department of Agriculture, Natural Resources Conservation Service, National Soil Survey Center, Lincoln, NE.

Simonson, Roy W. 1959. Outline of a generalized theory of soil genesis. Soil Science Society of America Proceedings 23:152-156.

Smith, Jr., J.F., L.C. Huff, E.N. Hinrichs, and R.G. Luedke. 1963. Geology of the Capitol Reef area, Wayne and Garfield Counties, Utah. Geological Survey Professional Paper 363.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Stokes, W.L. 1986. Geology of Utah. Utah Museum of Natural History Occasional Paper No. 6.

United States Department of Agriculture. Natural Resources Conservation Service. Ecological Site Information System. https://esis.sc.egov.usda.gov/

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://nsscnt.nssc.nrcs.usda.gov/nfm/

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.ftw.nrcs.usda.gov/glti/NRPH.html

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://soils.usda.gov/technical/

United States Department of Agriculture, Natural Resources Conservation Service. PLANTS database. National Plant Data Center. http://plants.usda.gov

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296.
http://soils.usda.gov/survey/geography/mlra/index.html

United States Department of Agriculture, Natural Resources Conservation Service. 2009. Soil formation and classification.
http://soils.usda.gov/education/facts/formation.html

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.

Zinke, P.J., and W.L. Colwell, Jr. 1965. Some general relationships among California forest soils. *In* C.T. Youngberg (editor) Forest-Soil Relationships in North America. Proceedings of Second North America Forest Soils Conference, Oregon State University, August 26–31, 1963.

Glossary

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Badland. Steep or very steep, commonly nonstony, barren land dissected by many intermittent drainage channels. Badland is most common in semiarid and arid regions where streams are entrenched in soft geologic material. Local relief generally ranges from 25 to 500 feet. Runoff potential is very high, and geologic erosion is active.

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.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by 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.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. The steep and very steep broken land at the border of an upland summit that is dissected by ravines.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Butte. An isolated small mountain or hill with steep or precipitous sides and a top variously flat, rounded, or pointed that may be a residual mass isolated by erosion or an exposed volcanic neck.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow, very steep-sided valley with high, precipitous walls in an area of high local relief.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

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.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex 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.

Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coppice dune. A small dune of fine grained soil material stabilized around shrubs or small trees.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cuesta. An asymmetric ridge capped by resistant rock layers of slight to moderate dip, commonly less than 10 degrees (less than 15 percent slopes); a homocline type produced by differential erosion of interbedded resistant and weak rocks. A cuesta has a long, gentle slope on one side (dip slope), that roughly parallels the inclined beds, and has on the opposite side a relatively short, steep or cliff-like slope (scarp slope) that cuts through the tilted rocks.

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.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Desert pavement. On a desert surface, a layer of gravel or larger fragments that was emplaced by upward movement of the underlying sediments or that remains after finer particles have been removed by running water or the wind.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Draw. A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called normal field capacity, normal moisture capacity, or capillary capacity.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

First raindrop impact. Term used to describe ground cover; the probability of raindrop interception by a specific category of cover (plant canopy, litter, rock fragments, cyanobacteria crust, lichen crust, moss crust, salt crust, gypsum crust, or bare soil).

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

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.

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.

Graben. An elongate, depressed block of land that is bounded by faults on both sides.

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.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head out. To form a flower head.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Homoclinal ridge. An intermediate form of homocline that forms an asymmetric ridge with a dip slope commonly between 10 and 25 degrees (15 to 45 percent). A homoclinal ridge has dip steeper than that of a cuesta but less than that of a hogback.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very

slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Interfluve. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

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.

Leaching. The removal of soluble material from soil or other material by percolating water.

LEP. See Linear extensibility percent.

Linear extensibility (LE). Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Linear extensibility percent. Refers to the percent change in linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low 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.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mesa. A broad, nearly flat-topped and commonly isolated upland mass characterized by summit widths that are more than the heights of bounding erosional scarps.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent.* The size measurements are of the diameter along the greatest dimension. Fine indicates less than 5 millimeters (about 0.2 inch); medium, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and coarse, more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. 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

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pediment. A gently sloping erosional surface developed at the foot of a receding hill or mountain slope, commonly with a slightly concave-upward profile, that cross-cuts rock or sediment strata that extend beneath adjacent uplands.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher-lying areas of the erosion surface.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The 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.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plateau. An extensive upland mass with relatively flat summit area that is considerably elevated (more than 100 meters) above adjacent lowlands and separated from them on one or more sides by escarpments.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressional areas, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff.

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.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma *in situ* because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water. The runoff values in this survey were assigned using locally derived criteria.

Sabkha. A flat area of eolian sedimentation and erosion that formed under semiarid or arid conditions. It occurs: (1) in interior areas (e.g., on basin floors slightly above playa lake beds); (2) along coastal areas (e.g., just above intertidal zones) where, through deflation and evaporation, gypsum, halite, or other soluble minerals crystallize at or near the surface and form a thin, irregular mineral crust that is intermittently deflated away. Microbiotic crusts are not extensive, and vegetation is very sparse and consists primarily of small, halophytic shrubs (e.g., iodine bush).

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

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.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. A geomorphic component of hills consisting of the 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.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A type of stream terrace that formed as an erosional surface cut on bedrock. It is thinly mantled (less than 3 meters) with stream deposits (alluvium), commonly with a gravel lag deposit immediately above the bedrock.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Tables

Table 1.—Temperature and Precipitation

(Recorded in the period 1971-2000 at Capitol Reef National Park headquarters, Utah)

Month	Temperature (degrees F)						Precipitation (inches)				
				2 years in 10 may have				2 years in 10 may have			
	Average daily maximum	Average daily minimum	Average daily	Maximum higher than--	Minimum lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snow-fall
January--	40.5	19.4	30.0	60.0	0.0	0.0	0.62	0.04	0.92	1	5.1
February-	46.3	24.7	35.5	65.0	5.0	3.5	0.49	0.06	0.59	1	2.0
March----	56.5	32.4	44.4	75.0	17.0	150.0	0.73	0.12	1.07	2	2.7
April----	64.7	39.2	52.0	84.0	23.0	364.0	0.54	0.09	0.89	2	0.6
May------	75.0	48.3	61.6	91.0	32.0	675.0	0.53	0.15	1.15	2	0.1
June-----	85.6	57.5	71.6	100.0	40.0	958.5	0.45	0.06	0.66	1	0.0
July-----	91.2	64.5	77.9	102.0	52.0	1,180.0	0.93	0.32	1.49	3	0.0
August---	87.4	62.2	74.8	100.0	50.0	1,098.5	1.33	0.42	1.90	4	0.0
September	79.4	54.0	66.7	95.0	38.0	854.0	0.75	0.20	1.38	2	0.0
October--	65.8	42.4	54.1	86.0	25.0	466.5	0.90	0.10	1.40	2	0.4
November-	51.0	29.7	40.4	72.0	13.0	79.0	0.52	0.08	1.01	2	1.7
December-	40.3	20.2	30.3	60.0	5.0	0.0	0.36	0.05	0.41	1	2.5
Annual:											
Average	65.4	41.3	53.4	---	---	---	---	---	---	---	---
Extreme	104.0	-9.0	---	102	-2	---	---	---	---	---	---
Total--	---	---	---	---	---	5,829.0	8.15	5.79	9.52	23	15.1

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 2.—Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Capitol Reef National Park headquarters, Utah)

Probability	Temperature (degrees F)		
	24 or lower	28 or lower	32 or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 13	Apr. 29	May 15
2 years in 10 later than--	Apr. 5	Apr. 23	May 8
5 years in 10 later than--	Mar. 20	Apr. 10	Apr. 25
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 30	Oct. 21	Oct. 5
2 years in 10 earlier than--	Nov. 4	Oct. 26	Oct. 10
5 years in 10 earlier than--	Nov. 12	Nov. 4	Oct. 21

Table 3.—Growing Season

(Recorded in the period 1971-2000 at Capitol Reef National Park headquarters, Utah)

Probability	Daily minimum temperature (degrees F) during growing season		
	Higher than 24	Higher than 28	Higher than 32
	Days	Days	Days
9 years in 10	209	189	157
8 years in 10	219	198	167
5 years in 10	238	215	185
2 years in 10	256	232	204
1 year in 10	266	240	213

Table 4.—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
Abra	Fine-loamy, mixed, superactive, mesic Ustic Haplocalcids
Abra family	Fine-loamy, mixed, superactive, mesic Ustic Haplocalcids
Anasazi	Coarse-loamy, mixed, superactive, mesic Ustic Haplocalcids
Aquic Torrifluvents	Aquic Torrifluvents
Aquima	Fine-loamy, mixed, superactive, mesic Ustic Haplocambids
Arches	Mixed, mesic Lithic Torripsamments
Barx	Fine-loamy, mixed, superactive, mesic Ustic Calciargids
*Beclabito	Fine, mixed, superactive, mesic Haplic Ustic Natrargids
Begay	Coarse-loamy, mixed, superactive, mesic Ustic Haplocambids
Bowington	Mixed, mesic Oxyaquic Torripsamments
Bullpen	Fine-loamy, mixed, superactive, mesic Ustic Haplocambids
Calladito	Mixed, mesic Ustic Torripsamments
*Cannonville	Fine, smectitic, mesic Ustic Haplocambids
*Catahoula	Loamy-skeletal, mixed, superactive, mesic Ustic Haplocambids
Cerropelon family	Fine-loamy, mixed, superactive, mesic Ustic Haplargids
*Chilton	Loamy-skeletal, mixed, superactive, mesic Ustic Haplocambids
Chinchin	Loamy, mixed, superactive, mesic Lithic Calciargids
Chipeta	Clayey, mixed, active, calcareous, mesic, shallow Typic Torriorthents
*Clapper	Loamy-skeletal, mixed, superactive, mesic Ustic Haplocambids
Clapper	Loamy-skeletal, mixed, superactive, mesic Ustic Haplocalcids
*Daklos	Loamy-skeletal, mixed, superactive, mesic Lithic Ustic Haplocambids
Daklos	Loamy-skeletal, mixed, superactive, calcareous, mesic Lithic Ustic Torriorthents
Earlweed	Sandy, mixed, mesic Ustic Haplocalcids
Elias	Fine-loamy, mixed, superactive, mesic Ustic Natrargids
Emco family	Clayey, smectitic, calcareous, mesic, shallow Typic Torriorthents
Eslendo	Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents
Foy family	Loamy-skeletal, mixed, superactive, frigid Aridic Calciustepts
Fruitland	Coarse-loamy, mixed, superactive, calcareous, mesic Typic Torriorthents
Gerst	Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents
*Gish	Fine, mixed, superactive, mesic Sodic Ustic Haplocambids
Gladel	Loamy, mixed, superactive, mesic Aridic Lithic Haplustepts
*Goblin	Loamy, mixed, superactive, mesic, shallow Leptic Haplogypsids
*Goblin	Loamy, mixed, superactive, mesic Lithic Haplogypsids
Goblin	Loamy, gypsic, mesic, shallow Leptic Haplogypsids
*Hanksville	Fine-silty, mixed, active, mesic Typic Haplosalids
*Happle	Coarse-loamy, mixed, superactive, mesic Ustic Haplocambids
Ignacio	Coarse-loamy, mixed, superactive, mesic Ustic Haplocambids
*Ivanpatch	Sandy, mixed, mesic Leptic Haplogypsids
Kwakina	Sandy, mixed, mesic Ustic Torrifluvents
Kydestea	Loamy-skeletal, mixed, superactive, calcareous, mesic Aridic Lithic Ustorthents
*Lavodnas	Loamy, gypsic, mesic, shallow Leptic Haplogypsids
Lazear	Loamy, mixed, superactive, calcareous, mesic Lithic Ustic Torriorthents
*Lemrac	Coarse-loamy, mixed, superactive, mesic Leptic Haplogypsids
Lemrac	Fine-gypseous, hypergypsic, mesic Leptic Haplogypsids
*Lybrook	Fine, mixed, superactive, mesic Ustic Haplocambids
Lybrook	Fine, mixed, superactive, calcareous, mesic Ustic Torriorthents
Mathis	Sandy-skeletal, mixed, mesic Ustic Torriorthents
Metuck	Loamy-skeletal, mixed, superactive, calcareous, mesic Aridic Lithic Ustorthents
Mezzo family	Frigid, coated Ustic Quartzipsamments
Mident	Mixed, mesic, shallow Ustic Torripsamments
Mido	Mixed, mesic Ustic Torripsamments
Mikim	Fine-loamy, mixed, superactive, calcareous, mesic Ustic Torriorthents
Milok	Coarse-loamy, mixed, superactive, mesic Ustic Haplocalcids
Mivida	Coarse-loamy, mixed, superactive, mesic Ustic Haplocalcids
Moab	Loamy-skeletal, carbonatic, mesic Ustic Haplocalcids
Moclom	Mixed, mesic Lithic Torripsamments

Table 4.—Taxonomic Classification of the Soils—Continued

Soil name	Family or higher taxonomic class
Moenkopie	Loamy, mixed, superactive, calcareous, mesic Lithic Torriorthents
Moffat	Coarse-loamy, mixed, superactive, mesic Typic Haplocalcids
Molen family	Fine-loamy, mixed, superactive, mesic Ustic Haplocalcids
Monue	Coarse-loamy, mixed, superactive, mesic Typic Haplocambids
Mulford	Fine-loamy, mixed, superactive, mesic Ustifluventic Haplocambids
*Mussentuchit	Coarse-loamy, gypsic, mesic Leptic Haplogypsids
*Myton	Loamy-skeletal, mixed, superactive, mesic Typic Haplocambids
Myton	Loamy-skeletal, mixed, superactive, calcareous, mesic Typic Torriorthents
Nalcase	Siliceous, mesic Lithic Torripsamments
Needle	Mixed, mesic Lithic Torripsamments
Nepalto	Sandy-skeletal, mixed, mesic Typic Torriorthents
*Nizhoni	Loamy, mixed, superactive, calcareous, frigid Aridic Lithic Ustorthents
Nizhoni	Loamy, mixed, active, calcareous, mesic Aridic Lithic Ustorthents
*Notal	Fine-loamy, mixed, active, calcareous, mesic Typic Torriorthents
Notom	Sandy-skeletal, mixed, mesic Ustic Torrifluvents
Oxyaquic Torrifluvents	Oxyaquic Torrifluvents
Parkwash	Mesic, coated Lithic Quartzipsamments
Peachsprings	Fine-loamy, mixed, superactive, mesic Ustic Haplocalcids
Pherson family	Loamy-skeletal, mixed, superactive, calcareous, mesic Ustic Torrifluvents
Pinepoint	Mesic, coated Ustic Quartzipsamments
Plumasano	Coarse-loamy, mixed, superactive, mesic Aridic Haplustepts
*Polychrome	Loamy-skeletal, mixed, superactive, nonacid, mesic Ustic Torriorthents
Puertecito	Loamy-skeletal, mixed, superactive, mesic Lithic Ustic Haplargids
Querencia	Fine-loamy, mixed, superactive, mesic Ustic Haplocambids
Quezcan	Fine, smectitic, calcareous, mesic Aridic Ustorthents
Radnik	Coarse-loamy, mixed, superactive, calcareous, mesic Ustic Torrifluvents
Razito	Mixed, mesic Typic Torripsamments
Reef	Loamy-skeletal, mixed, superactive, calcareous, mesic Lithic Ustic Torriorthents
Remorris	Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents
*Retsabal	Loamy, gypsic, mesic, shallow Leptic Haplogypsids
*Retsabal	Loamy-skeletal, gypsic, mesic Lithic Haplogypsids
Retsabal	Fine-gypseous, hypergypsic, mesic, shallow Leptic Haplogypsids
*Retsabal	Fine-gypseous, hypergypsic, mesic Lithic Haplogypsids
Rizno	Loamy, mixed, superactive, calcareous, mesic Lithic Ustic Torriorthents
Rosced family	Loamy-skeletal, mixed, superactive, mesic Aridic Haplustepts
Saemo	Loamy-skeletal, mixed, superactive, mesic Ustic Haplargids
Sandyranch	Mixed, mesic Ustic Torripsamments
Santrick	Siliceous, mesic Ustic Torripsamments
Sazi	Coarse-loamy, mixed, superactive, mesic Ustic Haplocalcids
Seeg	Loamy-skeletal, mixed, superactive, mesic Typic Haplocalcids
Sheppard	Mixed, mesic Typic Torripsamments
Simel	Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents
Skos	Loamy-skeletal, mixed, superactive, calcareous, mesic Lithic Ustic Torriorthents
Somorent	Loamy, mixed, superactive, calcareous, mesic, shallow Typic Torriorthents
Stent family	Loamy-skeletal, mixed, superactive, mesic Typic Haplocalcids
Strell family	Frigid, coated Lithic Quartzipsamments
Strych	Loamy-skeletal, mixed, superactive, mesic Ustic Haplocalcids
Sulphurcreek	Fine-loamy, mixed, superactive, mesic Ustic Haplargids
Swell family	Coarse-loamy, mixed, active, mesic Typic Calcigypsids
Tesihim	Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents
Tineoyler	Coarse-loamy, mixed, superactive, mesic Ustifluventic Haplocambids
Typic Torriorthents	Typic Torriorthents
Ustic Torriorthents	Ustic Torriorthents
*Uzona	Fine-silty, smectitic, mesic Typic Haplosalids
*Vessilla	Loamy, mixed, superactive, calcareous, mesic Aridic Lithic Ustorthents
Whitesage family	Fine-loamy, mixed, superactive, frigid Aridic Calciustepts
Yarts	Coarse-loamy, mixed, superactive, calcareous, mesic Ustic Torriorthents

Table 5.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Sevier County	Garfield County	Wayne County	Emery County	Total	
		Acres				Area	Extent
						Acres	Pct
1	Abra-Sazi-Strych complex, 1 to 5 percent slopes, moist	372	---	---	---	372	0.1
2	Aquima fine sandy loam, 1 to 6 percent slopes	---	324	---	---	324	0.1
3	Arches-Mido-Rock outcrop complex, 2 to 15 percent slopes	---	---	1,831	---	1,831	0.7
4	Badland-Emco family complex, 10 to 60 percent slopes	---	---	1,406	---	1,406	0.5
5	Barx-Remorris complex, 5 to 45 percent slopes	---	1,567	---	---	1,567	0.6
6	Beclabito-Lybrook, saline-sodic, complex, 10 to 40 percent slopes	---	---	3,412	---	3,412	1.3
7	Begay fine sandy loam, 1 to 15 percent slopes, moist	---	211	---	---	211	*
8	Begay sandy loam, 1 to 9 percent slopes	---	270	---	---	270	0.1
9	Begay very fine sandy loam, 1 to 5 percent slopes, moist	---	42	137	---	179	*
10	Begay, saline-Querencia, saline-sodic complex, 1 to 9 percent slopes	---	3,209	---	---	3,209	1.2
11	Begay, saline-sodic-Begay, moist-Elias complex, 2 to 8 percent slopes	415	---	2,430	---	2,845	1.1
12	Begay-Ignacio-Retsabal complex, 2 to 60 percent slopes	---	2,178	---	---	2,178	0.8
13	Begay-Rizno complex, 1 to 20 percent slopes, moist	---	204	223	---	427	0.2
14	Begay-Strych complex, 2 to 15 percent slopes	---	---	574	---	574	0.2
15	Bullpen-Daklos-Puertecito complex, 2 to 25 percent slopes	---	332	---	---	332	0.1
16	Calladito-Yarts complex, 1 to 6 percent slopes, saline-sodic	---	1,061	---	---	1,061	0.4
17	Catahoula-Rock outcrop complex, 35 to 75 percent slopes	---	9,381	533	---	9,914	3.8
18	Chilton-Begay complex, 1 to 25 percent slopes	---	---	344	---	344	0.1
19	Chinchin-Badland complex, 25 to 50 percent slopes	---	17	---	---	17	*
20	Chipeta, saline-sodic-Stent family complex, 30 to 70 percent slopes	---	299	---	---	299	0.1
21	Daklos-Lazear-Rock outcrop complex, 5 to 60 percent slopes	---	805	---	---	805	0.3
22	Daklos-Reef-Rock outcrop complex, 6 to 60 percent slopes	---	279	7,745	---	8,024	3.1
23	Daklos-Rizno-Rock outcrop complex, 15 to 60 percent slopes	---	4,802	1,535	---	6,337	2.4
24	Earlweed-Anasazi complex, 5 to 22 percent slopes	---	139	---	---	139	*
25	Eslendo-Happle-Rock outcrop complex, 30 to 70 percent slopes, saline	---	1,568	---	---	1,568	0.6

See footnote at end of table.

Table 5.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Sevier County	Garfield County	Wayne County	Emery County	Total	
		Acres				Area	Extent
						Acres	Pct
26	Foy-Whitesage families complex, 2 to 35 percent slopes	287	---	2,828	---	3,115	1.2
27	Gladel-Plumasano complex, 2 to 20 percent slopes	---	3,324	---	---	3,324	1.3
28	Goblin fine sandy loam, 15 to 70 percent slopes	---	---	6,027	---	6,027	2.3
29	Goblin-Clapper complex, 8 to 65 percent slopes	469	---	110	655	1,234	0.5
30	Goblin-Ivanpatch complex, 2 to 60 percent slopes	---	---	2,526	---	2,526	1.0
31	Hanksville, saline-sodic-Chipeta, saline complex, 9 to 45 percent slopes	---	126	---	---	126	*
32	Hanksville-Notal complex, 2 to 8 percent slopes, saline-sodic	---	---	1,058	---	1,058	0.4
33	Kydestea-Vessilla-Rock outcrop complex, 15 to 60 percent slopes	---	793	3,404	---	4,197	1.6
34	Kydestea-Vessilla-Rock outcrop complex, 2 to 15 percent slopes	---	172	395	---	567	0.2
35	Lavodnas-Retsabal complex, 15 to 60 percent slopes	---	---	2,981	---	2,981	1.1
36	Mathis-Rock outcrop complex, 15 to 90 percent slopes	---	262	---	---	262	0.1
37	Metuck-Rock outcrop-Vessilla complex, 15 to 60 percent slopes	---	---	2,214	---	2,214	0.9
38	Mezzo family loamy fine sand, 2 to 20 percent slopes	---	---	694	---	694	0.3
39	Mido-Rock outcrop complex, 10 to 35 percent slopes	---	482	---	---	482	0.2
40	Mido-Strych-Reef complex, 2 to 50 percent slopes	---	---	786	---	786	0.3
41	Mikim-Mivida, moist, complex, 3 to 15 percent slopes	---	132	---	---	132	*
42	Milok-Clapper complex, 2 to 20 percent slopes	---	---	305	---	305	0.1
43	Milok, steep-Strych complex, 15 to 60 percent slopes	---	---	222	---	222	*
44	Mivida loamy fine sand, 1 to 4 percent slopes	914	---	26	681	1,621	0.6
45	Mivida-Gish-Cannonville complex, 2 to 15 percent slopes	---	172	---	---	172	*
46	Moab-Abra family complex, 1 to 12 percent slopes	---	---	1,098	---	1,098	0.4
47	Moclom, warm-Rock outcrop complex, 6 to 20 percent slopes	---	475	---	---	475	0.2
48	Moenkopie, warm-Rock outcrop complex, 2 to 35 percent slopes	---	273	---	---	273	0.1
49	Moenkopie-Rock outcrop complex, 3 to 24 percent slopes	---	55	---	---	55	*

See footnote at end of table.

Table 5.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Sevier County	Garfield County	Wayne County	Emery County	Total	
		Acres				Area	Extent
						Acres	Pct
50	Molen family-Lazear-Gerst complex, 2 to 8 percent slopes	8	---	---	---	8	*
51	Monue-Fruitland complex, 1 to 8 percent slopes	---	---	3,560	---	3,560	1.4
52	Monue-Myton-Uzona complex, 1 to 15 percent slopes, saline-sodic	30	---	1,363	432	1,825	0.7
53	Monue-Sheppard complex, 1 to 6 percent slopes	---	---	1,981	---	1,981	0.8
54	Mulford silty clay loam, 0 to 5 percent slopes	---	---	37	---	37	*
55	Mussentuchit-Goblin-Swell family association, 3 to 20 percent slopes	---	---	16	452	468	0.2
56	Nepalto very gravelly sandy loam, 5 to 18 percent slopes, very bouldery	---	2	---	---	2	*
57	Nizhoni-Rock outcrop complex, 2 to 35 percent slopes	---	---	2,305	---	2,305	0.9
58	Nizhoni-Rock outcrop complex, 20 to 50 percent slopes	---	6,144	1,142	---	7,286	2.8
59	Nizhoni-Rock outcrop-Pinepoint complex, 2 to 20 percent slopes	---	---	2,045	---	2,045	0.8
60	Notom-Begay, moist-Bowington complex, 1 to 6 percent slopes	---	90	156	---	246	*
61	Notom-Aquic Torrifluvents complex, 1 to 20 percent slopes	---	42	77	---	119	*
62	Parkwash-Rock outcrop complex, 3 to 35 percent slopes	---	3,112	---	---	3,112	1.2
63	Pherson family-Sandyranch-Riverwash complex, 1 to 30 percent slopes	---	---	452	---	452	0.2
64	Polychrome-Badland-Cerropelon family complex, 15 to 60 percent slopes	---	256	---	---	256	*
65	Querencia-Lybrook complex, 2 to 35 percent slopes, saline-sodic	---	1,904	---	---	1,904	0.7
66	Radnik-Kwakina-Pherson family complex, 1 to 15 percent slopes	---	---	434	---	434	0.2
67	Radnik-Notom-Oxyaquic Torrifluvents complex, 2 to 10 percent slopes	---	---	124	---	124	*
68	Razito-Riverwash complex, 1 to 4 percent slopes	---	12	---	---	12	*
69	Reef-Retsabal-Rock outcrop complex, 15 to 60 percent slopes	---	1,492	8,419	---	9,911	3.8
70	Reef-Rock outcrop complex, 15 to 60 percent slopes	---	7,985	---	---	7,985	3.1
71	Reef-Rock outcrop complex, 25 to 50 percent slopes	---	1,346	---	---	1,346	0.5
72	Reef-Rock outcrop complex, 30 to 60 percent slopes, extremely bouldery	---	1,387	---	---	1,387	0.5

See footnote at end of table.

Table 5.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Sevier County	Garfield County	Wayne County	Emery County	Total	
		Acres				Area	Extent
						Acres	Pct
73	Reef-Rock outcrop complex, 6 to 20 percent slopes	---	1,157	2,982	---	4,139	1.6
74	Reef, warm-Rock outcrop-Lemrac complex, 20 to 65 percent slopes	---	821	---	---	821	0.3
75	Reef-Rizno-Rock outcrop complex, 2 to 15 percent slopes	---	3,013	1,417	---	4,430	1.7
76	Remorris sandy loam, 2 to 60 percent slopes	---	---	453	---	453	0.2
77	Remorris, strongly alkaline-Rock outcrop complex, 30 to 70 percent slopes	1,853	---	7,550	---	9,403	3.6
78	Remorris-Milok-Rock outcrop complex, 10 to 60 percent slopes	17	---	8,444	32	8,493	3.3
79	Remorris-Peachsprings complex, 5 to 60 percent slopes	---	---	1,482	---	1,482	0.6
80	Retsabal-Lemrac complex, 9 to 60 percent slopes	---	---	1,439	---	1,439	0.6
81	Rizno-Mido, warm-Rock outcrop complex, 2 to 30 percent slopes	---	1,707	---	---	1,707	0.7
82	Rizno-Rock outcrop complex, 1 to 25 percent slopes	---	98	---	---	98	*
83	Rizno-Rock outcrop complex, 15 to 35 percent slopes	---	105	---	---	105	*
84	Rock outcrop-Arches complex, 2 to 60 percent slopes	---	288	---	---	288	0.1
85	Rock outcrop-Arches complex, 4 to 25 percent slopes	---	---	10,650	---	10,650	4.1
86	Rock outcrop-Daklos-Moclom complex, 5 to 20 percent slopes	345	1	11,366	---	11,712	4.5
87	Rock outcrop-Myton-Somorent complex, 35 to 60 percent slopes	---	1,653	---	---	1,653	0.6
88	Rock outcrop-Nalcase complex, 2 to 30 percent slopes	---	16,660	16,926	---	33,586	12.9
89	Rock outcrop-Needle complex, 2 to 30 percent slopes	---	276	---	---	276	0.1
90	Rock outcrop-Mezzo family-Strell family complex, 2 to 45 percent slopes	---	---	5,434	---	5,434	2.1
91	Rock outcrop-Santrick-Nalcase complex, 2 to 30 percent slopes	---	2,448	2,999	---	5,447	2.1
92	Rock outcrop-Typic Torriorthents complex, 20 to 65 percent slopes, extremely bouldery	---	39	---	---	39	*
93	Rosced family-Quezcan, sodic complex, 15 to 70 percent slopes	---	7,938	---	---	7,938	3.0
94	Saemo gravelly fine sandy loam, 15 to 50 percent slopes	---	470	---	---	470	0.2
95	Sandyranch-Aquic Torrifluvents-Water complex, 2 to 15 percent slopes	---	102	---	---	102	*

See footnote at end of table.

Table 5.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Sevier County	Garfield County	Wayne County	Emery County	Total Area	Total Extent
		Acres				Acres	Pct
96	Sandyranch-Mido-Miden complex, 2 to 45 percent slopes	---	1,238	11	---	1,249	0.5
97	Sandyranch-Radnik-Riverwash complex, 1 to 15 percent slopes	---	1,317	---	---	1,317	0.5
98	Seeg-Moffat-Needle complex, 2 to 30 percent slopes	---	860	---	---	860	0.3
99	Simel-Catahoula-Rock outcrop complex, 30 to 70 percent slopes, saline	---	---	2,930	---	2,930	1.1
100	Simel-Rock outcrop complex, 20 to 50 percent slopes	---	---	1,903	---	1,903	0.7
101	Simel-Simel, steep-Rock outcrop complex, 15 to 60 percent slopes	---	---	6,753	---	6,753	2.6
102	Skos-Badland complex, 25 to 60 percent slopes	---	176	---	---	176	*
103	Strych gravelly very fine sandy loam, 2 to 40 percent slopes	---	---	859	---	859	0.3
104	Sulphurcreek loam, 0 to 5 percent slopes	---	---	34	---	34	*
105	Tesihim-Rizno, steep-Rock outcrop-Badland complex, 6 to 75 percent slopes	---	5,316	---	---	5,316	2.0
106	Tineoyler loam, 0 to 5 percent slopes	---	---	99	---	99	*
107	Ustic Torriorthents-Rock outcrop-Badland complex, 4 to 54 percent slopes, extremely bouldery	---	261	---	---	261	0.1
108	Water	---	2	---	---	2	*
	Total	4,710	102,672	150,686	2,252	260,320	100.0

* Less than 0.1 percent.

Table 6.—Landform, Geology, Parent Material, and Ecological Site

(Miscellaneous nonsoil components are not displayed in this report. Component percents may not add up to 100. MAP is the mean annual precipitation)

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
1:								
Abra, moist	30	1-5	7047-7365	9-13	Pediment and plateau	Pediment deposits (Pleistocene and Upper Pliocene)	Alluvium derived from basalt	Semidesert Loam (Wyoming Big Sagebrush), R035XY209UT
Sazi, moist	30	1-5	7047-7365	9-13	Pediment and plateau	Pediment deposits (Pleistocene and Upper Pliocene) over Morrison Formation, Salt Wash Member (Upper Jurrasic)	Alluvium derived from basalt over residuum weathered from sandstone and siltstone	Semidesert Loam (Wyoming Big Sagebrush), R035XY209UT
Strych, moist	30	1-5	7047-7365	9-13	Pediment and plateau	Pediment deposits (Pleistocene and Upper Pliocene)	Alluvium derived from basalt	Semidesert Loam (Wyoming Big Sagebrush), R035XY209UT
2:								
Aquima	80	1-6	6444-6781	9-13	Alluvial flat	Alluvium (Quaternary)	Alluvium derived from sandstone and shale and/or slope alluvium derived from sandstone and shale	Semidesert Loam (Wyoming Big Sagebrush), R035XY209UT
3:								
Arches	45	2-15	6037-7326	9-13	Mesa and structural bench	Eolian deposits (Quaternary)	Eolian deposits derived from sandstone	Semidesert Shallow Sand (Utah Juniper-Pinyon), R035XY227UT
Mido	25	2-15	6037-7326	9-13	Dune on mesa and dune on structural bench	Eolian deposits (Quaternary)	Eolian deposits derived from sandstone	Semidesert Sand (Fourwing Saltbush), R035XY212UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
4:								
Emco family--------	30	10-60	5082-6020	6-9	Hill	Morrison Formation, Brushy Basin Member (Jurassic)	Colluvium derived from sandstone and shale over residuum weathered from mudstone	Desert Shallow Clay (Shadscale), R035XY125UT
5:								
Barx---------------	55	5-15	5302-6959	9-12	Alluvial flat	Alluvium and dune deposits (Quaternary)	Reworked eolian material	Semidesert Loam (Wyoming Big Sagebrush), R035XY209UT
Remorris-----------	20	25-45	5302-6959	9-12	Structural bench	Chinle Formation (Triassic)	Colluvium derived from sandstone and siltstone over residuum weathered from sandstone and siltstone	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon), R035XY240UT
6:								
Beclabito----------	55	10-40	4951-6824	9-13	Hillslope	Colluvial deposits (Quaternary)	Alluvium derived from igneous rock and/or residuum weathered from sedimentary rock	Semidesert Loam (Shadscale), R035XY242UT
Lybrook, saline-sodic------	30	20-40	4951-6824	9-13	Hillslope	Morrison Formation, Brushy Basin Member (Jurassic)	Residuum weathered from sedimentary rock	Semidesert Shallow Clay (Shadscale-Utah Juniper), R035XY239UT
7:								
Begay, moist-------	80	1-15	5696-5889	9-13	Alluvial flat	Alluvium and dune sand (Quaternary)	Slope alluvium derived from sandstone and shale and/or eolian sands derived from sandstone	Semidesert Sandy Loam (Wyoming Big Sagebrush), R035XY216UT
8:								
Begay--------------	90	1-9	5240-5741	9-13	Alluvial fan	Alluvial deposits (Quaternary)	Alluvium derived from sandstone and/or slope alluvium derived from sandstone	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
9:								
Begay, moist-------	80	1-5	5876-6283	9-13	Intermediate and high stream terrace	Quaternary alluvium	Alluvium derived from sandstone	Semidesert Sandy Loam (Wyoming Big Sagebrush), R035XY216UT
10:								
Begay, saline------	50	2-9	4846-5745	9-13	Alluvial fan	Alluvial deposits (Quaternary)	Alluvium derived from sandstone and/or slope alluvium derived from sandstone	Semidesert Loam (Shadscale), R035XY242UT
Querencia, saline-sodic------	35	1-9	4846-5745	9-13	Alluvial fan	Alluvial deposits (Quaternary)	Alluvium derived from sandstone and shale and/or slope alluvium derived from sandstone and shale	Semidesert Loam (Shadscale), R035XY242UT
11:								
Begay, saline-sodic	50	2-8	5948-6713	9-13	Stream terrace	Quaternary alluvium	Alluvium derived from sandstone and siltstone	Alkali Flat (Greasewood), R035XY009UT
Begay, moist-------	25	2-8	5948-6713	9-13	Stream terrace	Quaternary alluvium	Alluvium derived from sandstone and siltstone	Semidesert Sandy Loam (Wyoming Big Sagebrush), R035XY216UT
Elias--------------	20	2-8	5948-6713	9-13	Stream terrace	Quaternary alluvium	Alluvium derived from sandstone and siltstone	Alkali Flat (Greasewood), R035XY009UT
12:								
Begay--------------	40	2-20	5522-6102	9-13	Dissected cuesta and dissected pediment	Quaternary alluvial and eolian deposits	Eolian deposits derived from sandstone over slope alluvium derived from sandstone	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT
Ignacio------------	25	20-60	5522-6102	9-13	Dissected cuesta and dissected pediment	Entrada and Carmel Formations (Jurassic)	Slope alluvium derived from sandstone over residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
12:								
Retsabal	15	6-30	5522-6102	9-13	Dissected cuesta and dissected pediment	Carmel Formation (Jurassic)	Residuum weathered from rock gypsum	Semidesert Shallow Gypsum (Mormontea), R035XY237UT
13:								
Begay, moist	65	6-20	5951-6463	9-13	Low hill and pediment	Moenkopi and Chinle Formations (Triassic) and eolian deposits (Quaternary)	Eolian deposits derived from sandstone over alluvium derived from sandstone	Semidesert Sandy Loam (Wyoming Big Sagebrush), R035XY216UT
Rizno, moist	15	1-10	5951-6463	9-13	Hill and pediment	Moenkopi Formation (Triassic)	Slope alluvium derived from sandstone over residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
14:								
Begay	60	2-15	5604-6932	9-13	Alluvial fan and pediment	Quaternary alluvium and pediment deposits	Alluvium derived from sandstone and/or eolian deposits derived from sandstone	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT
Strych	30	2-15	5604-6932	9-13	Alluvial fan and pediment	Quaternary alluvium and pediment deposits	Eolian deposits derived from sandstone over alluvium derived from basalt	Semidesert Stony Loam (Utah Juniper-Pinyon), R035XY246UT
15:								
Bullpen	35	4-25	6995-7270	9-13	Mesa	Chinle Formation (Triassic), Shinarump Conglomerate and Monitor Butte Member	Slope alluvium derived from shale and siltstone over residuum weathered from shale and siltstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
15:								
Daklos	35	2-15	6995-7270	9-13	Mesa and structural bench	Chinle Formation (Triassic), Shinarump Conglomerate	Residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
Puertecito	20	2-15	6995-7270	9-13	Mesa and structural bench	Chinle Formation (Triassic), Shinarump Conglomerate	Slope alluvium derived from sandstone and shale over residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
16:								
Calladito, saline-sodic	50	1-6	4711-5673	9-13	Stream terrace	Alluvium (Quaternary)	Alluvium derived from sandstone	Alkali Flat (Greasewood), R035XY009UT
Yarts, saline-sodic	35	1-6	4711-5673	9-13	Stream terrace	Quaternary alluvium	Alluvium derived from sandstone	Alkali Bottom (Greasewood), R035XY003UT
17:								
Catahoula	40	35-75	4583-7313	9-13	Escarpment and talus slope	Colluvial deposits (Quaternary)	Colluvium derived from sandstone over residuum weathered from sandstone and shale	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper), R035XY263UT
18:								
Chilton	55	2-25	5476-5883	9-13	Alluvial fan and stream terrace	Quaternary alluvial deposits	Alluvium derived from sandstone and shale	Semidesert Loam (Shadscale), R035XY242UT
Begay	20	1-5	5476-5883	9-13	Stream terrace	Quaternary alluvial deposits	Alluvium derived from sandstone	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT
19:								
Chinchin	45	25-50	5102-6903	9-12	Escarpment on structural bench	Chinle Formation (Triassic)	Residuum weathered from shale	Semidesert Shallow Clay (Shadscale-Utah Juniper), R035XY239UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
20:								
Chipeta, saline-sodic	65	30-70	4993-5965	6-9	Escarpment	Mancos Shale, Tununk Member (Cretaceous)	Residuum weathered from shale	Desert Clay (Castle Valley Saltbush), R035XY103UT
Stent family	25	30-70	4993-5965	6-9	Escarpment	Mesaverde Formation (Cretaceous)	Colluvium derived from sandstone	Desert Clay (Castle Valley Saltbush), R035XY103UT
21:								
Daklos	40	5-60	5302-6860	9-12	Dissected structural bench	Chinle Formation (Triassic)	Slope alluvium and/or colluvium derived from sandstone over residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
Lazear, dry	35	5-60	5302-6860	9-12	Hillslope on dissected structural bench	Chinle Formation (Triassic)	Residuum weathered from sandstone and shale	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
22:								
Daklos	60	6-25	5069-6736	9-13	Dip slope of cuesta	Carmel Formation sandstone (Jurassic)	Residuum weathered from arenaceous limestone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
Reef	15	25-60	5069-6736	9-13	Canyon side slope on dip slope of cuesta	Carmel Formation sandstone (Jurassic)	Colluvium derived from arenaceous limestone and/or residuum weathered from arenaceous limestone	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon), R035XY240UT
23:								
Daklos	40	15-60	4990-7612	9-13	Canyon	Kaibab Limestone (Permian)	Colluvium derived from sandstone and/or residuum weathered from sandstone	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon), R035XY240UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
23:								
Rizno	25	15-35	4990-7612	9-13	Canyon	Kaibab Limestone (Permian)	Residuum weathered from sandstone and/or slope alluvium derived from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
24:								
Earlweed	60	5-22	5322-7064	10-14	Interfluve on hill, mesa, and structural bench as coppice mound and dune	Dune deposits (Quaternary)	Eolian deposits	Semidesert Sand (Fourwing Saltbush), R035XY212UT
Anasazi	30	5-22	5322-7064	10-14	Interfluve on hill, mesa, and structural bench	Kayenta Formation sandstone (Jurassic) and dune deposits (Quaternary)	Eolian deposits and/or residuum weathered from sandstone	Semidesert Sandy Loam (Blackbrush), R035XY218UT
25:								
Eslendo, saline	60	30-70	5026-6335	9-13	Escarpment	Masuk, Emery Sandstone, and Blue Gate Members of Mancos Shale (Cretaceous)	Residuum weathered from shale	Semidesert Shallow Clay (Mat Saltbush), R035XY223UT
Happle, saline-sodic	20	30-70	5026-6335	9-13	Escarpment	Masuk, Emery Sandstone, and Blue Gate Members of Mancos Shale (Cretaceous)	Colluvium derived from sandstone	Semidesert Shallow Clay (Mat Saltbush), R035XY223UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
26:								
Foy family---------	50	2-35	6076-8973	13-16	Mountain	Boulder deposits and pediment deposits (Pleistocene and Upper Pliocene)	Alluvium derived from basalt	Upland Stony Loam (Pinyon-Utah Juniper), R035XY321UT
Whitesage family---	45	2-35	6076-8973	13-16	Mountain	Boulder deposits (Pleistocene and Upper Pliocene)	Alluvium derived from basalt over residuum weathered from sandstone	Upland Loam (Mountain Big Sagebrush), R035XY308UT
27:								
Gladel-------------	55	2-20	6535-7418	13-16	Mesa	Kayenta Formation sandstone (Triassic)	Residuum weathered from sandstone and/or slope alluvium derived from sandstone	Upland Shallow Loam (Pinyon-Utah Juniper), R035XY315UT
Plumasano----------	35	2-9	6535-7418	13-16	Sand sheet on mesa	Eolian deposits (Holocene and Upper Pliestocene) and alluvial deposits (Holocene)	Slope alluvium derived from sandstone and/or eolian sands derived from sandstone	Upland Loam (Mountain Big Sagebrush), R035XY308UT
28:								
Goblin-------------	80	15-70	5039-6529	6-9	Dip slope of cuesta	Carmel Formation (Jurassic)	Residuum weathered from rock gypsum	Desert Very Shallow Gypsum (Torrey’s Jointfir), R035XY142UT
29:								
Goblin-------------	50	8-60	5722-6801	8-10	Dissected hillside, side slope, and structural bench	Curtis and Entrada Formations sandstone and siltstone (Jurassic)	Gypsiferous residuum weathered from sandstone and shale	Desert Very Shallow Gypsum (Torrey’s Jointfir), R035XY142UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
29:								
Clapper	30	25-65	5722-6801	8-10	Dissected hill and structural bench	Curtis and Entrada Formations sandstone and siltstone (Jurassic)	Colluvium derived from basalt and slope alluvium derived from sandstone and shale over residuum weathered from sandstone and shale	Semidesert Very Steep Stony Loam (Salina Wildrye), R035XY260UT
30:								
Goblin	60	9-60	4990-5692	6-9	Break and hillslope on cuesta	Carmel and Entrada Formations (Jurassic)	Colluvium derived from sandstone over residuum weathered from sandstone	Desert Very Shallow Gypsum (Torrey’s Jointfir), R035XY142UT
Ivanpatch	30	2-15	4990-5692	6-9	Hillslope on cuesta and pediment	Carmel and Entrada Formations (Jurassic)	Eolian deposits derived from sandstone and/or pedisediment derived from sandstone over residuum weathered from rock gypsum	Desert Gypsum Loam (Torrey’s Jointfir), R035XY106UT
31:								
Hanksville, saline-sodic	60	15-45	4918-5105	6-9	Hillslope on cuesta and pediment	Mancos Shale (Cretaceous)	Slope alluvium derived from shale over residuum weathered from shale	Desert Clay (Castle Valley Saltbush), R035XY103UT
Chipeta, saline	30	9-45	4918-5105	6-9	Hillslope on cuesta and pediment	Mancos Shale (Cretaceous)	Slope alluvium derived from shale over residuum weathered from shale	Desert Shallow Clay (Mat Saltbush), R035XY124UT
32:								
Hanksville, saline-sodic	50	2-8	5049-5269	6-9	Alluvial flat and pediment	Tununk Member of Mancos Shale (Cretaceous)	Pedisediment derived from shale and/or residuum weathered from shale	Desert Clay (Castle Valley Saltbush), R035XY103UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
32:								
Notal, saline-sodic	40	2-8	5049-5269	6-9	Alluvial flat and pediment	Tununk Member of Mancos Shale (Cretaceous)	Pedisediment derived from shale and/or residuum weathered from shale	Desert Clay (Castle Valley Saltbush), R035XY103UT
33:								
Kydestea	50	15-60	5758-7982	13-16	Scarp slope on pediment	Moenkopi Formation sandstone (Triassic)	Colluvium derived from calcareous sandstone over residuum weathered from calcareous sandstone	Upland Very Steep Shallow Loam (Pinyon-Utah Juniper), R035XY325UT
Vessilla	30	15-60	5758-7982	13-16	Scarp slope on pediment	Moenkopi Formation sandstone (Triassic)	Colluvium derived from calcareous sandstone over residuum weathered from calcareous sandstone	Upland Very Steep Shallow Loam (Pinyon-Utah Juniper), R035XY325UT
34:								
Kydestea	40	2-15	6453-7897	13-16	Ridgetop and footslope of mountain slope	Moenkopi Formation sandstone (Triassic)	Slope alluvium derived from sandstone	Upland Shallow Loam (Pinyon-Utah Juniper), R035XY315UT
Vessilla	35	2-15	6453-7897	13-16	Ridgetop and footslope of mountain slope	Moenkopi Formation sandstone (Triassic)	Residuum weathered from sandstone and/or slope alluvium derived from sandstone	Upland Shallow Loam (Pinyon-Utah Juniper), R035XY315UT
35:								
Lavodnas	45	15-60	5564-6690	9-13	Break and hill on cuesta	Carmel Formation (Jurassic)	Slope alluvium derived from shale over residuum weathered from rock gypsum	Semidesert Shallow Gypsum (Mormontea), R035XY237UT
Retsabal	40	15-60	5564-6690	9-13	Homoclinal ridge	Carmel Formation (Jurassic)	Eolian deposits derived from sandstone and shale over residuum weathered from rock gypsum	Semidesert Shallow Gypsum (Mormontea), R035XY237UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
36:								
Mathis, cool	70	15-90	5354-6316	9-13	Escarpment and talus slope	Wingate Sandstone (Triassic)	Colluvium derived from sandstone over residuum weathered from sandstone	Upland Stony Sand (Utah Juniper-Pinyon), R035XY323UT
37:								
Metuck	30	35-60	5495-7723	13-16	Canyon	Kaibab Limestone (Permian)	Colluvium derived from arenaceous limestone over residuum weathered from arenaceous limestone	Upland Very Steep Shallow Loam (Pinyon-Utah Juniper), R035XY325UT
Vessilla	25	15-35	5495-7723	13-16	Canyon	Kaibab Limestone (Permian)	Colluvium derived from arenaceous limestone and/or slope alluvium derived from arenaceous limestone over residuum weathered from arenaceous limestone	Upland Shallow Loam (Pinyon-Utah Juniper), R035XY315UT
38:								
Mezzo family	80	2-20	6437-7651	13-16	Dune and sand sheet	Eolian deposits (Quaternary)	Eolian deposits derived from sandstone	Upland Sand (Mountain Big Sagebrush), R035XY307UT
39:								
Mido	65	10-35	5000-5768	9-13	Dune	Quaternary eolian deposits	Eolian sands derived from sandstone	Semidesert Sand (Fourwing Saltbush), R035XY212UT
40:								
Mido	40	2-15	4993-5817	9-13	Sand sheet on strath terrace	Eolian deposits (Quaternary)	Eolian sands derived from sandstone	Semidesert Sand (Fourwing Saltbush), R035XY212UT
Strych	30	6-35	4993-5817	9-13	Strath terrace	Terrace deposits (Quaternary)	Alluvium derived from basalt	Semidesert Stony Loam (Utah Juniper-Pinyon), R035XY246UT
Reef	15	35-50	4993-5817	9-13	Strath terrace	Terrace deposits (Quaternary)	Alluvium derived from basalt	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon), R035XY240UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
41:								
Mikim	50	3-15	5509-5761	9-13	Mesa	Quaternary eolian deposits	Eolian sands derived from sandstone over residuum weathered from sandstone	Semidesert Loam (Wyoming Big Sagebrush), R035XY209UT
Mivida, moist	40	3-15	5509-5761	9-13	Mesa	Quaternary eolian deposits	Eolian sands derived from sandstone over residuum weathered from sandstone	Semidesert Loam (Wyoming Big Sagebrush), R035XY209UT
42:								
Milok, cool	50	2-20	6499-6765	9-13	Pediment and plateau	Eolian deposits (Holocene and Upper Pleistocene) and pediment deposits (Pleistocene and Upper Pliocene)	Eolian deposits derived from sandstone over alluvium derived from basalt	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT
Clapper	40	2-20	6499-6765	9-13	Pediment and plateau	Pediment deposits (Pleistocene and Upper Pliocene)	Alluvium derived from basalt	Semidesert Stony Loam (Utah Juniper-Pinyon), R035XY246UT
43:								
Milok, steep	40	15-60	6552-7454	9-13	Escarpment	Colluvial deposits (Holocene and Pleistocene)	Slope alluvium derived from basalt over slope alluvium derived from sandstone	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper), R035XY263UT
Strych	40	15-60	6552-7454	9-13	Escarpment	Colluvial deposits (Holocene and Pleistocene)	Alluvium derived from basalt and/or colluvium derived from basalt	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper), R035XY263UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
44:								
Mivida	80	1-4	5725-6401	9-12	Fan terrace	Alluvium (Quaternary)	Eolian deposits derived from calcareous sandstone over alluvium derived from calcareous sandstone	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT
45:								
Mivida	50	2-6	5666-5778	9-13	Alluvial flat	Alluvium and slope alluvium (Quaternary)	Eolian deposits derived from sandstone and/or slope alluvium derived from sandstone	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT
Gish	15	2-15	5666-5778	9-13	Alluvial flat	Alluvium and slope alluvium (Quaternary)	Slope alluvium derived from sandstone and shale	Alkali Bottom (Greasewood), R035XY003UT
Cannonville	15	6-15	5666-5778	9-13	Hill	Chinle Formation (Triassic)	Residuum weathered from shale	Semidesert Shallow Clay (Shadscale-Utah Juniper), R035XY239UT
46:								
Moab	60	2-12	5249-6624	9-13	Fan remnant and pediment	Alluvium and pediment deposits (Quaternary)	Alluvium derived from sandstone and/or alluvium derived from basalt	Semidesert Loam (Shadscale), R035XY242UT
Abra family	30	1-5	5249-6624	9-13	Fan remnant and pediment	Alluvium and pediment deposits (Quaternary)	Alluvium derived from sandstone and/or alluvium derived from basalt	Semidesert Loam (Shadscale), R035XY242UT
47:								
Moclom, warm	45	6-20	4888-5548	9-13	Dip slope of cuesta or hogback	Morrison Formation, Salt Wash Member (Jurassic)	Eolian deposits derived from sandstone and/or slope alluvium derived from sandstone	Semidesert Shallow Sand (Blackbrush), R035XY224UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
48:								
Moenkopie, warm----	60	2-35	3924-4406	6-9	Low hill and structural bench	Carmel Formation sandstone (Jurassic)	Residuum weathered from sandstone and siltstone	Desert Shallow Sandy Loam (Blackbrush), R035XY133UT
49:								
Moenkopie----------	60	3-24	3701-4639	6-10	Interfluve on hill, mesa, and structural bench	Entrada Sandstone (Jurassic)	Eolian sands derived from sandstone and/or residuum weathered from sandstone and shale	Desert Shallow Sandy Loam (Shadscale), R035XY130UT
50:								
Molen family-------	50	2-6	5200-6801	9-12	Structural bench	Curtis, Summerville, and Entrada Formations (Jurassic)	Eolian deposits over residuum weathered from sandstone and shale	Semidesert Loam (Salina wildrye), R034XY209UT
Lazear-------------	18	2-8	5200-6801	9-12	Structural bench	Curtis, Summerville, and Entrada Formations (Jurassic)	Slope alluvium over residuum weathered from sandstone and shale	Semidesert Shallow Loam (Utah Juniper-Pinyon), R034XY233UT
Gerst--------------	15	5-8	5200-6801	9-12	Shale hill	Curtis, Summerville, and Entrada Formations (Jurassic)	Slope alluvium derived from sandstone and shale over residuum weathered from calcareous shale	Semidesert Shallow Clay (Utah Juniper), R034XY221UT
51:								
Monue--------------	55	2-8	5364-6283	6-9	Stream terrace	Alluvial deposits (Holocene)	Alluvium derived from sandstone	Desert Alkali Sandy Loam (Alkali Sacaton), R035XY101UT
Fruitland----------	20	1-5	5364-6283	6-9	Alluvial fan and stream terrace	Alluvial deposits (Holocene)	Alluvium derived from sandstone	Desert Alkali Sandy Loam (Alkali Sacaton), R035XY101UT
52:								
Monue, saline-sodic	50	1-8	5702-6132	6-9	Stream terrace	Quaternary alluvium	Alluvium derived from sandstone	Desert Alkali Sandy Loam (Alkali Sacaton), R035XY101UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
52:								
Myton, saline-sodic	20	1-15	5702-6132	6-9	Stream terrace	Quaternary alluvium	Alluvium derived from sandstone	Desert Stony Loam (Shadscale-Bud Sagebrush), R035XY136UT
Uzona, saline-sodic	20	1-3	5702-6132	6-9	Stream terrace	Quaternary alluvium	Alluvium derived from sandstone and shale	Alkali Bottom (Greasewood), R035XY003UT
53:								
Monue	60	1-6	5020-5610	6-9	High stream terrace	Alluvium and eolian sand (Quaternary)	Alluvium derived from sandstone and/or eolian sands derived from sandstone	Desert Alkali Sandy Loam (Alkali Sacaton), R035XY101UT
Sheppard	25	1-6	5020-5610	6-9	Low stream terrace	Entrada Sandstone (Jurassic), Quaternary eolian sediments, and Quaternary alluvium sediments	Alluvium derived from sandstone and/or eolian sands derived from sandstone	Desert Alkali Sandy Loam (Alkali Sacaton), R035XY101UT
54:								
Mulford	90	0-5	5420-5476	9-13	Terrace	Quaternary alluvium	Alluvium derived from basalt and/or alluvium derived from sedimentary rock	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types), R035XY022UT
55:								
Mussentuchit	45	5-20	4301-6201	6-9	Gypsum hill	Entrada Sandstone (Jurassic)	Eolian deposits and/or slope alluvium over gypsiferous residuum weathered from sandstone and shale	Desert Gypsum Loam (Torrey’s Jointfir), R035XY106UT
Goblin	25	5-20	4301-6201	6-9	Dissected structural bench	Entrada Sandstone (Jurassic)	Slope alluvium over residuum weathered from gypsiferous shale and sandstone	Desert Very Shallow Gypsum (Torrey’s Jointfir), R035XY142UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
55:								
Swell family-------	20	3-12	4301-6201	6-9	Hill	Entrada Sandstone (Jurassic)	Gypsiferous slope alluvium derived from sandstone and shale	Desert Gypsum Loam (Torrey's Jointfir), R035XY106UT
56:								
Nepalto------------	95	5-18	3150-4039	6-10	Base slope on fan remnant	Terrace gravel deposits (Quaternary)	Colluvium and/or slope alluvium derived from sandstone and shale	Desert Stony Loam (Shadscale-Bud Sagebrush), R035XY136UT
57:								
Nizhoni------------	60	2-35	6388-7890	13-16	Structural bench	Kayenta Formation (Jurassic)	Residuum weathered from sandstone and/or slope alluvium derived from sandstone	Upland Shallow Loam (Pinyon-Utah Juniper), R035XY315UT
58:								
Nizhoni------------	60	20-50	5295-7657	13-16	Structural bench	Kayenta Formation (Jurassic)	Residuum weathered from sandstone	Upland Shallow Loam (Pinyon-Utah Juniper), R035XY315UT
59:								
Nizhoni------------	40	2-15	6572-7605	13-16	Mesa and structural bench	Kayenta Formation (Jurassic)	Eolian sands derived from sandstone over residuum weathered from sandstone	Upland Shallow Loam (Pinyon-Utah Juniper), R035XY315UT
Pinepoint, dry-----	20	2-20	6572-7605	13-16	Dune on mesa and dune on structural bench	Eolian deposits (Holocene and Upper Pleistocene)	Eolian sands derived from sandstone	Upland Sand (Utah Juniper-Pinyon), R035XY324UT
60:								
Notom--------------	40	1-6	5787-6250	9-13	Flood-plain step	Quaternary alluvium	Mixed alluvium derived from igneous and sedimentary rock	Colorado Plateau Riparian Complex Perennial (Valley Type VIII - B4C Stream Type), R035XY021UT
Begay, moist-------	20	1-5	5787-6250	9-13	Stream terrace	Quaternary alluvium	Mixed alluvium derived from igneous and sedimentary rock	Loamy Bottom (Basin Big Sagebrush), R035XY011UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
60:								
Bowington----------	10	1-5	5787-6250	9-13	Flood plain	Quaternary alluvium	Mixed alluvium derived from igneous and sedimentary rock	Colorado Plateau Riparian Complex Perennial (Valley Type VIII - B4C Stream Type), R035XY021UT
61:								
Notom--------------	50	1-5	5518-5938	9-13	Flood-plain step	Quaternary alluvium	Alluvium derived from basalt and/or alluvium derived from sandstone	Colorado Plateau Riparian Complex Perennial (Valley Type IV - B4C Stream Type), R035XY020UT
Aquic Torrifluvents	20	2-20	5518-5938	9-13	Flood plain	Quaternary alluvium	Alluvium derived from sandstone	Colorado Plateau Riparian Complex Perennial (Valley Type IV - B4C Stream Type), R035XY020UT
62:								
Parkwash-----------	70	3-35	5837-7644	13-16	Mesa	Kayenta Formation (Jurassic)	Residuum weathered from sandstone and/or eolian sands derived from sandstone	Upland Shallow Sand (Pinyon-Utah Juniper), R035XY314UT
63:								
Pherson family-----	30	2-30	5226-6749	9-13	Flood-plain step	Quaternary alluvium	Alluvium derived from sandstone	Ephemeral Canyon Scrub, R035XY032UT
Sandyranch---------	25	1-15	5226-6749	9-13	Stream terrace	Quaternary alluvial deposits and eolian sands	Alluvium derived from sandstone	Sandy Bottom (Fourwing Saltbush), R035XY015UT
64:								
Polychrome---------	50	15-60	5502-6739	9-12	Escarpment	Chinle Formation (Triassic)	Slope alluvium derived from shale over colluvium derived from shale	Semidesert Stony Loam (Utah Juniper-Pinyon), R035XY246UT
Cerropelon family--	15	15-60	5502-6739	9-12	Escarpment on structural bench	Chinle Formation (Triassic)	Colluvium derived from shale over residuum weathered from shale	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon), R035XY240UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
65:								
Querencia, saline-sodic------	50	2-15	5007-5981	9-13	Hill and pediment	Mancos Shale, Blue Gate and Tununk Members (Cretaceous)	Slope alluvium derived from shale over residuum weathered from shale	Desert Loam (Shadscale), R035XY109UT
Lybrook, saline-sodic------	30	9-35	5007-5981	9-13	Hill and pediment	Mancos Shale, Blue Gate and Tununk Members (Cretaceous)	Slope alluvium derived from shale over residuum weathered from shale	Desert Clay (Castle Valley Saltbush), R035XY103UT
66:								
Radnik----------	45	1-5	4951-5650	9-13	Flood-plain step	Quaternary alluvium	Alluvium derived from sandstone	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types), R035XY022UT
Kwakina----------	25	1-5	4951-5650	9-13	Flood-plain step and levee	Quaternary alluvium	Alluvium derived from sandstone	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types), R035XY022UT
Pherson family-----	15	2-15	4951-5650	9-13	Flood-plain step	Quaternary alluvium	Alluvium derived from basalt and/or alluvium derived from sandstone	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types), R035XY022UT
67:								
Radnik----------	50	2-10	5400-7100	9-13	Stream terrace	Quaternary alluvium	Alluvium derived from basalt and/or alluvium derived from sandstone	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT
Notom----------	25	2-10	5400-7100	9-13	Flood-plain step	Quaternary alluvium	Alluvium derived from volcanic and sedimentary rock	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types), R035XY022UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
67: Oxyaquic Torrifluvents-----	20	2-10	5400-7100	9-13	Flood plain	Quaternary alluvium	Alluvium derived from basalt and/or alluvium derived from sandstone	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types), R035XY022UT
68: Razito----------	55	1-4	3704-3914	6-10	Flood plain	Alluvium (Quaternary)	Sandy alluvium	Sandy Wash 6-10” p.z., R035XB216AZ
69: Reef----------	60	15-50	5262-8619	9-13	Pediment	Carmel Formation (Jurassic)	Residuum weathered from calcareous sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
Retsabal----------	15	25-60	5262-8619	9-13	Interfluve and canyon side slope of dissected pediment	Carmel Formation (Jurassic)	Eolian deposits derived from sandstone over residuum weathered from rock gypsum	Semidesert Shallow Gypsum (Mormontea), R035XY237UT
70: Reef----------	70	15-60	4711-6982	9-13	Hillslope on deeply dissected plateau	Moenkopi Formation (Lower Triassic)	Colluvium derived from sandstone over residuum weathered from sandstone	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon), R035XY240UT
71: Reef----------	75	25-50	5043-6342	9-13	Cuesta or hogback	Carmel Formation sandstone (Jurassic)	Colluvium derived from sandstone and/or residuum weathered from sandstone	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon), R035XY240UT
72: Reef----------	65	30-60	4029-7021	10-14	Talus slope on plateau	Kayenta and Navajo Formations sandstone (Jurassic)	Sandy and gravelly talus derived from sandstone and shale	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper), R035XY263UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
73:								
Reef	40	6-20	4987-7536	9-13	Dip slope of cuesta and structural bench	Kayenta Formation (Jurassic)	Residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
74:								
Reef, warm	40	20-35	3881-5315	9-13	Dip slope of hogback or cuesta	Carmel Formation (Jurassic)	Colluvium derived from sandstone over residuum weathered from sandstone	Semidesert Very Shallow Gravelly Loam (Utah Juniper), R035XY235UT
Lemrac	15	35-65	3881-5315	9-13	Dip slope of hogback or cuesta	Carmel Formation (Jurassic)	Residuum weathered from rock gypsum	Semidesert Gypsum (Torrey's Jointfir), R035XY264UT
75:								
Reef	45	2-15	5515-7382	9-13	Ridgetop and footslope of mountain slope and structural bench	Moenkopi Formation (Lower Triassic)	Slope alluvium derived from sandstone and siltstone over residuum weathered from sandstone and siltstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
Rizno	40	2-15	5515-7382	9-13	Ridgetop and footslope of mountain slope and structural bench	Moenkopi Formation (Lower Triassic)	Slope alluvium derived from sandstone and siltstone over residuum weathered from sandstone and siltstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
76:								
Remorris	85	2-60	5463-6325	9-13	Low hill	Moenkopi Formation sandstone (Triassic)	Residuum weathered from siltstone	Semidesert Shallow Sandy Loam (Shadscale), R035XY230UT
77:								
Remorris, strongly alkaline	60	30-70	4964-7785	9-13	Escarpment	Summerville, Curtis, and Entrada Formations	Residuum weathered from sandstone and siltstone	Desert Clay (Castle Valley Saltbush), R035XY103UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
78:								
Remorris	40	15-60	5322-7480	9-13	Dip slope of cuesta, hillslope, and structural bench	Entrada and Summerville Formations (Jurassic)	Slope alluvium derived from sandstone and siltstone over residuum weathered from sandstone and siltstone	Semidesert Shallow Shale (Utah Juniper-Pinyon), R035XY234UT
Milok, extremely stony	25	10-35	5322-7480	9-13	Hillslope and dissected pediment	Terrace gravel deposits (Quaternary)	Alluvium derived from basalt and/or residuum weathered from sedimentary rock over slope alluvium derived from sandstone	Semidesert Gravelly Loam (Utah Juniper-Pinyon), R035XY206UT
79:								
Remorris	50	30-60	5820-6824	9-13	Escarpment	Curtis and Summerville Formations (Jurassic)	Colluvium derived from sandstone and shale over residuum weathered from sandstone and shale	Semidesert Shallow Clay (Shadscale-Utah Juniper), R035XY239UT
Peachsprings, strongly saline	20	5-15	5820-6824	9-13	Alluvial fan and pediment	Curtis and Summerville Formations (Jurassic)	Slope alluvium derived from sandstone and shale over residuum weathered from sandstone and shale	Desert Alkali Sandy Loam (Alkali Sacaton), R035XY101UT
80:								
Retsabal	60	9-60	6201-7024	9-13	Cuesta, homoclinal ridge, dissected side slope, and structural bench	Carmel Formation (Jurassic)	Eolian deposits derived from sandstone and shale over residuum weathered from rock gypsum and/or residuum weathered from sandstone and shale	Semidesert Shallow Gypsum (Mormontea), R035XY237UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
80:								
Lemrac	20	15-60	6201-7024	9-13	Dip slope of cuesta and dissected structural bench	Carmel Formation (Jurassic)	Slope alluvium derived from sandstone and shale over residuum weathered from rock gypsum	Semidesert Shallow Gypsum (Mormontea), R035XY237UT
81:								
Rizno	50	2-30	4577-5102	9-13	Structural bench	Entrada Sandstone (Jurassic)	Eolian deposits derived from sandstone and/or residuum weathered from sandstone	Semidesert Shallow Sandy Loam (Blackbrush), R035XY233UT
Mido, warm	30	6-30	4577-5102	9-13	Structural bench	Quaternary eolian deposits	Eolian deposits derived from sandstone	Semidesert Sand (Blackbrush), R035XY210UT
82:								
Rizno	60	1-25	4429-7044	10-14	Interfluve on hill, mesa, and structural bench	Kayenta Formation sandstone (Jurrasic)	Residuum weathered from sandstone	Semidesert Shallow Sandy Loam (Utah Juniper, Blackbrush), R035XY236UT
83:								
Rizno, warm	60	15-35	4921-5384	9-13	Dip slope of cuesta	Dakota Sandstone (Cretaceous)	Colluvium derived from sandstone and/or slope alluvium derived from sandstone	Semidesert Shallow Sandy Loam (Utah Juniper, Blackbrush), R035XY236UT
84:								
Arches	30	2-60	4206-6972	10-14	Interfluve on hill, mesa, and structural bench as sand sheet	Navajo and Wingate Sandstones (Jurassic)	Eolian sands and/or residuum weathered from sandstone	Semidesert Shallow Sand (Utah Juniper-Pinyon), R035XY227UT
85:								
Arches	30	4-25	5262-7612	9-13	Structural bench	Kayenta and Navajo Formations sandstone (Jurassic)	Eolian deposits derived from sandstone over residuum weathered from sandstone	Semidesert Shallow Sand (Utah Juniper-Pinyon), R035XY227UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
86:								
Daklos	25	5-20	5026-7178	9-13	Dip slope of cuesta and dissected mesa	Salt Wash Member of Morrison Formation (Jurassic)	Residuum weathered from conglomerate and/or residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
Moclom	20	5-20	5026-7178	9-13	Pediment	Salt Wash Member of Morrison Formation (Jurassic)	Residuum weathered from conglomerate and/or sandstone	Semidesert Shallow Sand (Utah Juniper-Pinyon), R035XY227UT
87:								
Myton	25	35-60	3921-5499	6-9	Escarpment	Morrison Formation, Salt Wash Member (Jurassic)	Colluvium derived from sandstone	Desert Very Steep Stony Loam (Shadscale), R035XY146UT
Somorent	25	35-60	3921-5499	6-9	Escarpment	Summerville Formation (Jurassic)	Slope alluvium derived from shale and siltstone over residuum weathered from shale and siltstone	Desert Very Steep Stony Loam (Shadscale), R035XY146UT
88:								
Nalcase	25	2-30	3917-7290	9-13	Coppice mound on cuesta or hogback	Navajo Sandstone (Jurassic)	Eolian sands derived from sandstone over residuum weathered from sandstone	Shallow Sand Rock Pocket (Utah Juniper/ Two-Needle Pinyon), R035XY019UT
89:								
Needle	35	2-30	3717-5069	6-10	Interfluve on hill, mesa, and structural bench as sand sheet	Navajo Sandstone (Jurassic)	Eolian sands derived from sandstone	Sandstone Rockland 6-10” p.z., R035XB255AZ

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
90:								
Mezzo family, dry--	30	2-15	6060-8973	13-16	Dune on structural bench and sand sheet on structural bench	Navajo Sandstone (Jurassic)	Slope alluvium derived from sandstone and/or eolian sands derived from sandstone over residuum weathered from sandstone	Upland Sand (Utah Juniper-Pinyon), R035XY324UT
Strell family------	15	2-45	6060-8973	13-16	Sand sheet on structural bench and shrub-coppice dune on structural bench	Navajo Sandstone (Jurassic)	Slope alluvium derived from sandstone and/or eolian sands derived from sandstone over residuum weathered from sandstone	Shallow Sand Rock Pocket (Utah Juniper/ Two-Needle Pinyon), R035XY019UT
91:								
Santrick----------	30	2-30	5026-7096	9-13	Sandsheet and dune on cuesta	Navajo Sandstone (Jurassic)	Slope alluvium derived from sandstone and/or eolian sands derived from sandstone over residuum weathered from sandstone	Semidesert Shallow Sand (Utah Juniper-Pinyon), R035XY227UT
Nalcase-----------	15	2-30	5026-7096	9-13	Sandsheet and dune on cuesta	Navajo Sandstone (Jurassic)	Slope alluvium derived from sandstone and/or eolian sands derived from sandstone over residuum weathered from sandstone	Shallow Sand Rock Pocket (Utah Juniper/ Two-Needle Pinyon), R035XY019UT
92:								
Typic Torriorthents	40	20-65	3698-4882	6-10	Talus slope	Navajo Sandstone (Jurassic)	Sandy and gravelly talus derived from sandstone and shale	Talus Slope (Blackbrush-Shadscale), R035XY018UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
93:								
Rosced family------	60	15-60	5715-7592	13-16	Side slope of canyon	Quaternary colluvial deposits from Wingate Sandstone	Colluvium derived from sandstone	Upland Steep Stony Loam (Utah Juniper-Pinyon), R035XY317UT
Quezcan, sodic-----	25	35-70	5715-7592	13-16	Side slope of canyon and hill	Chinle Formation (Triassic)	Slope alluvium derived from shale and siltstone over residuum weathered from shale and siltstone	Semidesert Shallow Clay (Shadscale-Utah Juniper), R035XY239UT
94:								
Saemo--------------	95	15-50	4285-5991	9-13	Landslide	Quaternary colluvial deposits	Colluvium derived from sandstone and shale and/or slope alluvium derived from sandstone and shale over residuum weathered from sandstone and shale	Semidesert Loam (Shadscale), R035XY242UT
95:								
Sandyranch---------	40	2-15	3914-4656	9-13	Stream terrace	Quaternary alluvium and eolian deposits	Alluvium derived from sandstone	Sandy Bottom (Fourwing Saltbush), R035XY015UT
Aquic Torrifluvents	15	2-15	3914-4656	9-13	Flood plain	Quaternary alluvium	Alluvium derived from sandstone	Colorado Plateau Riparian Complex (Valley Type IV - F1/G1 Stream Types), R035XY029UT
96:								
Sandyranch---------	35	2-15	4964-5804	9-13	Flood-plain step	Alluvium and eolian sands (Holocene and Upper Pleistocene)	Alluvium derived from calcareous sandstone	Loamy Bottom (Basin Big Sagebrush), R035XY011UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
96:								
Mido	30	2-15	4964-5804	9-13	Stream terrace	Quaternary alluvium and eolian deposits	Alluvium derived from calcareous sandstone and/or eolian sands derived from calcareous sandstone	Semidesert Sand (Fourwing Saltbush), R035XY212UT
Mident	15	15-45	4964-5804	9-13	Hill	Entrada Sandstone (Jurassic)	Slope alluvium derived from sandstone over residuum weathered from sandstone	Semidesert Shallow Sand (Utah Juniper-Pinyon), R035XY227UT
97:								
Sandyranch	45	1-15	3878-4738	9-13	Flood-plain step	Alluvium (Quaternary)	Alluvium derived from sandstone	Sandy Bottom (Fourwing Saltbush), R035XY015UT
Radnik	30	1-4	3878-4738	9-13	Flood-plain step	Quaternary alluvium	Alluvium derived from sandstone	Semidesert Sandy Loam (Fourwing Saltbush) R035XY215UT
98:								
Seeg	40	6-30	4180-4849	6-9	Strath terrace and high stream terrace	Terrace gravel deposits and colluvial deposits (Quaternary)	Alluvium derived from igneous and sedimentary rock and/or colluvium derived from igneous and sedimentary rock	Desert Stony Loam (Blackbrush), R035XY139UT
Moffat	30	2-30	4180-4849	6-9	Strath terrace and high stream terrace	Eolian and alluvial deposits (Quaternary)	Eolian sands derived from sandstone	Desert Sandy Loam (Blackbrush), R035XY121UT
Needle	25	2-15	4180-4849	6-9	Structural bench	Eolian deposits (Quaternary) and Entrada Sandstone (Jurassic)	Eolian deposits derived from sandstone and/or residuum weathered from sandstone	Desert Shallow Sandy Loam (Blackbrush), R035XY133UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
99:								
Simel, saline------	40	30-70	5377-7336	9-13	Escarpment	Moenkopi and Chinle Formations (Triassic)	Residuum weathered from shale	Desert Shallow Loam (Shadscale), R035XY122UT
Catahoula, saline--	25	30-60	5377-7336	9-13	Escarpment	Chinle and Wingate Formations (Triassic and Jurassic)	Colluvium derived from sandstone	Desert Very Steep Stony Loam (Shadscale), R035XY146UT
100:								
Simel--------------	40	20-50	5512-6988	9-13	Structural bench	Moenkopi and Chinle Formations	Residuum weathered from siltstone	Semidesert Shallow Sandy Loam (Shadscale), R035XY230UT
101:								
Simel--------------	50	15-30	5453-8225	9-13	Mountain slope	Moenkopi Formation (Triassic)	Slope alluvium derived from sandstone over residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
Simel, steep-------	25	30-60	5453-8225	9-13	Mountain slope	Moenkopi Formation (Triassic)	Slope alluvium derived from sandstone over residuum weathered from sandstone	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon), R035XY240UT
102:								
Skos---------------	60	25-60	5200-7201	9-12	Escarpment on structural bench	Moenkopi Formation sandstone (Triassic)	Residuum and colluvium derived from sandstone and shale	Semidesert Shallow Shale (Utah Juniper-Pinyon), R035XY234UT
103:								
Strych-------------	85	2-40	5433-7208	9-13	Pediment and plateau	Pediment deposits (Pleistocene and Upper Pliocene)	Alluvium derived from basalt	Semidesert Stony Loam (Utah Juniper-Pinyon), R035XY246UT
104:								
Sulphurcreek-------	90	0-5	5390-5499	9-13	Stream terrace	Quaternary alluvium	Alluvium derived from basalt and/or alluvium derived from sedimentary rock	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types), R035XY022UT

Table 6.—Landform, Geology, Parent Material, and Ecological Site—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform	Geology	Parent material	Ecological site name and number
		Pct	Ft	In				
105:								
Tesihim	50	6-35	4921-6371	9-13	Dip slope of hogback	Mancos, Dakota, Cedar Mountain, Morrison, and Summerville Formations (Cretaceous and Jurassic)	Eolian deposits derived from sandstone over residuum weathered from sandstone	Semidesert Shallow Loam (Utah Juniper-Pinyon), R035XY221UT
Rizno, steep	18	35-50	4921-6371	9-13	Scarp slope of hogback	Mancos, Dakota, Cedar Mountain, Morrison, and Summerville Formations	Slope alluvium derived from sandstone over residuum weathered from sandstone	Semidesert Steep Shallow Loam (Utah Juniper Two-Needle Pinyon), R035XY240UT
106:								
Tineoyler	90	0-5	5367-5522	9-13	Stream terrace	Quaternary alluvium	Alluvium derived from basalt and/or alluvium derived from sedimentary rock	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types), R035XY022UT
107:								
Ustic Torriorthents	45	4-54	4091-7152	10-14	Talus slope, side slope, and structural bench	Chinle Formation (Triasic) and colluvial deposits (Quaternary)	Colluvium and/or slope alluvium derived from sandstone and shale	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper), R035XY263UT

Table 7.—Ecological Sites and Characteristic Plant Communities

(Composition is based on percent dry weight. Characteristic plants are pulled from the component existing plants table in the National Soils Information System (NASIS). Absence of an entry indicates the species totalled less than one percent of annual production. Only soils and miscellaneous areas with correlated ecological sites are shown)

Map unit symbol, soil name, and percent of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
1:					
Abra, moist (30%)	Semidesert Loam (Wyoming Big Sagebrush) (R035XY209UT)	Favorable	450	Wyoming big sagebrush	50
		Normal	350	blue grama	25
		Unfavorable	250	twoneedle pinyon	20
				plains pricklypear	5
Sazi, moist (30%)	Semidesert Loam (Wyoming Big Sagebrush) (R035XY209UT)	Favorable	450	Wyoming big sagebrush	50
		Normal	350	blue grama	25
		Unfavorable	250	twoneedle pinyon	20
				plains pricklypear	5
Strych, moist (30%)	Semidesert Loam (Wyoming Big Sagebrush) (R035XY209UT)	Favorable	550	Wyoming big sagebrush	50
		Normal	450	blue grama	25
		Unfavorable	350	twoneedle pinyon	20
				plains pricklypear	5
2:					
Aquima (80%)	Semidesert Loam (Wyoming Big Sagebrush) (R035XY209UT)	Favorable	850	Russian wildrye	80
		Normal	700	Wyoming big sagebrush	10
		Unfavorable	550	crested wheatgrass	5
				fourwing saltbush	5
3:					
Arches (45%)	Semidesert Shallow Sand (Utah Juniper-Pinyon) (R035XY227UT)	Favorable	600	Utah juniper	25
		Normal	500	fourwing saltbush	15
		Unfavorable	400	needle and thread	15
				twoneedle pinyon	15
				blue grama	10
				Indian ricegrass	10
				sandhill muhly	10
Mido (25%)	Semidesert Sand (Fourwing Saltbush) (R035XY212UT)	Favorable	700	needle and thread	45
		Normal	600	fourwing saltbush	15
		Unfavorable	500	blue grama	10
				Indian ricegrass	10
				sandhill muhly	10
				nodding buckwheat	5
				winterfat	5
4:					
Emco family (30%)	Desert Shallow Clay (Shadscale) (R035XY125UT)	Favorable	150	broom snakeweed	20
		Normal	100	galleta	20
		Unfavorable	50	shadscale	20
				valley saltbush	20
				Bigelow sage	10
				desert princesplume	5
				Indian ricegrass	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
5:					
Barx (55%)------	Semidesert Loam (Wyoming Big Sagebrush) (R035XY209UT)	Favorable	875	other shrubs	20
		Normal	675	Wyoming big sagebrush	20
		Unfavorable	475	galleta	15
				Indian ricegrass	15
				other perennial forbs	10
				other perennial grasses	10
				bottlebrush squirreltail	5
				winterfat	5
Remorris (20%)--	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon) (R035XY240UT)	Favorable	325	Utah juniper	20
		Normal	225	roundleaf buffaloberry	15
		Unfavorable	125	Utah serviceberry	15
				Indian ricegrass	10
				twoneedle pinyon	10
				broom snakeweed	5
				galleta	5
				other shrubs	5
				other perennial forbs	5
				other perennial grasses	5
				singleleaf ash	5
6:					
Beclabito (55%)	Semidesert Loam (Shadscale) (R035XY242UT)	Favorable	400	galleta	45
		Normal	300	shadscale	25
		Unfavorable	200	low rabbitbrush	15
				Utah juniper	10
				Torrey’s jointfir	5
Lybrook, saline-sodic (30%)----	Semidesert Shallow Clay (Shadscale-Utah Juniper) (R035XY239UT)	Favorable	350	galleta	30
		Normal	250	Utah juniper	20
		Unfavorable	150	Douglas rabbitbrush	15
				needle and thread	15
				Torrey’s jointfir	15
				shadscale	5
7:					
Begay, moist (80%)----------	Semidesert Sandy Loam (Wyoming Big Sagebrush) (R035XY216UT)	Favorable	600	Utah juniper	45
		Normal	450	Wyoming big sagebrush	40
		Unfavorable	300	twoneedle pinyon	10
				Wright’s bird’s beak	5
8:					
Begay (90%)-----	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	600	galleta	40
		Normal	500	Indian ricegrass	30
		Unfavorable	400	fourwing saltbush	15
				plains pricklypear	10
				prairie sunflower	5
9:					
Begay, moist (80%)----------	Semidesert Sandy Loam (Wyoming Big Sagebrush) (R035XY216UT)	Favorable	800	Wyoming big sagebrush	45
		Normal	650	fourwing saltbush	35
		Unfavorable	500	broom snakeweed	5
				Indian ricegrass	5
				needle and thread	5
				plains pricklypear	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
10:					
Begay, saline (50%)	Semidesert Loam (Shadscale) (R035XY242UT)	Favorable	450	shadscale	40
		Normal	300	galleta	13
		Unfavorable	150	Indian ricegrass	13
				winterfat	13
Querencia, saline-sodic (35%)	Semidesert Loam (Shadscale) (R035XY242UT)	Favorable	450	shadscale	40
		Normal	300	galleta	20
		Unfavorable	150	Indian ricegrass	15
				winterfat	15
11:					
Begay, saline-sodic (50%)	Alkali Flat (Greasewood) (R035XY009UT)	Favorable	450	Indian ricegrass	35
		Normal	400	alkali sacaton	20
		Unfavorable	350	blue grama	20
				greasewood	20
				fourwing saltbush	5
Begay, moist (25%)	Semidesert Sandy Loam (Wyoming Big Sagebrush) (R035XY216UT)	Favorable	500	Wyoming big sagebrush	75
		Normal	450	fourwing saltbush	10
		Unfavorable	400	blue grama	8
				Indian ricegrass	5
				rubber rabbitbrush	2
Elias (20%)	Alkali Flat (Greasewood) (R035XY009UT)	Favorable	450	greasewood	70
		Normal	400	alkali sacaton	10
		Unfavorable	350	fourwing saltbush	10
				blue grama	5
				Indian ricegrass	5
12:					
Begay (40%)	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	550	Indian ricegrass	35
		Normal	450	sandhill muhly	25
		Unfavorable	350	crispleaf buckwheat	20
				fourwing saltbush	10
				lupine	10
Ignacio (25%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	500	Utah juniper	35
		Normal	400	twoneedle pinyon	20
		Unfavorable	300	blue grama	15
				galleta	15
				Indian ricegrass	10
				green ephedra	5
Retsabal (15%)	Semidesert Shallow Gypsum (Mormontea) (R035XY237UT)	Favorable	200	Torrey’s jointfir	35
		Normal	150	Utah juniper	30
		Unfavorable	100	galleta	15
				crispleaf buckwheat	10
				green ephedra	10

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
13:					
Begay, moist (65%)	Semidesert Sandy Loam (Wyoming Big Sagebrush) (R035XY216UT)	Favorable	800	Wyoming big sagebrush	40
		Normal	600	Utah juniper	30
		Unfavorable	400	galleta	15
				twoneedle pinyon	10
				Wright birdsbeak	5
Rizno, moist (15%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	550	Utah juniper	40
		Normal	425	twoneedle pinyon	25
		Unfavorable	300	galleta	15
				blue grama	10
				green ephedra	5
				roundleaf buffaloberry	5
14:					
Begay (60%)	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	700	Indian ricegrass	30
		Normal	500	needle and thread	30
		Unfavorable	300	blue grama	10
				fourwing saltbush	10
				plains pricklypear	10
				nodding buckwheat	5
				prickly Russian thistle	5
Strych (30%)	Semidesert Stony Loam (Utah Juniper-Pinyon) (R035XY246UT)	Favorable	700	Utah juniper	30
		Normal	500	blue grama	10
		Unfavorable	300	fourwing saltbush	10
				Indian ricegrass	10
				twoneedle pinyon	10
				needle and thread	5
				prickly Russian thistle	5
15:					
Bullpen (35%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	650	Utah juniper	50
		Normal	550	pinyon	45
		Unfavorable	450	roundleaf buffaloberry	3
				Wright’s bird’s beak	2
Daklos (35%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	650	Utah juniper	50
		Normal	550	pinyon	45
		Unfavorable	450	roundleaf buffaloberry	3
				Wright’s bird’s beak	2
Puertecito - 20%	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	600	Utah juniper	50
		Normal	550	pinyon	45
		Unfavorable	450	roundleaf buffaloberry	3
				Wright’s bird’s beak	2
16:					
Calladito, saline-sodic (50%)	Alkali Flat (Greasewood) (R035XY009UT)	Favorable	550	greasewood	40
		Normal	450	Indian ricegrass	30
		Unfavorable	350	galleta	20
				cheatgrass	5
				Pursh seepweed	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
16:					
Yarts, saline-sodic (35%)----	Alkali Bottom (Greasewood) (R035XY003UT)	Favorable	750	needle and thread	30
		Normal	600	greasewood	25
		Unfavorable	450	galleta	20
				Indian ricegrass	15
				Pursh seepweed	10
17:					
Catahoula (40%)	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper) (R035XY263UT)	Favorable	550	Utah juniper	25
		Normal	425	alderleaf mountain mahogany	20
		Unfavorable	300	twoneedle pinyon	20
				Utah service-berry	20
				roundleaf buffaloberry	5
				Salina wildrye	5
				Wright birdsbeak	5
18:					
Chilton (55%)---	Semidesert Loam (Shadscale) (R035XY242UT)	Favorable	450	galleta	40
		Normal	350	low rabbitbrush	20
		Unfavorable	200	shadscale	20
				blue grama	10
				crispleaf buckwheat	5
				Torrey’s jointfir	5
Begay (20%)-----	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	600	galleta	50
		Normal	500	Indian ricegrass	15
		Unfavorable	400	shadscale	15
				fourwing saltbush	10
				low rabbitbrush	10
19:					
Chinchin (45%)--	Semidesert Shallow Clay (Shadscale-Utah Juniper) (R035XY239UT)	Favorable	300	galleta	15
		Normal	150	Indian ricegrass	15
		Unfavorable	50	roundleaf buffaloberry	15
				shadscale saltbush	15
				bottlebrush squirreltail	10
				black sagebrush	5
				crispleaf buckwheat	5
				other shrubs	5
				other perennial forbs	5
				other perennial grasses	5
				Utah juniper	5
20:					
Chipeta, saline-sodic (65%)----	Desert Clay (Castle Valley Saltbush) (R035XY103UT)	Favorable	200	valley saltbush	95
		Normal	125	Brenda’s yellow	2
		Unfavorable	50	cryptantha	
				Jones’ pepperweed	2
				saline wildrye	1
Stent family (25%)----------	Desert Clay (Castle Valley Saltbush) (R035XY103UT)	Favorable	200	valley saltbush	95
		Normal	125	Brenda’s yellow	2
		Unfavorable	50	cryptantha	
				Jones’ pepperweed	2
				Salina wildrye	1

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
21:					
Daklos (40%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	650	Utah juniper	35
		Normal	450	broom snakeweed	10
		Unfavorable	250	green Mormon tea	10
				Fremont’s mahonia	5
				galleta	5
				Indian ricegrass	5
				other shrubs	5
				other perennial forbs	5
				other perennial grasses	5
				roundleaf buffaloberry	5
				twoneedle pinyon	5
				yellow rabbitbrush	5
Lazear, dry (35%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	650	Utah juniper	35
		Normal	450	broom snakeweed	10
		Unfavorable	250	green Mormon tea	10
				Fremont’s mahonia	5
				galleta	5
				Indian ricegrass	5
				other shrubs	5
				other perennial forbs	5
				other perennial grasses	5
				roundleaf buffaloberry	5
				twoneedle pinyon	5
				yellow rabbitbrush	5
22:					
Daklos (60%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	200	Torrey’s jointfir	30
		Normal	150	Bigelow sage	25
		Unfavorable	100	low rabbitbrush	15
				shadscale	10
				Utah juniper	10
				crispleaf buckwheat	5
				Pleuraphis jamesii	5
Reef (15%)	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon) (R035XY240UT)	Favorable	300	twoneedle pinyon	30
		Normal	250	Utah juniper	25
		Unfavorable	200	desert needlegrass	20
				galleta	10
				green ephedra	5
				roundleaf buffaloberry	5
				shadscale	5
23:					
Daklos (40%)	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon) (R035XY240UT)	Favorable	400	Salina wildrye	30
		Normal	325	twoneedle pinyon	30
		Unfavorable	250	roundleaf buffaloberry	15
				Utah juniper	15
				galleta	10
Rizno (25%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	450	twoneedle pinyon	40
		Normal	400	Utah juniper	40
		Unfavorable	350	Salina wildrye	10
				roundleaf buffaloberry	7
				green ephedra	3

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
24:					
Earlweed (60%)--	Semidesert Sand (Fourwing Saltbush) (R035XY212UT)	Favorable	900	Utah juniper	60
		Normal	600	Cutler Mormon tea	9
		Unfavorable	300	galleta	8
				Indian ricegrass	8
Anasazi (30%)---	Semidesert Sandy Loam (Blackbrush) (R035XY218UT)	Favorable	900	blackbrush	59
		Normal	600	galleta	10
		Unfavorable	300	Cutler Mormon tea	6
				Indian ricegrass	6
				shadscale saltbush	6
25:					
Eslendo, saline (60%)----------	Semidesert Shallow Clay (Mat Saltbush) (R035XY223UT)	Favorable	300	valley saltbush	95
		Normal	225	Brenda’s yellow	2
		Unfavorable	150	cryptantha	
				Jones’ pepperweed	2
				Salina wildrye	1
Happle, saline-sodic (20%)----	Semidesert Shallow Clay (Mat Saltbush) (R035XY223UT)	Favorable	300	valley saltbush	95
		Normal	225	Brenda’s yellow	2
		Unfavorable	150	cryptantha	
				Jones’ pepperweed	2
				Salina wildrye	1
26:					
Foy family (50%)	Upland Stony Loam (Pinyon-Utah Juniper) (R035XY321UT)	Favorable	700	twoneedle pinyon	40
		Normal	600	Utah juniper	40
		Unfavorable	500	blue grama	15
				brittle pricklypear	5
Whitesage family (45%)---	Upland Loam (Mountain Big Sagebrush) (R035XY308UT)	Favorable	900	twoneedle pinyon	55
		Normal	750	Utah juniper	40
		Unfavorable	600		
27:					
Gladel (55%)----	Upland Shallow Loam (Pinyon-Utah Juniper) (R035XY315UT)	Favorable	1100	twoneedle pinyon	50
		Normal	950	Utah juniper	20
		Unfavorable	800	alderleaf mountain mahogany	15
				Utah serviceberry	10
				desert snowberry	5
Plumasano (35%)	Upland Loam (Mountain Big Sagebrush) (R035XY308UT)	Favorable	900	twoneedle pinyon	35
		Normal	750	mountain big sagebrush	30
		Unfavorable	600	blue grama	15
				needle and thread	12
				Utah juniper	5
				Great Basin lupine	3
28:					
Goblin (80%)----	Desert Very Shallow Gypsum (Torrey’s Jointfir) (R035XY142UT)	Favorable	200	Torrey’s jointfir	35
		Normal	125	Bigelow sage	15
		Unfavorable	50	low rabbitbrush	15
				prickly Russian thistle	15
				shadscale	15
				Indian ricegrass	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
29:					
Goblin (50%)----	Desert Very Shallow Gypsum (Torrey's Jointfir) (R035XY142UT)	Favorable	200	Torrey's jointfir	25
		Normal	100	shadscale	15
		Unfavorable	25	galleta	10
				Indian ricegrass	10
				matted crinklemat	7
Clapper (30%)---	Semidesert Very Steep Stony Loam (Salina Wildrye) (R035XY260UT)	Favorable	800	Indian ricegrass	20
		Normal	500	shadscale	20
		Unfavorable	200	Salina wildrye	10
				Torrey's jointfir	10
				Bigelow sagebrush	5
				gooseberryleaf	4
				globemallow	
30:					
Goblin (60%)----	Desert Very Shallow Gypsum (Torrey's Jointfir) (R035XY142UT)	Favorable	150	crispleaf buckwheat	40
		Normal	100	Indian ricegrass	20
		Unfavorable	50	Torrey's jointfir	20
				nakedstem sunray	15
				galleta	5
Ivanpatch (30%)	Desert Gypsum Loam (Torrey's Jointfir) (R035XY106UT)	Favorable	250	Indian ricegrass	30
		Normal	200	Torrey's jointfir	20
		Unfavorable	150	galleta	15
				valley saltbush	15
				broom snakeweed	10
				shadscale	10
31:					
Hanksville, saline-sodic (60%)----------	Desert Clay (Castle Valley Saltbush) (R035XY103UT)	Favorable	400	mat saltbush	95
		Normal	350	desert trumpet	3
		Unfavorable	300	Indian ricegrass	2
Chipeta, saline (30%)----------	Desert Shallow Clay (Mat Saltbush) (R035XY124UT)	Favorable	250	mat saltbush	95
		Normal	200	desert trumpet	3
		Unfavorable	150	Indian ricegrass	2
32:					
Hanksville, saline-sodic (50%)----------	Desert Clay (Castle Valley Saltbush) (R035XY103UT)	Favorable	150	mat saltbush	95
		Normal	100	yellow beeplant	3
		Unfavorable	75	desert trumpet	2
Notal, saline-sodic (40%)----	Desert Clay (Castle Valley Saltbush) (R035XY103UT)	Favorable	150	mat saltbush	95
		Normal	100	yellow beeplant	3
		Unfavorable	75	desert trumpet	2
33:					
Kydestea (50%)--	Upland Very Steep Shallow Loam (Pinyon-Utah Juniper) (R035XY325UT)	Favorable	700	twoneedle pinyon	50
		Normal	600	Utah juniper	40
		Unfavorable	500	blue grama	5
				Indian ricegrass	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
33:					
Vessilla (30%)--	Upland Very Steep Shallow Loam (Pinyon-Utah Juniper) (R035XY325UT)	Favorable	700	twoneedle pinyon	50
		Normal	600	Utah juniper	40
		Unfavorable	500	blue grama	5
				Indian ricegrass	5
34:					
Kydestea (40%)--	Upland Shallow Loam (Pinyon-Utah Juniper) (R035XY315UT)	Favorable	850	twoneedle pinyon	50
		Normal	700	Utah juniper	40
		Unfavorable	550	ponderosa pine	5
				Geyer’s sedge	3
				Indian ricegrass	2
Vessilla (35%)--	Upland Shallow Loam (Pinyon-Utah Juniper) (R035XY315UT)	Favorable	850	twoneedle pinyon	50
		Normal	700	Utah juniper	40
		Unfavorable	550	ponderosa pine	5
				Geyer’s sedge	3
				Indian ricegrass	2
35:					
Lavodnas (45%)--	Semidesert Shallow Gypsum (Mormontea) (R035XY237UT)	Favorable	300	needle and thread	40
		Normal	200	Torrey’s jointfir	20
		Unfavorable	100	galleta	15
				shadscale	15
				crispleaf buckwheat	10
Retsabal (40%)--	Semidesert Shallow Gypsum (Mormontea) (R035XY237UT)	Favorable	150	Torrey’s jointfir	40
		Normal	100	crispleaf buckwheat	25
		Unfavorable	50	galleta	15
				shadscale	15
				Indian ricegrass	5
36:					
Mathis, cool (70%)----------	Upland Stony Sand (Utah Juniper-Pinyon) (R035XY323UT)	Favorable	450	Salina wildrye	55
		Normal	350	twoneedle pinyon	20
		Unfavorable	250	Indian ricegrass	10
				Utah juniper	10
				galleta	5
37:					
Metuck (30%)----	Upland Very Steep Shallow Loam (Pinyon-Utah Juniper) (R035XY325UT)	Favorable	550	twoneedle pinyon	55
		Normal	450	Utah juniper	25
		Unfavorable	350	littleleaf mountain mahogany	10
				roundleaf buffaloberry	5
				Salina wildrye	5
Vessilla (25%)--	Upland Shallow Loam (Pinyon-Utah Juniper) (R035XY315UT)	Favorable	550	twoneedle pinyon	50
		Normal	450	Utah juniper	30
		Unfavorable	350	littleleaf mountain mahogany	10
				Indian ricegrass	5
				roundleaf buffaloberry	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
38:					
Mezzo family (80%)	Upland Sand (Mountain Big Sagebrush) (R035XY307UT)	Favorable	700	blue grama	25
		Normal	600	needle and thread	25
		Unfavorable	500	Indian ricegrass	20
				sandhill muhly	15
				brittle pricklypear	5
				fourwing saltbush	5
				winterfat	5
39:					
Mido (65%)	Semidesert Sand (Fourwing Saltbush) (R035XY212UT)	Favorable	500	fourwing saltbush	25
		Normal	400	galleta	25
		Unfavorable	300	blue grama	20
				Indian ricegrass	20
				plains pricklypear	10
40:					
Mido (40%)	Semidesert Sand (Fourwing Saltbush) (R035XY212UT)	Favorable	600	Indian ricegrass	65
		Normal	500	mesa dropseed	10
		Unfavorable	400	needle and thread	10
				Torrey’s jointfir	10
				fourwing saltbush	5
Strych (30%)	Semidesert Stony Loam (Utah Juniper-Pinyon) (R035XY246UT)	Favorable	450	Utah juniper	30
		Normal	350	black grama	15
		Unfavorable	250	twoneedle pinyon	15
				blue grama	10
				galleta	10
				roundleaf buffaloberry	10
				Torrey’s jointfir	10
Reef (15%)	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon) (R035XY240UT)	Favorable	400	Utah juniper	30
		Normal	300	black grama	20
		Unfavorable	200	galleta	15
				twoneedle pinyon	15
				Torrey’s jointfir	10
				blue grama	5
				roundleaf buffaloberry	5
41:					
Mikim (50%)	Semidesert Loam (Wyoming Big Sagebrush) (R035XY209UT)	Favorable	650	Wyoming big sagebrush	45
		Normal	550	Utah juniper	40
		Unfavorable	450	twoneedle pinyon	10
				plains pricklypear	3
				blue grama	2
Mivida, moist (40%)	Semidesert Loam (Wyoming Big Sagebrush) (R035XY209UT)	Favorable	650	Wyoming big sagebrush	45
		Normal	550	Utah juniper	40
		Unfavorable	450	twoneedle pinyon	10
				plains pricklypear	3
				blue grama	2

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
42:					
Milok, cool (50%)	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	650	blue grama	30
		Normal	525	galleta	20
		Unfavorable	400	fourwing saltbush	15
				Indian ricegrass	15
				mesa dropseed	10
				nodding buckwheat	5
				winterfat	5
Clapper (40%)	Semidesert Stony Loam (Utah Juniper-Pinyon) (R035XY246UT)	Favorable	550	Utah juniper	60
		Normal	425	pinyon	25
		Unfavorable	300	blue grama	5
				galleta	5
43:					
Milok, steep (40%)	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper) (R035XY263UT)	Favorable	550	twoneedle pinyon	45
		Normal	500	Utah juniper	30
		Unfavorable	450	blue grama	10
				Indian ricegrass	5
				Salina wildrye	5
				Spanish bayonet	5
Strych (40%)	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper) (R035XY263UT)	Favorable	550	twoneedle pinyon	45
		Normal	500	Utah juniper	30
		Unfavorable	450	blue grama	10
				Indian ricegrass	5
				Salina wildrye	5
				Spanish bayonet	5
44:					
Mivida (80%)	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	700	Indian ricegrass	25
		Normal	450	fourwing saltbush	15
		Unfavorable	250	needleandthread	15
				galleta	10
				Cutler Mormon tea	7
				winterfat	5
				gooseberryleaf	4
				globemallow	
45:					
Mivida (50%)	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	650	galleta	50
		Normal	450	blue grama	20
		Unfavorable	300	fourwing saltbush	15
				Utah juniper	10
				Indian ricegrass	5
Gish (15%)	Alkali Bottom (Greasewood) (R035XY003UT)	Favorable	700	greasewood	35
		Normal	550	alkali sacaton	15
		Unfavorable	400	Indian ricegrass	15
				rubber rabbitbrush	15
				fourwing saltbush	10
				Pursh seepweed	10
Cannonville (15%)	Semidesert Shallow Clay (Shadscale-Utah Juniper) (R035XY239UT)	Favorable	450	broom snakeweed	50
		Normal	350	galleta	20
		Unfavorable	250	Utah juniper	20
				shadscale	10

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
46:					
Moab (60%)------	Semidesert Loam (Shadscale) (R035XY242UT)	Favorable	500	galleta	35
		Normal	350	shadscale	30
		Unfavorable	200	broom snakeweed	10
				desert needlegrass	5
				Indian ricegrass	5
				Phacelia	5
				sand dropseed	5
				Torrey’s jointfir	5
Abra family (30%)----------	Semidesert Loam (Shadscale) (R035XY242UT)	Favorable	500	galleta	35
		Normal	350	shadscale	30
		Unfavorable	200	broom snakeweed	10
				desert needlegrass	5
				Indian ricegrass	5
				Phacelia	5
				sand dropseed	5
				Torrey’s jointfir	5
47:					
Moclom, warm (45%)----------	Semidesert Shallow Sand (Blackbrush) (R035XY224UT)	Favorable	400	blackbrush	60
		Normal	300	galleta	20
		Unfavorable	200	Indian ricegrass	15
				Utah juniper	5
48:					
Moenkopie, warm (60%)----------	Desert Shallow Sandy Loam (Blackbrush) (R035XY133UT)	Favorable	500	blackbrush	70
		Normal	400	galleta	10
		Unfavorable	300	shadscale	10
				Torrey’s jointfir	10
49:					
Moenkopie (60%)	Desert Shallow Sandy Loam (Shadscale) (R035XY130UT)	Favorable	300	shadscale saltbush	32
		Normal	200	blackbrush	21
		Unfavorable	100	pricklypear	13
				Indian ricegrass	9
				Cutler Mormon tea	8
				galleta	8
50:					
Molen family (50%)----------	Semidesert Loam (Salina wildrye) (R034XY209UT)	Favorable	---	---	
		Normal	---		
		Unfavorable	---		
Lazear (18%)----	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R034XY233UT)	Favorable	400	black sagebrush	20
		Normal	275	Salina wildrye	15
		Unfavorable	150	bluebunch wheatgrass	4
				galleta	4
				twoneedle pinyon	4
				Utah juniper	4
				roughseed cryptantha	1

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
50:					
Gerst (15%)-----	Semidesert Shallow Clay (Utah Juniper) (R034XY221UT)	Favorable	700	Salina wildrye	30
		Normal	525	galleta	20
		Unfavorable	350	shadscale	20
				Indian ricegrass	10
				Brenda’s yellow cryptantha	4
				twoneedle pinyon	4
				Utah juniper	4
51:					
Monue (55%)-----	Desert Alkali Sandy Loam (Alkali Sacaton) (R035XY101UT)	Favorable	550	alkali sacaton	50
		Normal	450	fourwing saltbush	10
		Unfavorable	350	galleta	10
				greasewood	10
				Indian ricegrass	10
				nodding buckwheat	5
				rubber rabbitbrush	5
Fruitland (20%)	Desert Alkali Sandy Loam (Alkali Sacaton) (R035XY101UT)	Favorable	550	alkali sacaton	50
		Normal	450	fourwing saltbush	10
		Unfavorable	350	greasewood	10
				Indian ricegrass	10
				rubber rabbitbrush	10
				galleta	5
				nodding buckwheat	5
52:					
Monue, saline-sodic (50%)----	Desert Alkali Sandy Loam (Alkali Sacaton) (R035XY101UT)	Favorable	500	alkali sacaton	60
		Normal	400	Indian ricegrass	10
		Unfavorable	300	sandhill muhly	10
				annual bursage	5
				fourwing saltbush	5
				greasewood	5
				sand buckwheat	5
Myton, saline-sodic (20%)----	Desert Stony Loam (Shadscale-Bud Sagebrush) (R035XY136UT)	Favorable	450	galleta	30
		Normal	350	Indian ricegrass	25
		Unfavorable	250	shadscale	25
				broom snakeweed	10
				mesa dropseed	5
				Phacelia	5
Uzona, saline-sodic (20%)----	Alkali Bottom (Greasewood) (R035XY003UT)	Favorable	700	greasewood	35
		Normal	550	alkali sacaton	15
		Unfavorable	400	Indian ricegrass	15
				rubber rabbitbrush	15
				fourwing saltbush	10
				Pursh seepweed	10
53:					
Monue (60%)-----	Desert Alkali Sandy Loam (Alkali Sacaton) (R035XY101UT)	Favorable	500	alkali sacaton	60
		Normal	400	Indian ricegrass	10
		Unfavorable	300	sandhill muhly	10
				annual bursage	5
				fourwing saltbush	5
				greasewood	5
				sand buckwheat	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
53:					
Sheppard (25%)--	Desert Alkali Sandy Loam (Alkali Sacaton) (R035XY101UT)	Favorable	500	alkali sacaton	60
		Normal	400	Indian ricegrass	10
		Unfavorable	300	sandhill muhly	10
				annual bursage	5
				fourwing saltbush	5
				greasewood	5
				sand buckwheat	5
54:					
Mulford (90%)---	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types) (R035XY022UT)	Favorable	800	orchardgrass	
		Normal	750	tree	
		Unfavorable	700		
55:					
Mussentuchit (45%)----------	Desert Gypsum Loam (Torrey’s Jointfir) (R035XY106UT)	Favorable	250	Bigelow sagebrush	30
		Normal	200	galleta	25
		Unfavorable	150	Torrey Mormon tea	25
				broom snakeweed	10
				buckwheat	5
				green rabbitbrush	5
Goblin (25%)----	Desert Very Shallow Gypsum (Torrey’s Jointfir) (R035XY142UT)	Favorable	200	Castle Valley saltbush	35
		Normal	125	saltlover	35
		Unfavorable	50	Torrey’s jointfir	30
Swell family (20%)----------	Desert Gypsum Loam (Torrey’s Jointfir) (R035XY106UT)	Favorable	250	Bigelow sagebrush	30
		Normal	200	galleta	25
		Unfavorable	150	Torrey Mormon tea	25
				broom snakeweed	10
				buckwheat	5
				green rabbitbrush	5
56:					
Nepalto (95%)---	Desert Stony Loam (Shadscale-Bud Sagebrush) (R035XY136UT)	Favorable	500	shadscale saltbush	33
		Normal	300	galleta	23
		Unfavorable	150	fluffgrass	9
				gooseberryleaf globemallow	9
57:					
Nizhoni (60%)---	Upland Shallow Loam (Pinyon-Utah Juniper) (R035XY315UT)	Favorable	700	twoneedle pinyon	30
		Normal	600	Utah juniper	25
		Unfavorable	500	alderleaf mountain mahogany	15
				Salina wildrye	10
				Utah serviceberry	10
				Indian ricegrass	5
				roundleaf buffaloberry	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
58:					
Nizhoni (60%)---	Upland Shallow Loam (Pinyon-Utah Juniper) (R035XY315UT)	Favorable	650	twoneedle pinyon	30
		Normal	550	Utah juniper	25
		Unfavorable	450	alderleaf mountain mahogany	15
				Salina wildrye	10
				Utah serviceberry	10
				Indian ricegrass	5
				roundleaf buffaloberry	5
59:					
Nizhoni (40%)---	Upland Shallow Loam (Pinyon-Utah Juniper) (R035XY315UT)	Favorable	500	twoneedle pinyon	50
		Normal	425	Utah juniper	30
		Unfavorable	350	Indian ricegrass	10
				blue grama	5
				roundleaf buffaloberry	5
Pinepoint, dry (20%)----------	Upland Sand (Utah Juniper-Pinyon) (R035XY324UT)	Favorable	700	twoneedle pinyon	30
		Normal	600	needle and thread	20
		Unfavorable	500	blue grama	15
				Utah juniper	15
				sandhill muhly	10
				brittle pricklypear	5
				fourwing saltbush	5
60:					
Notom (40%)-----	Colorado Plateau Riparian Complex Perennial (Valley Type VIII - B4C Stream Type) (R035XY021UT)	Favorable	1500	Fremont cottonwood	40
		Normal	1250	basin big sagebrush	20
		Unfavorable	1000	Indian ricegrass	15
				rubber rabbitbrush	15
				alkali sacaton	10
Begay, moist (20%)----------	Loamy Bottom (Basin Big Sagebrush) (R035XY011UT)	Favorable	800	basin big sagebrush	55
		Normal	750	Indian ricegrass	15
		Unfavorable	700	needle and thread	15
				rubber rabbitbrush	10
				Rhus trilobata	5
Bowington (10%)	Colorado Plateau Riparian Complex Perennial (Valley Type VIII - B4C Stream Type) (R035XY021UT)	Favorable	2000	Baltic rush	30
		Normal	1750	coyote willow	30
		Unfavorable	1500	horsetail	20
				common threesquare	10
				yellow sweetclover	10
61:					
Notom (50%)-----	Colorado Plateau Riparian Complex Perennial (Valley Type IV - B4C Stream Type) (R035XY020UT)	Favorable	600	Fremont cottonwood	60
		Normal	500	Indian ricegrass	30
		Unfavorable	400	coyote willow	5
				rubber rabbitbrush	5
Aquic Torrifluvents (20%)----------	Colorado Plateau Riparian Complex Perennial (Valley Type IV - B4C Stream Type) (R035XY020UT)	Favorable	2000	Baltic rush	35
		Normal	1750	coyote willow	30
		Unfavorable	1500	alkali muhly	20
				common threesquare	15

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
62:					
Parkwash (70%)--	Upland Shallow Sand (Pinyon-Utah Juniper) (R035XY314UT)	Favorable	550	twoneedle pinyon	45
		Normal	450	Utah juniper	30
		Unfavorable	350	alderleaf mountain mahogany	15
				green Mormon tea	5
				Utah serviceberry	5
63:					
Pherson family (30%)----------	Ephemeral Canyon Scrub (R035XY032UT)	Favorable	800	littleleaf mountain mahogany	40
		Normal	600		
		Unfavorable	400	Apache plume	30
				little bluestem	15
				Indian ricegrass	5
				needle and thread	5
				Utah serviceberry	5
Sandyranch (25%)	Sandy Bottom (Fourwing Saltbush) (R035XY015UT)	Favorable	900	Indian ricegrass	70
		Normal	700	needle and thread	15
		Unfavorable	500	fourwing saltbush	10
				mesa dropseed	5
64:					
Polychrome (50%)	Semidesert Stony Loam (Utah Juniper-Pinyon) (R035XY246UT)	Favorable	400	Indian ricegrass	15
		Normal	300	Utah juniper	15
		Unfavorable	200	galleta	10
				green Mormon tea	10
				other shrubs	10
				roundleaf buffaloberry	10
				broom snakeweed	5
				needle and thread	5
				other perennial forbs	5
				other perennial grasses	5
				twoneedle pinyon	5
				Wyoming big sagebrush	5
Cerropelon family (15%)---	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon) (R035XY240UT)	Favorable	325	Utah juniper	20
		Normal	225	roundleaf buffaloberry	15
		Unfavorable	125	Utah serviceberry	15
				Indian ricegrass	10
				twoneedle pinyon	10
				broom snakeweed	5
				galleta	5
				other shrubs	5
				other perennial forbs	5
				other perennial grasses	5
				singleleaf ash	5
65:					
Querencia, saline-sodic (50%)----------	Desert Loam (Shadscale) (R035XY109UT)	Favorable	500	Indian ricegrass	40
		Normal	350	shadscale	30
		Unfavorable	200	valley saltbush	15
				galleta	10
				winterfat	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
65:					
Lybrook, saline-sodic (30%)	Desert Clay (Castle Valley Saltbush) (R035XY103UT)	Favorable	400	mat saltbush	90
		Normal	250	Indian ricegrass	5
		Unfavorable	100	Castle Valley clover	3
				desert trumpet	1
				galleta	1
66:					
Radnik (45%)	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types) (R035XY022UT)	Favorable	1500	Fremont cottonwood	30
		Normal	1250	basin big sagebrush	20
		Unfavorable	1000	fourwing saltbush	20
				Indian ricegrass	15
				rubber rabbitbrush	15
Kwakina (25%)	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types) (R035XY022UT)	Favorable	1500	Fremont cottonwood	30
		Normal	1250	basin big sagebrush	20
		Unfavorable	1000	fourwing saltbush	20
				Indian ricegrass	15
				rubber rabbitbrush	15
Pherson family (15%)	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types) (R035XY022UT)	Favorable	1500	Fremont cottonwood	30
		Normal	1250	basin big sagebrush	20
		Unfavorable	1000	fourwing saltbush	20
				Indian ricegrass	15
				rubber rabbitbrush	15
67:					
Radnik (50%)	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	600	Indian ricegrass	40
		Normal	500	fourwing saltbush	35
		Unfavorable	400	needle and thread	15
				broom snakeweed	10
Notom (25%)	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types) (R035XY022UT)	Favorable	600	Fremont cottonwood	60
		Normal	500	Indian ricegrass	30
		Unfavorable	400	coyote willow	5
				rubber rabbitbrush	5
Oxyaquic Torrifluvents (20%)	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types) (R035XY022UT)	Favorable	2000	Baltic rush	35
		Normal	1750	coyote willow	30
		Unfavorable	1500	alkali muhly	20
				common threesquare	15
68:					
Razito (55%)	Sandy Wash 6-10” p.z. (R035XB216AZ)	Favorable	1000	China tamarisk	28
		Normal	500	rubber rabbitbrush	27
		Unfavorable	200		
69:					
Reef (60%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	400	twoneedle pinyon	30
		Normal	325	Salina wildrye	20
		Unfavorable	250	Utah juniper	20
				green ephedra	10
				blue grama	5
				roundleaf buffaloberry	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
69:					
Retsabal (15%)--	Semidesert Shallow Gypsum (Mormontea) (R035XY237UT)	Favorable	150	twoneedle pinyon	30
		Normal	100	Torrey’s jointfir	20
		Unfavorable	50	Utah juniper	20
				Bigelow sage	15
				Fremont’s mahonia	15
70:					
Reef (70%)------	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon) (R035XY240UT)	Favorable	350	Utah juniper	50
		Normal	275	twoneedle pinyon	30
		Unfavorable	200	green Mormon tea	10
				Bigelow sage	5
				desert needlegrass	5
71:					
Reef (75%)------	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon (R035XY240UT)	Favorable	400	Utah juniper	30
		Normal	300	Salina wildrye	25
		Unfavorable	200	broom snakeweed	10
				crispleaf buckwheat	10
				Indian ricegrass	10
				twoneedle pinyon	10
				galleta	5
72:					
Reef (65%)------	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper) (R035XY263UT)	Favorable	300	singleleaf ash	25
		Normal	250	Utah juniper	20
		Unfavorable	200	Utah serviceberry	13
				desert princesplume	10
				sumac	10
				desert needlegrass	5
73:					
Reef (40%)------	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	500	Utah juniper	35
		Normal	400	twoneedle pinyon	25
		Unfavorable	300	broom snakeweed	15
				blackbrush	5
				desert needlegrass	5
				green ephedra	5
				Indian ricegrass	5
				Stansbury cliffrose	5
74:					
Reef, warm (40%)	Semidesert Very Shallow Gravelly Loam (Utah Juniper) (R035XY235UT)	Favorable	350	blackbrush	60
		Normal	275	Utah juniper	20
		Unfavorable	200	green ephedra	15
				low rabbitbrush	5
Lemrac (15%)----	Semidesert Gypsum (Torrey’s Jointfir) (R035XY264UT)	Favorable	200	Torrey’s jointfir	45
		Normal	125	blackbrush	30
		Unfavorable	75	shadscale	15
				Indian ricegrass	5
				low rabbitbrush	5
75:					
Reef (45%)------	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	550	Utah juniper	40
		Normal	450	twoneedle pinyon	35
		Unfavorable	350	galleta	15
				green Mormon tea	10

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
75:					
Rizno (40%)-----	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	550	Utah juniper	40
		Normal	450	twoneedle pinyon	35
		Unfavorable	350	galleta	15
				green Mormon tea	10
76:					
Remorris (85%)--	Semidesert Shallow Sandy Loam (Shadscale) (R035XY230UT)	Favorable	150	shadscale	40
		Normal	100	Torrey’s jointfir	40
		Unfavorable	50	Brenda’s yellow cryptantha	10
				galleta	10
77:					
Remorris, strongly alkaline (60%)	Desert Clay (Castle Valley Saltbush) (R035XY103UT)	Favorable	125	valley saltbush	50
		Normal	75	galleta	15
		Unfavorable	50	Bigelow sage	10
				shadscale	10
				Torrey’s jointfir	10
				Indian ricegrass	5
78:					
Remorris (40%)--	Semidesert Shallow Shale (Utah Juniper-Pinyon) (R035XY234UT)	Favorable	300	Utah juniper	40
		Normal	250	galleta	15
		Unfavorable	200	Indian ricegrass	15
				roundleaf buffaloberry	15
				Douglas rabbitbrush	10
				crispleaf buckwheat	5
Milo, extremely stony (25%)----	Semidesert Gravelly Loam (Utah Juniper-Pinyon) (R035XY206UT)	Favorable	300	Utah juniper	30
		Normal	250	galleta	20
		Unfavorable	200	Indian ricegrass	15
				Torrey’s jointfir	15
				needle and thread	10
				shadscale	10
79:					
Remorris (50%)--	Semidesert Shallow Clay (Shadscale-Utah Juniper) (R035XY239UT)	Favorable	350	broom snakeweed	30
		Normal	250	galleta	30
		Unfavorable	150	shadscale	25
				needle and thread	10
				desert needlegrass	5
Peachsprings, strongly saline (20%)---	Desert Alkali Sandy Loam (Alkali Sacaton) (R035XY101UT)	Favorable	550	alkali sacaton	45
		Normal	450	Indian ricegrass	20
		Unfavorable	350	needle and thread	15
				blue grama	10
				Salina wildrye	10
80:					
Retsabal (60%)--	Semidesert Shallow Gypsum (Mormontea) (R035XY237UT)	Favorable	300	Torrey’s jointfir	30
		Normal	200	twoneedle pinyon	30
		Unfavorable	100	Bigelow sage	15
				shadscale	15
				green ephedra	5
				Indian ricegrass	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
80:					
Lemrac (20%)	Semidesert Shallow Gypsum (Mormontea) (R035XY237UT)	Favorable	300	Torrey’s jointfir	30
		Normal	200	twoneedle pinyon	30
		Unfavorable	100	Bigelow sage	15
				shadscale	15
				green ephedra	5
				Indian ricegrass	5
81:					
Rizno (50%)	Semidesert Shallow Sandy Loam (Blackbrush) (R035XY233UT)	Favorable	400	blackbrush	95
		Normal	350	Indian ricegrass	3
		Unfavorable	300	galleta	2
Mido, warm (30%)	Semidesert Sand (Blackbrush) (R035XY210UT)	Favorable	350	blackbrush	35
		Normal	250	Indian ricegrass	20
		Unfavorable	200	sand sagebrush	20
				galleta	15
				rosemary mint	10
82:					
Rizno (60%)	Semidesert Shallow Sandy Loam (Utah Juniper, Blackbrush) (R035XY236UT)	Favorable	400	blackbrush	35
		Normal	300	Utah juniper	25
		Unfavorable	200	twoneedle pinyon	10
				broom snakeweed	8
				green Mormon tea	5
				plains pricklypear	5
83:					
Rizno, warm (60%)	Semidesert Shallow Sandy Loam (Utah Juniper, Blackbrush) (R035XY236UT)	Favorable	400	blackbrush	50
		Normal	300	twoneedle pinyon	20
		Unfavorable	200	Utah juniper	20
				littleleaf mountain mahogany	5
				Salina wildrye	5
84:					
Arches (30%)	Semidesert Shallow Sand (Utah Juniper-Pinyon) (R035XY227UT)	Favorable	300	mesa dropseed	51
		Normal	150	Utah juniper	22
		Unfavorable	25	Cutler Mormon tea	13
				crispleaf buckwheat	10
85:					
Arches (30%)	Semidesert Shallow Sand (Utah Juniper-Pinyon) (R035XY227UT)	Favorable	600	Utah juniper	50
		Normal	450	Bigelow sage	15
		Unfavorable	300	twoneedle pinyon	15
				crispleaf buckwheat	10
				galleta	10
86:					
Daklos (25%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	300	galleta	35
		Normal	250	Utah juniper	35
		Unfavorable	200	roundleaf buffaloberry	10
				Bigelow sage	5
				broom snakeweed	5
				green ephedra	5
				twoneedle pinyon	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
86:					
Moclom (20%)----	Semidesert Shallow Sand (Utah Juniper-Pinyon) (R035XY227UT)	Favorable	250	galleta	35
		Normal	200	Utah juniper	35
		Unfavorable	150	roundleaf buffaloberry	10
				Bigelow sage	5
				broom snakeweed	5
				green ephedra	5
				twoneedle pinyon	5
87:					
Myton (25%)-----	Desert Very Steep Stony Loam (Shadscale) (R035XY146UT)	Favorable	300	shadscale	30
		Normal	225	galleta	25
		Unfavorable	150	Indian ricegrass	15
				mesa dropseed	15
				Bigelow sage	10
				Torrey’s jointfir	5
Somorent (25%)--	Desert Very Steep Stony Loam (Shadscale) (R035XY146UT)	Favorable	300	shadscale	30
		Normal	225	galleta	25
		Unfavorable	150	Indian ricegrass	15
				mesa dropseed	15
				Bigelow sage	10
				Torrey’s jointfir	5
88:					
Nalcase (25%)---	Shallow Sand Rock Pocket (Utah Juniper/Two-Needle Pinyon) (R035XY019UT)	Favorable	450	littleleaf mountain mahogany	30
		Normal	350		
		Unfavorable	250	Utah serviceberry	25
				greenleaf manzanita	10
				singleleaf ash	10
				twoneedle pinyon	10
				Utah juniper	10
				Indian ricegrass	5
89:					
Needle (35%)----	Sandstone Rockland 6-10” p.z. (R035XB255AZ)	Favorable	400	blackbrush	19
		Normal	250	broom snakeweed	19
		Unfavorable	100	black grama	17
90:					
Mezzo family, dry (30%)------	Upland Sand (Utah Juniper-Pinyon) (R035XY324UT)	Favorable	600	twoneedle pinyon	30
		Normal	500	blue grama	20
		Unfavorable	400	needle and thread	20
				Utah juniper	15
				brittle pricklypear	10
				Utah serviceberry	5
Strell family (15%)----------	Shallow Sand Rock Pocket (Utah Juniper/Two-Needle Pinyon) (R035XY019UT)	Favorable	500	littleleaf mountain mahogany	40
		Normal	400		
		Unfavorable	300	twoneedle pinyon	25
				singleleaf ash	15
				Utah juniper	15
				Bigelow sage	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
91:					
Santrick (30%)--	Semidesert Shallow Sand (Utah Juniper-Pinyon) (R035XY227UT)	Favorable	500	Utah juniper	40
		Normal	400	twoneedle pinyon	35
		Unfavorable	300	littleleaf mountain mahogany	10
				Utah serviceberry	10
				roundleaf buffaloberry	5
Nalcase (15%)---	Shallow Sand Rock Pocket (Utah Juniper/Two-Needle Pinyon) (R035XY019UT)	Favorable	500	littleleaf mountain mahogany	50
		Normal	400		
		Unfavorable	300	Utah juniper	20
				needle and thread	15
				twoneedle pinyon	10
				singleleaf ash	5
92:					
Typic Torriorthents (40%)----------	Talus Slope (Blackbrush-Shadscale) (R035XY018UT)	Favorable	400	fourwing saltbush	47
		Normal	200	galleta	13
		Unfavorable	50	skeletonweed buckwheat	10
				Torrey Mormon tea	5
93:					
Rosced family (60%)----------	Upland Steep Stony Loam (Utah Juniper-Pinyon) (R035XY317UT)	Favorable	500	twoneedle pinyon	25
		Normal	400	Utah juniper	25
		Unfavorable	300	alderleaf mountain mahogany	20
				Indian ricegrass	15
				galleta	10
				roundleaf buffaloberry	5
Quezcan, sodic (25%)----------	Semidesert Shallow Clay (Shadscale-Utah Juniper) (R035XY239UT)	Favorable	350	galleta	30
		Normal	250	Utah juniper	20
		Unfavorable	150	low rabbitbrush	15
				needle and thread	15
				Torrey’s jointfir	15
				shadscale	5
94:					
Saemo (95%)-----	Semidesert Loam (Shadscale) (R035XY242UT)	Favorable	250	galleta	60
		Normal	200	rubber rabbitbrush	10
		Unfavorable	150	shadscale	10
				blackbrush	5
				Indian ricegrass	5
				low rabbitbrush	5
				Wright birdsbeak	5
95:					
Sandyranch (40%)	Sandy Bottom (Fourwing Saltbush) (R035XY015UT)	Favorable	800	Indian ricegrass	40
		Normal	600	fourwing saltbush	30
		Unfavorable	400	mesa dropseed	20
				boxelder	5
				rubber rabbitbrush	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
95:					
Aquic Torrifluvents (15%)	Colorado Plateau Riparian Complex (Valley Type IV - F1/G1 Stream Types) (R035XY029UT)	Favorable	1500	Baltic rush	60
		Normal	1250	willow	25
		Unfavorable	1000	horsetail	10
				Fremont cottonwood	5
96:					
Sandyranch (35%)	Loamy Bottom (Basin Big Sagebrush) (R035XY011UT)	Favorable	700	basin big sagebrush	50
		Normal	550	needle and thread	20
		Unfavorable	450	Indian ricegrass	10
				gooseberryleaf globemallow	5
				plains pricklypear	5
				prickly Russian thistle	5
				rubber rabbitbrush	5
Mido (30%)	Semidesert Sand (Fourwing Saltbush) (R035XY212UT)	Favorable	500	fourwing saltbush	25
		Normal	400	galleta	25
		Unfavorable	300	blue grama	20
				Indian ricegrass	20
				plains pricklypear	10
Mident (15%)	Semidesert Shallow Sand (Utah Juniper-Pinyon) (R035XY227UT)	Favorable	400	Utah juniper	50
		Normal	300	galleta	15
		Unfavorable	200	twoneedle pinyon	15
				crispleaf buckwheat	10
				green ephedra	5
				stemless four-nerve daisy	5
97:					
Sandyranch (45%)	Sandy Bottom (Fourwing Saltbush) (R035XY015UT)	Favorable	800	Indian ricegrass	40
		Normal	600	fourwing saltbush	30
		Unfavorable	400	sand sagebrush	20
				mesa dropseed	10
Radnik (30%)	Semidesert Sandy Loam (Fourwing Saltbush) (R035XY215UT)	Favorable	500	Pleuraphis jamesii	30
		Normal	400	Indian ricegrass	20
		Unfavorable	300	mesa dropseed	20
				sand sagebrush	15
				fourwing saltbush	10
				woolly plantain	5
98:					
Seeg (40%)	Desert Stony Loam (Blackbrush) (R035XY139UT)	Favorable	300	blackbrush	80
		Normal	250	galleta	10
		Unfavorable	200	Bigelow sage	5
				Torrey’s jointfir	5
Moffat (30%)	Desert Sandy Loam (Blackbrush) (R035XY121UT)	Favorable	500	blackbrush	85
		Normal	400	Cutler’s jointfir	10
		Unfavorable	300	plains pricklypear	5
Needle (25%)	Desert Shallow Sandy Loam (Blackbrush) (R035XY133UT)	Favorable	500	blackbrush	70
		Normal	400	galleta	15
		Unfavorable	300	needle and thread	10
				specklepod milkvetch	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
99:					
Simel, saline (40%)	Desert Shallow Loam (Shadscale) (R035XY122UT)	Favorable	150	crispleaf buckwheat	40
		Normal	100	Torrey’s jointfir	25
		Unfavorable	50	galleta	15
				shadscale	15
				pinyon	5
Catahoula, saline (25%)	Desert Very Steep Stony Loam (Shadscale) (R035XY146UT)	Favorable	100	shadscale saltbush	40
		Normal	75	galleta	20
		Unfavorable	50	crispleaf buckwheat	15
				Indian ricegrass	15
				broom snakeweed	10
100:					
Simel (40%)	Semidesert Shallow Sandy Loam (Shadscale) (R035XY230UT)	Favorable	350	galleta	25
		Normal	250	crispleaf buckwheat	20
		Unfavorable	150	Torrey’s jointfir	20
				shadscale	15
				Douglas rabbitbrush	10
				Utah juniper	10
101:					
Simel (50%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	350	twoneedle pinyon	40
		Normal	300	Utah juniper	30
		Unfavorable	250	broom snakeweed	10
				galleta	10
				roundleaf buffaloberry	10
Simel, steep (25%)	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon) (R035XY240UT)	Favorable	300	twoneedle pinyon	40
		Normal	250	Utah juniper	30
		Unfavorable	200	roundleaf buffaloberry	20
				broom snakeweed	5
				galleta	5
102:					
Skos (60%)	Semidesert Shallow Shale (Utah Juniper-Pinyon) (R035XY234UT)	Favorable	325	Fremont’s mahonia	15
		Normal	225	Utah juniper	15
		Unfavorable	125	broom snakeweed	10
				galleta	10
				green Mormon tea	10
				Indian ricegrass	5
				Mexican cliffrose	5
				other shrubs	5
				other perennial forbs	5
				other perennial grasses	5
				plains pricklypear	5
				twoneedle pinyon	5
				yellow rabbitbrush	5
103:					
Strych (85%)	Semidesert Stony Loam (Utah Juniper-Pinyon) (R035XY246UT)	Favorable	450	Utah juniper	35
		Normal	350	needle and thread	25
		Unfavorable	250	galleta	15
				blue grama	10
				twoneedle pinyon	10
				roughseed cryptantha	5

Table 7.—Ecological Sites and Characteristic Plant Communities—Continued

Map unit symbol, soil name, and percent of of map unit	Ecological site name and number	Total production		Characteristic plants	Composition for rangeland
		Kind of year	Dry weight		
			Lb/ac		Pct
104:					
Sulphurcreek (90%)	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types) (R035XY022UT)	Favorable	500	orchardgrass	
		Normal	400	tree	
		Unfavorable	300		
105:					
Tesihim (50%)	Semidesert Shallow Loam (Utah Juniper-Pinyon) (R035XY221UT)	Favorable	400	Utah juniper	80
		Normal	300	Pleuraphis jamesii	10
		Unfavorable	200	Salina wildrye	5
				Wyoming big sagebrush	5
Rizno, steep (18%)	Semidesert Steep Shallow Loam (Utah Juniper-Two-Needle Pinyon (R035XY240UT)	Favorable	450	Utah juniper	55
		Normal	350	needle and thread	10
		Unfavorable	250	Pleuraphis jamesii	10
				Salina wildrye	10
				green Mormon tea	5
				roughseed cryptantha	5
				twoneedle pinyon	5
106:					
Tineoyler (90%)	Colorado Plateau Riparian Complex Perennial (Valley Type IV - C5/F5 Stream Types) (R035XY022UT)	Favorable	500	orchardgrass	
		Normal	400	tree	
		Unfavorable	300		
107:					
Ustic Torriorthents (45%)	Semidesert Very Steep Stony Loam (Two-Needle Pinyon, Utah Juniper) (R035XY263UT)	Favorable	300	Utah juniper	42
		Normal	250	pinyon	22
		Unfavorable	200	broom snakeweed	14
				Ephedra cutleri	13
				Indian ricegrass	8

Table 8.—Index of Plant Common and Scientific Names and Plant Symbols Sorted by Plant Symbol

(Plants displayed occur within the National Soils Information System (NASIS) plant tables used for the soil survey area. The scientific and common names are referenced at the USDA PLANTS database: plants.usda.gov)

Local common name	Scientific name	Plant symbol
other perennial forbs		2FP
other perennial grasses		2GP
other shrubs		2SD
tree		2TREE
Indian ricegrass	Achnatherum hymenoides	ACHY
boxelder	Acer negundo	ACNE2
desert needlegrass	Achnatherum speciosum	ACSP12
crested wheatgrass	Agropyron cristatum	AGCR
annual bursage	Ambrosia acanthicarpa	AMAC2
Utah service-berry	Amelanchier utahensis	AMUT
Utah serviceberry	Amelanchier utahensis	AMUT
Bigelow sage	Artemisia bigelovii	ARBI3
Bigelow sagebrush	Artemisia bigelovii	ARBI3
sand sagebrush	Artemisia filifolia	ARFI2
black sagebrush	Artemisia nova	ARNO4
greenleaf manzanita	Arctostaphylos patula	ARPA6
basin big sagebrush	Artemisia tridentata ssp. tridentata	ARTRT
mountain big sagebrush	Artemisia tridentata ssp. vaseyana	ARTRV
Wyoming big sagebrush	Artemisia tridentata ssp. vaseyana	ARTRV
Wyoming big sagebrush	Artemisia tridentata var. wyomingensis	ARTRW
Wyoming big sagebrush	Artemisia tridentata ssp. wyomingensis	ARTRW8
specklepod milkvetch	Astragalus lentiginosus	ASLE8
fourwing saltbush	Atriplex canescens	ATCA2
shadscale	Atriplex confertifolia	ATCO
shadscale saltbush	Atriplex confertifolia	ATCO
mat saltbush	Atriplex corrugata	ATCO4
Castle Valley clover	Atriplex cuneata	ATCU
valley saltbush	Atriplex cuneata	ATCU
Castle Valley saltbush	Atriplex cuneata ssp. cuneata	ATCUC
black grama	Bouteloua eriopoda	BOER4
blue grama	Bouteloua gracilis	BOGR2
cheatgrass	Bromus tectorum	BRTE
Geyer’s sedge	Carex geyeri	CAGE2
littleleaf mountain mahogany	Cercocarpus intricatus	CEIN7
alderleaf mountain mahogany	Cercocarpus montanus	CEMO2
Douglas rabbitbrush	Chrysothamnus viscidiflorus	CHVI8
green rabbitbrush	Chrysothamnus viscidiflorus	CHVI8
low rabbitbrush	Chrysothamnus viscidiflorus	CHVI8
yellow rabbitbrush	Chrysothamnus viscidiflorus	CHVI8
yellow beeplant	Cleome lutea	CLLU2
blackbrush	Coleogyne ramosissima	CORA
Wright birdsbeak	Cordylanthus wrightii	COWR2
Wright’s bird’s beak	Cordylanthus wrightii	COWR2
Brenda’s yellow cryptantha	Cryptantha flava	CRFL5
roughseed cryptantha	Cryptantha flavoculata	CRFL6
orchardgrass	Dactylis	DACTY
fluffgrass	Dasyochloa pulchella	DAPU7
bottlebrush squirreltail	Elymus elymoides	ELEL5
nakedstem sunray	Enceliopsis nudicaulis	ENNU
Cutler Mormon tea	Ephedra cutleri	EPCU
Cutler’s jointfir	Ephedra cutleri	EPCU
Ephedra cutleri	Ephedra cutleri	EPCU
Torrey Mormon tea	Ephedra torreyana	EPTO
Torrey’s jointfir	Ephedra torreyana	EPTO
green ephedra	Ephedra viridis	EPVI
green Mormon tea	Ephedra viridis	EPVI
horsetail	Equisetum	EQUIS
nodding buckwheat	Eriogonum cernuum	ERCE2

Table 8.—Index of Plant Common and Scientific Names and Plant Symbols Sorted by Plant Symbol—Continued

Local common name	Scientific name	Plant symbol
crispleaf buckwheat	Eriogonum corymbosum	ERCO14
skeletonweed buckwheat	Eriogonum deflexum	ERDE6
desert trumpet	Eriogonum inflatum	ERIN4
buckwheat	Eriogonum	ERIOG
sand buckwheat	Eriogonum leptocladon	ERLE9
rubber rabbitbrush	Ericameria nauseosa	ERNA10
Apache plume	Fallugia paradoxa	FAPA
singleleaf ash	Fraxinus anomala	FRAN2
broom snakeweed	Gutierrezia sarothrae	GUSA2
saltlover	Halogeton	HALOG
needle and thread	Hesperostipa comata	HECO26
needle and thread	Hesperostipa comata ssp. comata	HECOC8
needleandthread	Hesperostipa comata ssp. comata	HECOC8
prairie sunflower	Helianthus petiolaris	HEPE
Baltic rush	Juncus balticus	JUBA
Utah juniper	Juniperus osteosperma	JUOS
winterfat	Krascheninnikovia lanata	KRLA2
Jones' pepperweed	Lepidium montanum var. jonesii	LEMOJ
Salina wildrye	Leymus salinus ssp. salinus	LESAS
saline wildrye	Leymus salinus ssp. salinus	LESAS
Great Basin lupine	Lupinus x alpestris	LUAL5
lupine	Lupinus	LUPIN
Fremont's mahonia	Mahonia fremontii	MAFR3
yellow sweetclover	Melilotus officinalis	MEOF
alkali muhly	Muhlenbergia asperifolia	MUAS
sandhill muhly	Muhlenbergia pungens	MUPU2
brittle pricklypear	Opuntia fragilis	OPFR
plains pricklypear	Opuntia polyacantha	OPPO
pricklypear	Opuntia	OPUNT
Phacelia	Phacelia	PHACE
pinyon	Pinus edulis	PIED
twoneedle pinyon	Pinus edulis	PIED
ponderosa pine	Pinus ponderosa	PIPO
galleta	Pleuraphis jamesii	PLJA
Pleuraphis jamesii	Pleuraphis jamesii	PLJA
woolly plantain	Plantago patagonica	PLPA2
Fremont cottonwood	Populus fremontii	POFR2
rosemary mint	Poliomintha incana	POIN3
Russian wildrye	Psathyrostachys juncea	PSJU3
bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6
Mexican cliffrose	Purshia mexicana	PUME
Stansbury cliffrose	Purshia stansburiana	PUST
Rhus trilobata	Rhus trilobata	RHTR
sumac	Rhus	RHUS
coyote willow	Salix exigua	SAEX
willow	Salix	SALIX
prickly Russian thistle	Salsola tragus	SATR12
greasewood	Sarcobatus vermiculatus	SAVE4
common threesquare	Schoenoplectus pungens	SCPU10
little bluestem	Schizachyrium scoparium	SCSC
roundleaf buffaloberry	Shepherdia rotundifolia	SHRO
alkali sacaton	Sporobolus airoides	SPAI
sand dropseed	Sporobolus cryptandrus	SPCR
mesa dropseed	Sporobolus flexuosus	SPFL2
gooseberryleaf globemallow	Sphaeralcea grossulariifolia	SPGR2
desert princesplume	Stanleya pinnata	STPI
Pursh seepweed	Suaeda calceoliformis	SUCA2
desert snowberry	Symphoricarpos longiflorus	SYLO
China tamarisk	Tamarix chinensis	TACH2
stemless four-nerve daisy	Tetraneuris acaulis var. acaulis	TEACA2
matted crinklemat	Tiquilia latior	TILA6
Spanish bayonet	Yucca harrimaniae	YUHA

Table 9.—Index of Plant Common and Scientific Names and Plant Symbols Sorted by Common Name

(Plants displayed occur within the National Soils Information System (NASIS) plant tables used for the soil survey area. The scientific and common names are referenced at the USDA PLANTS database: plants.usda.gov)

Local common name	Scientific name	Plant symbol
alderleaf mountain mahogany	Cercocarpus montanus	CEMO2
alkali muhly	Muhlenbergia asperifolia	MUAS
alkali sacaton	Sporobolus airoides	SPAI
annual bursage	Ambrosia acanthicarpa	AMAC2
Apache plume	Fallugia paradoxa	FAPA
Baltic rush	Juncus balticus	JUBA
basin big sagebrush	Artemisia tridentata ssp. tridentata	ARTRT
Bigelow sage	Artemisia bigelovii	ARBI3
Bigelow sagebrush	Artemisia bigelovii	ARBI3
black grama	Bouteloua eriopoda	BOER4
black sagebrush	Artemisia nova	ARNO4
blackbrush	Coleogyne ramosissima	CORA
blue grama	Bouteloua gracilis	BOGR2
bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6
bottlebrush squirreltail	Elymus elymoides	ELEL5
boxelder	Acer negundo	ACNE2
Brenda’s yellow cryptantha	Cryptantha flava	CRFL5
brittle pricklypear	Opuntia fragilis	OPFR
broom snakeweed	Gutierrezia sarothrae	GUSA2
buckwheat	Eriogonum	ERIOG
Castle Valley clover	Atriplex cuneata	ATCU
Castle Valley saltbush	Atriplex cuneata ssp. cuneata	ATCUC
cheatgrass	Bromus tectorum	BRTE
China tamarisk	Tamarix chinensis	TACH2
common threesquare	Schoenoplectus pungens	SCPU10
coyote willow	Salix exigua	SAEX
crested wheatgrass	Agropyron cristatum	AGCR
crispleaf buckwheat	Eriogonum corymbosum	ERCO14
Cutler Mormon tea	Ephedra cutleri	EPCU
Cutler’s jointfir	Ephedra cutleri	EPCU
desert needlegrass	Achnatherum speciosum	ACSP12
desert princesplume	Stanleya pinnata	STPI
desert snowberry	Symphoricarpos longiflorus	SYLO
desert trumpet	Eriogonum inflatum	ERIN4
Douglas rabbitbrush	Chrysothamnus viscidiflorus	CHVI8
Ephedra cutleri	Ephedra cutleri	EPCU
fluffgrass	Dasyochloa pulchella	DAPU7
fourwing saltbush	Atriplex canescens	ATCA2
Fremont cottonwood	Populus fremontii	POFR2
Fremont’s mahonia	Mahonia fremontii	MAFR3
galleta	Pleuraphis jamesii	PLJA
Geyer’s sedge	Carex geyeri	CAGE2
gooseberryleaf globemallow	Sphaeralcea grossulariifolia	SPGR2
greasewood	Sarcobatus vermiculatus	SAVE4
Great Basin lupine	Lupinus x alpestris	LUAL5
green ephedra	Ephedra viridis	EPVI
green Mormon tea	Ephedra viridis	EPVI
green rabbitbrush	Chrysothamnus viscidiflorus	CHVI8
greenleaf manzanita	Arctostaphylos patula	ARPA6
horsetail	Equisetum	EQUIS
Indian ricegrass	Achnatherum hymenoides	ACHY
Jones’ pepperweed	Lepidium montanum var. jonesii	LEMOJ
little bluestem	Schizachyrium scoparium	SCSC
littleleaf mountain mahogany	Cercocarpus intricatus	CEIN7
low rabbitbrush	Chrysothamnus viscidiflorus	CHVI8
lupine	Lupinus	LUPIN
mat saltbush	Atriplex corrugata	ATCO4
matted crinklemat	Tiquilia latior	TILA6
mesa dropseed	Sporobolus flexuosus	SPFL2

Table 9.—Index of Plant Common and Scientific Names and Plant Symbols Sorted by Common Name—Continued

Local common name	Scientific name	Plant symbol
Mexican cliffrose	Purshia mexicana	PUME
mountain big sagebrush	Artemisia tridentata ssp. vaseyana	ARTRV
nakedstem sunray	Enceliopsis nudicaulis	ENNU
needle and thread	Hesperostipa comata	HECO26
needle and thread	Hesperostipa comata ssp. comata	HECOC8
needleandthread	Hesperostipa comata ssp. comata	HECOC8
nodding buckwheat	Eriogonum cernuum	ERCE2
orchardgrass	Dactylis	DACTY
other shrubs		2SD
other perennial forbs		2FP
other perennial grasses		2GP
Phacelia	Phacelia	PHACE
pinyon	Pinus edulis	PIED
plains pricklypear	Opuntia polyacantha	OPPO
Pleuraphis jamesii	Pleuraphis jamesii	PLJA
ponderosa pine	Pinus ponderosa	PIPO
prairie sunflower	Helianthus petiolaris	HEPE
prickly Russian thistle	Salsola tragus	SATR12
pricklypear	Opuntia	OPUNT
Pursh seepweed	Suaeda calceoliformis	SUCA2
Rhus trilobata	Rhus trilobata	RHTR
rosemary mint	Poliomintha incana	POIN3
roughseed cryptantha	Cryptantha flavoculata	CRFL6
roundleaf buffaloberry	Shepherdia rotundifolia	SHRO
rubber rabbitbrush	Ericameria nauseosa	ERNA10
Russian wildrye	Psathyrostachys juncea	PSJU3
Salina wildrye	Leymus salinus ssp. salinus	LESAS
saline wildrye	Leymus salinus ssp. salinus	LESAS
saltlover	Halogeton	HALOG
sand buckwheat	Eriogonum leptocladon	ERLE9
sand dropseed	Sporobolus cryptandrus	SPCR
sand sagebrush	Artemisia filifolia	ARFI2
sandhill muhly	Muhlenbergia pungens	MUPU2
shadscale	Atriplex confertifolia	ATCO
shadscale saltbush	Atriplex confertifolia	ATCO
singleleaf ash	Fraxinus anomala	FRAN2
skeletonweed buckwheat	Eriogonum deflexum	ERDE6
Spanish bayonet	Yucca harrimaniae	YUHA
specklepod milkvetch	Astragalus lentiginosus	ASLE8
Stansbury cliffrose	Purshia stansburiana	PUST
stemless four-nerve daisy	Tetraneuris acaulis var. acaulis	TEACA2
sumac	Rhus	RHUS
Torrey Mormon tea	Ephedra torreyana	EPTO
Torrey’s jointfir	Ephedra torreyana	EPTO
tree		2TREE
twoneedle pinyon	Pinus edulis	PIED
Utah juniper	Juniperus osteosperma	JUOS
Utah service-berry	Amelanchier utahensis	AMUT
Utah serviceberry	Amelanchier utahensis	AMUT
valley saltbush	Atriplex cuneata	ATCU
willow	Salix	SALIX
winterfat	Krascheninnikovia lanata	KRLA2
woolly plantain	Plantago patagonica	PLPA2
Wright birdsbeak	Cordylanthus wrightii	COWR2
Wright’s bird’s beak	Cordylanthus wrightii	COWR2
Wyoming big sagebrush	Artemisia tridentata ssp. vaseyana	ARTRV
Wyoming big sagebrush	Artemisia tridentata ssp. wyomingensis	ARTRW8
Wyoming big sagebrush	Artemisia tridentata var. wyomingensis	ARTRW
yellow beeplant	Cleome lutea	CLLU2
yellow rabbitbrush	Chrysothamnus viscidiflorus	CHVI8
yellow sweetclover	Melilotus officinalis	MEOF

Table 10.—Prime and Other Important Farmland

(Only the soils considered prime or important farmland are listed. Urban or built-up areas of the soils listed are not considered prime or important farmland. If a soil is prime or important farmland only under certain conditions, the conditions are indicated in the column “Farmland classification”)

Map unit symbol	Map unit name	Farmland classification
8	Begay sandy loam, 1 to 9 percent slopes	Farmland of statewide importance
9	Begay very fine sandy loam, 1 to 5 percent slopes, moist	Farmland of statewide importance
27	Gladel-Plumasano complex, 2 to 20 percent slopes	Farmland of statewide importance
44	Mivida loamy fine sand, 1 to 4 percent slopes	Farmland of statewide importance
45	Mivida-Gish-Cannonville complex, 2 to 15 percent slopes	Farmland of statewide importance
51	Monue-Fruitland complex, 1 to 8 percent slopes	Farmland of statewide importance
53	Monue-Sheppard complex, 1 to 6 percent slopes	Farmland of statewide importance
54	Mulford silty clay loam, 0 to 5 percent slopes	Farmland of statewide importance
67	Radnik-Notom-Oxyaquic Torrifluvents complex, 2 to 10 percent slopes	Farmland of statewide importance
1	Abra-Sazi-Strych complex, 1 to 5 percent slopes, moist	Prime farmland if irrigated
2	Aquima fine sandy loam, 1 to 6 percent slopes	Prime farmland if irrigated
18	Chilton-Begay complex, 1 to 25 percent slopes	Prime farmland if irrigated
60	Notom-Begay, moist-Bowington complex, 1 to 6 percent slopes	Prime farmland if irrigated
104	Sulphurcreek loam, 0 to 5 percent slopes	Prime farmland if irrigated
106	Tineoyler loam, 0 to 5 percent slopes	Prime farmland if irrigated

Table 11.—Land Management, Part I (Planting)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Abra, moist	30	Well suited		Moderately suited		Moderate	
				Rock fragments	0.50	Low strength	0.50
Sazi, moist	30	Well suited		Well suited		Moderate	
						Low strength	0.50
Strych, moist	30	Well suited		Moderately suited		Moderate	
				Rock fragments	0.50	Low strength	0.50
2:							
Aquima	80	Well suited		Well suited		Moderate	
						Low strength	0.50
3:							
Arches	45	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
				Slope	0.50		
Mido	25	Moderately suited		Moderately suited		Moderate	
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
				Slope	0.50		
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated		Not rated	
4:							
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated		Not rated	
Emco family	30	Poorly suited		Unsuited		Severe	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	1.00
		Stickiness; high plasticity index	0.75	Slope	1.00		
		Slope	0.50	Stickiness; high plasticity index	0.75		
5:							
Barx	55	Well suited		Moderately suited		Moderate	
				Rock fragments	0.50	Low strength	0.50
				Slope	0.50		
Remorris	20	Poorly suited		Unsuited		Severe	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	1.00
		Slope	0.50	Slope	1.00		
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
6:							
Beclabito	55	Poorly suited		Unsuited		Severe	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	1.00
		Stickiness; high plasticity index	0.50	Slope	1.00		
				Stickiness; high plasticity index	0.50		

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6:							
Lybrook, saline-sodic	30	Poorly suited		Unsuited		Severe	
		Stickiness; high plasticity index	0.75	Rock fragments	1.00	Low strength	1.00
		Rock fragments	0.75	Slope	0.75		
				Stickiness; high plasticity index	0.75		
7:							
Begay, moist	80	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
8:							
Begay	90	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
9:							
Begay, moist	80	Well suited		Well suited		Severe	
						Low strength	1.00
10:							
Begay, saline	50	Well suited		Well suited		Moderate	
						Low strength	0.50
Querencia, saline-sodic	35	Well suited		Moderately suited		Moderate	
				Rock fragments	0.50	Low strength	0.50
11:							
Begay, saline-sodic	50	Well suited		Well suited		Severe	
						Low strength	1.00
Begay, moist	25	Well suited		Well suited		Severe	
						Low strength	1.00
Elias	20	Moderately suited		Moderately suited		Severe	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	1.00
12:							
Begay	40	Well suited		Poorly suited		Moderate	
				Slope	0.75	Low strength	0.50
Ignacio	25	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Slope	1.00	Low strength	0.50
				Rock fragments	0.75		
Retsabal	15	Unsuited		Poorly suited		Moderate	
		Restrictive layer	1.00	Slope	0.75	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.75		
				Restrictive layer	0.50		
13:							
Begay, moist	65	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Rizno, moist	15	Unsuited		Unsuited		Moderate	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	0.50
				Slope	0.50		

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14:							
Begay	60	Well suited		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
Strych	30	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
15:							
Bullpen	35	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
				Slope	0.75		
Daklos	35	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
				Slope	0.50		
Puertecito	20	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.75	Restrictive layer	0.50		
				Slope	0.50		
16:							
Calladito, saline-sodic	50	Well suited		Well suited		Moderate	
						Low strength	0.50
Yarts, saline-sodic	35	Well suited		Well suited		Moderate	
						Low strength	0.50
17:							
Catahoula	40	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Slope	1.00	Low strength	0.50
		Slope	0.50	Rock fragments	1.00		
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated		Not rated	
18:							
Chilton	55	Unsuited		Unsuited		Severe	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	1.00
				Slope	0.75		
Begay	20	Well suited		Well suited		Moderate	
						Low strength	0.50
19:							
Chinchin	45	Unsuited		Unsuited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Rock fragments	0.50	Restrictive layer	1.00		
		Slope	0.50	Rock fragments	0.75		
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
Badland, Chinle Formation	40	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20:							
Chipeta, saline-sodic	65	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Stickiness; high plasticity index	0.50		
		Stickiness; high plasticity index	0.50	Rock fragments	0.50		
Stent family	25	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Slope	1.00	Low strength	0.50
		Slope	0.50	Rock fragments	1.00		
21:							
Daklos	40	Poorly suited		Unsuited		Slight	
		Rock fragments	0.75	Rock fragments	1.00	Strength	0.10
		Sandiness	0.50	Slope	1.00		
		Slope	0.50	Sandiness	0.50		
Lazear, dry	35	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.75	Slope	1.00		
				Restrictive layer	1.00		
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated		Not rated	
22:							
Daklos	60	Unsuited		Unsuited		Moderate	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	0.50
		Restrictive layer	1.00	Restrictive layer	1.00		
				Slope	0.75		
Reef	15	Unsuited		Unsuited		Moderate	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	0.50
		Slope	0.50	Slope	1.00		
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated		Not rated	
23:							
Daklos	40	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Restrictive layer	1.00		
		Slope	0.50	Rock fragments	0.75		
Rizno	25	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
		Rock fragments	0.50	Slope	0.75		
				Rock fragments	0.75		
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated		Not rated	
24:							
Earlweed	60	Well suited		Poorly suited		Moderate	
				Slope	0.75	Low strength	0.50
Anasazi	30	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25:							
Eslendo, saline-----	60	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Rock fragments	0.75		
Happle, saline-sodic	20	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Slope	1.00	Low strength	0.50
		Slope	0.50	Rock fragments	1.00		
Rock outcrop, Mesaverde Formation sandstone----------	15	Not rated		Not rated		Not rated	
26:							
Foy family----------	50	Poorly suited		Unsuited		Slight	
		Rock fragments	0.75	Rock fragments	1.00	Strength	0.10
				Slope	0.50		
Whitesage family----	45	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
				Slope	0.75		
27:							
Gladel----------	55	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
Plumasano----------	35	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
28:							
Goblin----------	80	Moderately suited		Moderately suited		Moderate	
		Restrictive layer	0.50	Slope	0.50	Low strength	0.50
29:							
Goblin----------	50	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	1.00
		Slope	0.50	Slope	1.00		
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
Clapper----------	30	Poorly suited		Unsuited		Slight	
		Rock fragments	0.75	Rock fragments	1.00	Strength	0.10
		Slope	0.50	Slope	1.00		
30:							
Goblin----------	60	Unsuited		Poorly suited		Moderate	
		Restrictive layer	1.00	Rock fragments	0.75	Low strength	0.50
		Rock fragments	0.50	Slope	0.50		
				Restrictive layer	0.50		
Ivanpatch----------	30	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
31:							
Hanksville, saline-sodic-------	60	Poorly suited		Unsuited		Severe	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	1.00
		Stickiness; high plasticity index	0.50	Slope	0.75		
				Stickiness; high plasticity index	0.50		

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
31:							
Chipeta, saline-----	30	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Severe Low strength	1.00
32:							
Hanksville, saline-sodic-------	50	Moderately suited Rock fragments Stickiness; high plasticity index	0.50 0.50	Poorly suited Rock fragments Stickiness; high plasticity index	0.75 0.50	Severe Low strength	1.00
Notal, saline-sodic	40	Well suited		Well suited		Moderate Low strength	0.50
33:							
Kydestea------------	50	Unsuited Rock fragments Restrictive layer	1.00 1.00	Unsuited Rock fragments Slope Restrictive layer	1.00 1.00 1.00	Moderate Low strength	0.50
Vessilla------------	30	Unsuited Rock fragments Slope	1.00 0.50	Unsuited Rock fragments Slope	1.00 1.00	Moderate Low strength	0.50
Rock outcrop, Moenkopi Formation sandstone----------	15	Not rated		Not rated		Not rated	
34:							
Kydestea------------	40	Unsuited Restrictive layer Rock fragments	1.00 0.50	Unsuited Restrictive layer Rock fragments Slope	1.00 0.75 0.50	Moderate Low strength	0.50
Vessilla------------	35	Unsuited Restrictive layer Rock fragments	1.00 0.50	Unsuited Restrictive layer Rock fragments Slope	1.00 0.75 0.50	Moderate Low strength	0.50
Rock outcrop, Moenkopi Formation sandstone----------	15	Not rated		Not rated		Not rated	
35:							
Lavodnas------------	45	Unsuited Restrictive layer Rock fragments	1.00 0.50	Unsuited Slope Rock fragments Restrictive layer	1.00 0.75 0.50	Severe Low strength	1.00
Retsabal------------	40	Poorly suited Restrictive layer	0.75	Poorly suited Slope	0.75	Severe Low strength	1.00
36:							
Mathis, cool--------	70	Poorly suited Rock fragments Slope	0.75 0.50	Unsuited Rock fragments Slope	1.00 1.00	Moderate Low strength	0.50
Rock outcrop, Wingate Sandstone--	30	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
37:							
Metuck	30	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.75		
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated		Not rated	
Vessilla	25	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
				Slope	0.50		
				Rock fragments	0.50		
38:							
Mezzo family	80	Well suited		Poorly suited		Moderate	
				Slope	0.75	Low strength	0.50
39:							
Mido	65	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated		Not rated	
40:							
Mido	40	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Strych	30	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
Reef	15	Unsuited		Unsuited		Slight	
		Restrictive layer	1.00	Slope	1.00	Strength	0.10
		Rock fragments	0.75	Rock fragments	1.00		
		Slope	0.50	Restrictive layer	1.00		
41:							
Mikim	50	Well suited		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
Mivida, moist	40	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
42:							
Milok, cool	50	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
Clapper	40	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
43:							
Milok, steep	40	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
				Slope	0.75		
Strych	40	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
		Slope	0.50	Slope	1.00		

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44:							
Mivida	80	Well suited		Well suited		Moderate Low strength	0.50
45:							
Mivida	50	Well suited		Well suited		Severe Low strength	1.00
Gish	15	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Severe Low strength	1.00
Cannonville	15	Poorly suited Stickiness; high plasticity index Rock fragments	0.75 0.50	Poorly suited Stickiness; high plasticity index Rock fragments Slope	0.75 0.75 0.50	Severe Low strength	1.00
46:							
Moab	60	Poorly suited Rock fragments	0.75	Unsuited Rock fragments Slope	1.00 0.50	Moderate Low strength	0.50
Abra family	30	Well suited		Well suited		Severe Low strength	1.00
47:							
Moclom, warm	45	Unsuited Restrictive layer	1.00	Unsuited Restrictive layer Slope Rock fragments	1.00 0.50 0.50	Moderate Low strength	0.50
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated		Not rated	
48:							
Moenkopie, warm	60	Unsuited Restrictive layer Rock fragments	1.00 0.50	Poorly suited Slope Rock fragments Restrictive layer	0.75 0.75 0.50	Severe Low strength	1.00
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated		Not rated	
49:							
Moenkopie	60	Unsuited Restrictive layer Rock fragments	1.00 0.50	Unsuited Restrictive layer Slope Rock fragments	1.00 0.50 0.50	Severe Low strength	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
50:							
Molen family	50	Well suited		Well suited		Moderate Low strength	0.50
Lazear	18	Well suited		Moderately suited Rock fragments Slope	0.50 0.50	Moderate Low strength	0.50

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
50:							
Gerst	15	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Rock fragments Slope Stickiness; high plasticity index	0.50 0.50 0.50	Moderate Low strength	0.50
51:							
Monue	55	Well suited		Well suited		Severe Low strength	1.00
Fruitland	20	Poorly suited Rock fragments	0.75	Unsuited Rock fragments	1.00	Moderate Low strength	0.50
52:							
Monue, saline-sodic	50	Well suited		Moderately suited Rock fragments	0.50	Severe Low strength	1.00
Myton, saline-sodic	20	Moderately suited Rock fragments	0.50	Poorly suited Rock fragments	0.75	Moderate Low strength	0.50
Uzona, saline-sodic	20	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Severe Low strength	1.00
53:							
Monue	60	Well suited		Well suited		Moderate Low strength	0.50
Sheppard	25	Well suited		Well suited		Moderate Low strength	0.50
54:							
Mulford	90	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Severe Low strength	1.00
55:							
Mussentuchit	45	Moderately suited Rock fragments	0.50	Poorly suited Rock fragments Slope	0.75 0.75	Moderate Low strength	0.50
Goblin	25	Unsuited Restrictive layer Rock fragments	1.00 0.50	Poorly suited Rock fragments Slope Restrictive layer	0.75 0.50 0.50	Severe Low strength	1.00
Swell family	20	Well suited		Moderately suited Slope	0.50	Severe Low strength	1.00
56:							
Nepalto	95	Moderately suited Rock fragments	0.50	Poorly suited Rock fragments Slope	0.75 0.75	Moderate Low strength	0.50
57:							
Nizhoni	60	Unsuited Restrictive layer Rock fragments	1.00 0.75	Unsuited Restrictive layer Rock fragments Slope	1.00 1.00 0.50	Moderate Low strength	0.50

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57:							
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated		Not rated	
58:							
Nizhoni	60	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Slope	1.00	Low strength	0.50
		Rock fragments	0.75	Restrictive layer	1.00		
		Slope	0.50	Rock fragments	1.00		
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated		Not rated	
59:							
Nizhoni	40	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated		Not rated	
Pinepoint, dry	20	Well suited		Poorly suited		Moderate	
				Slope	0.75	Low strength	0.50
60:							
Notom	40	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
		Sandiness	0.50	Sandiness	0.50		
Begay, moist	20	Well suited		Moderately suited		Moderate	
				Rock fragments	0.50	Low strength	0.50
Bowington	10	Well suited		Well suited		Moderate	
						Low strength	0.50
61:							
Notom	50	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
Aquic Torrifluvents	20	Well suited		Poorly suited		Moderate	
				Slope	0.75	Low strength	0.50
62:							
Parkwash	70	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
		Sandiness	0.50	Slope	0.75		
				Sandiness	0.50		
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated		Not rated	
63:							
Pherson family	30	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Slope	1.00	Low strength	0.50
				Rock fragments	0.75		

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
63:							
Sandyranch	25	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Riverwash	20	Not rated		Not rated		Not rated	
64:							
Polychrome	50	Unsuited		Unsuited		Slight	
		Rock fragments	1.00	Rock fragments	1.00	Strength	0.10
		Slope	0.50	Slope	1.00		
Badland, Chinle Formation	20	Not rated		Not rated		Not rated	
Cerropelon family	15	Unsuited		Unsuited		Moderate	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	0.50
		Slope	0.50	Slope	1.00		
65:							
Querencia, saline-sodic	50	Well suited		Well suited		Severe	
						Low strength	1.00
Lybrook, saline-sodic	30	Poorly suited		Poorly suited		Severe	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	1.00
				Stickiness; high plasticity index	0.75		
				Rock fragments	0.50		
66:							
Radnik	45	Well suited		Well suited		Severe	
						Low strength	1.00
Kwakina	25	Well suited		Well suited		Severe	
						Low strength	1.00
Pherson family	15	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	1.00
67:							
Radnik	50	Well suited		Moderately suited		Moderate	
				Rock fragments	0.50	Low strength	0.50
Notom	25	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
Oxyaquic Torrifluvents	20	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
68:							
Razito	55	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
Riverwash	40	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69:							
Reef	60	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
				Slope	0.75		
Retsabal	15	Poorly suited		Unsuited		Moderate	
		Restrictive layer	0.75	Slope	1.00	Low strength	0.50
		Slope	0.50				
Rock outcrop, Carmel Formation	10	Not rated		Not rated		Not rated	
70:							
Reef	70	Unsuited		Unsuited		Slight	
		Restrictive layer	1.00	Rock fragments	1.00	Strength	0.10
		Rock fragments	0.75	Slope	1.00		
		Slope	0.50	Restrictive layer	0.50		
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
71:							
Reef	75	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.75	Slope	1.00		
		Slope	0.50	Restrictive layer	0.50		
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated		Not rated	
72:							
Reef	65	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Slope	1.00	Low strength	0.50
		Rock fragments	0.75	Rock fragments	1.00		
		Slope	0.50	Restrictive layer	1.00		
Rock outcrop	30	Not rated		Not rated		Not rated	
73:							
Reef	40	Unsuited		Unsuited		Slight	
		Restrictive layer	1.00	Rock fragments	1.00	Strength	0.10
		Rock fragments	0.75	Restrictive layer	1.00		
		Sandiness	0.50	Slope	0.75		
				Sandiness	0.50		
Rock outcrop, Kayenta Formation	40	Not rated		Not rated		Not rated	
74:							
Reef, warm	40	Unsuited		Unsuited		Slight	
		Restrictive layer	1.00	Rock fragments	1.00	Strength	0.10
		Rock fragments	0.75	Restrictive layer	1.00		
		Sandiness	0.50	Slope	0.75		
				Sandiness	0.50		
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74:							
Lemrac	15	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.75		
75:							
Reef	45	Unsuited		Unsuited		Slight	
		Restrictive layer	1.00	Rock fragments	1.00	Strength	0.10
		Rock fragments	0.75	Restrictive layer	0.50		
				Slope	0.50		
Rizno	40	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.75	Restrictive layer	0.50		
				Slope	0.50		
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated		Not rated	
76:							
Remorris	85	Well suited		Well suited		Moderate	
						Low strength	0.50
77:							
Remorris, strongly alkaline	60	Unsuited		Unsuited		Severe	
		Rock fragments	1.00	Slope	1.00	Low strength	1.00
		Restrictive layer	0.75	Rock fragments	1.00		
		Slope	0.50	Stickiness; high plasticity index	0.50		
		Stickiness; high plasticity index	0.50				
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated		Not rated	
78:							
Remorris	40	Poorly suited		Unsuited		Severe	
		Rock fragments	0.75	Slope	1.00	Low strength	1.00
		Slope	0.50	Rock fragments	1.00		
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
Milok, extremely stony	25	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
				Slope	0.50		
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated		Not rated	
79:							
Remorris	50	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Slope	1.00	Low strength	0.50
		Slope	0.50	Rock fragments	1.00		
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79:							
Peachsprings, strongly saline	20	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
80:							
Retsabal	60	Unsuited		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	0.75	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.75		
				Restrictive layer	0.50		
Lemrac	20	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
81:							
Rizno	50	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Mido, warm	30	Moderately suited		Moderately suited		Moderate	
		Sandiness	0.50	Slope	0.50	Low strength	0.50
				Sandiness	0.50		
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated		Not rated	
82:							
Rizno	60	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
				Slope	0.50		
				Rock fragments	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
83:							
Rizno, warm	60	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.75	Slope	1.00		
				Restrictive layer	1.00		
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated		Not rated	
84:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Arches	30	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
				Rock fragments	0.50		
85:							
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated		Not rated	
Arches	30	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86:							
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated		Not rated	
Daklos	25	Unsuited		Unsuited		Slight	
		Restrictive layer	1.00	Restrictive layer	1.00	Strength	0.10
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.75		
Moclom	20	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
		Sandiness	0.50	Slope	0.50		
				Sandiness	0.50		
				Rock fragments	0.50		
87:							
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated		Not rated	
Myton	25	Poorly suited		Unsuited		Slight	
		Rock fragments	0.75	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	1.00		
Somorent	25	Poorly suited		Unsuited		Severe	
		Rock fragments	0.75	Slope	1.00	Low strength	1.00
		Slope	0.50	Rock fragments	1.00		
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
88:							
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated		Not rated	
Nalcase	25	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
		Sandiness	0.50	Slope	0.50		
				Sandiness	0.50		
89:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Needle	35	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
				Slope	0.50		
90:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Mezzo family, dry	30	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
90:							
Strell family	15	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
				Slope	0.50		
				Rock fragments	0.50		
91:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Santrick	30	Well suited		Well suited		Moderate	
						Low strength	0.50
Nalcase	15	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.75		
				Restrictive layer	0.50		
92:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Typic Torriorthents	40	Poorly suited		Unsuited		Slight	
		Rock fragments	0.75	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	1.00		
93:							
Rosced family	60	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Slope	1.00	Low strength	0.50
		Slope	0.50	Rock fragments	1.00		
Quezcan, sodic	25	Moderately suited		Unsuited		Severe	
		Stickiness; high plasticity index	0.50	Slope	1.00	Low strength	1.00
				Rock fragments	0.75		
		Rock fragments	0.50	Stickiness; high plasticity index	0.50		
		Slope	0.50				
94:							
Saemo	95	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
				Slope	1.00		
95:							
Sandyranch	40	Well suited		Well suited		Moderate	
						Low strength	0.50
Aquic Torrifluvents	15	Well suited		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
Water	15	Not rated		Not rated		Not rated	
96:							
Sandyranch	35	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Mido	30	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Mident	15	Moderately suited		Unsuited		Moderate	
		Restrictive layer	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50				

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
97:							
Sandyranch	45	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Radnik	30	Well suited		Moderately suited		Severe	
				Rock fragments	0.50	Low strength	1.00
Riverwash	15	Not rated		Not rated		Not rated	
98:							
Seeg	40	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
Moffat	30	Well suited		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Needle	25	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
99:							
Simel, saline	40	Moderately suited		Unsuited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.75		
		Slope	0.50	Stickiness; high plasticity index	0.50		
		Stickiness; high plasticity index	0.50				
Catahoula, saline	25	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Slope	1.00	Low strength	0.50
				Rock fragments	1.00		
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated		Not rated	
100:							
Simel	40	Unsuited		Unsuited		Severe	
		Rock fragments	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Rock fragments	1.00		
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated		Not rated	
101:							
Simel	50	Unsuited		Unsuited		Severe	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	1.00
		Restrictive layer	0.50	Slope	0.75		
Simel, steep	25	Unsuited		Unsuited		Severe	
		Rock fragments	1.00	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Rock fragments	1.00		
		Slope	0.50	Stickiness; high plasticity index	0.50		
		Stickiness; high plasticity index	0.50				
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part I (Planting)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102:							
Skos	60	Unsuited		Unsuited		Slight	
		Rock fragments	1.00	Rock fragments	1.00	Strength	0.10
		Slope	0.50	Slope	1.00		
Badland, Moenkopi Formation	35	Not rated		Not rated		Not rated	
103:							
Strych	85	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
104:							
Sulphurcreek	90	Moderately suited		Moderately suited		Severe	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	1.00
105:							
Tesihim	50	Moderately suited		Poorly suited		Moderate	
		Restrictive layer	0.50	Slope	0.75	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.75		
Rizno, steep	18	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Slope	1.00	Low strength	0.50
		Rock fragments	0.75	Rock fragments	1.00		
		Slope	0.50	Restrictive layer	1.00		
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated		Not rated	
Badland	10	Not rated		Not rated		Not rated	
106:							
Tineoyler	90	Well suited		Well suited		Severe	
						Low strength	1.00
107:							
Ustic Torriorthents	45	Poorly suited		Unsuited		Moderate	
		Rock fragments	0.75	Rock fragments	1.00	Low strength	0.50
		Slope	0.50	Slope	1.00		
Rock outcrop	30	Not rated		Not rated		Not rated	
Badland	25	Not rated		Not rated		Not rated	
108:							
Water	100	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Hazard of 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
1:							
Abra, moist	30	Slight		Moderate		Well suited	
				Slope/erodibility	0.50	Dusty	0.19
Sazi, moist	30	Slight		Slight		Well suited	
						Dusty	0.15
Strych, moist	30	Slight		Slight		Well suited	
						Dusty	0.13
2:							
Aquima	80	Slight		Moderate		Well suited	
				Slope/erodibility	0.50	Dusty	0.11
3:							
Arches	45	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Mido	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Sandiness	0.50
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated		Not rated	
4:							
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated		Not rated	
Emco family	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Stickiness; high plasticity index	0.50
						Dusty	0.37
5:							
Barx	55	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Dusty	0.04
Remorris	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Dusty	0.50

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
6:							
Beclabito	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Dusty	0.38
Lybrook, saline-sodic	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
						Rock fragments	0.50
						Stickiness; high plasticity index	0.50
7:							
Begay, moist	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Dusty	0.01
8:							
Begay	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Dusty	0.09
9:							
Begay, moist	80	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.07
10:							
Begay, saline	50	Slight		Moderate		Well suited	
				Slope/erodibility	0.50	Dusty	0.07
Querencia, saline-sodic	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Dusty	0.19
11:							
Begay, saline-sodic	50	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.13
Begay, moist	25	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.07
Elias	20	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.29
12:							
Begay	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Ignacio	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.07

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
12:							
Retsabal	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Dusty	0.50
13:							
Begay, moist	65	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Dusty	0.04
Rizno, moist	15	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Rock fragments	0.50
						Dusty	0.09
14:							
Begay	60	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
						Dusty	0.01
Strych	30	Slight		Slight		Well suited	
						Dusty	0.12
15:							
Bullpen	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.13
Daklos	35	Slight		Severe		Poorly suited	
				Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.12
Puertecito	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Rock fragments	0.50
						Dusty	0.18
16:							
Calladito, saline-sodic	50	Slight		Slight		Well suited	
Yarts, saline-sodic	35	Slight		Slight		Well suited	
17:							
Catahoula	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.04
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated		Not rated	
18:							
Chilton	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Low strength	0.50
						Dusty	0.16

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
18:							
Begay	20	Slight		Slight		Well suited	
						Dusty	0.10
19:							
Chinchin	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Rock fragments	0.50
						Dusty	0.34
Badland, Chinle Formation	40	Not rated		Not rated		Not rated	
20:							
Chipeta, saline-sodic	65	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
Stent family	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.09
21:							
Daklos	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Rock fragments	1.00
						Slope	1.00
						Sandiness	0.50
						Dusty	0.02
Lazear, dry	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.31
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated		Not rated	
22:							
Daklos	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.03
Reef	15	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.27
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
23:							
Daklos	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.15
Rizno	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Dusty	0.09
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated		Not rated	
24:							
Earlweed	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Anasazi	30	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
25:							
Eslendo, saline	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.45
Happle, saline-sodic	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated		Not rated	
26:							
Foy family	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Rock fragments	0.50
						Slope	0.50
						Dusty	0.02
Whitesage family	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.16
27:							
Gladel	55	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Rock fragments	0.50
						Dusty	0.04
Plumasano	35	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Dusty	0.04
28:							
Goblin	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Dusty	0.21

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
29:							
Goblin	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
Clapper	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.04
30:							
Goblin	60	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Dusty	0.50
Ivanpatch	30	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Dusty	0.22
31:							
Hanksville, saline-sodic	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
						Rock fragments	0.50
Chipeta, saline	30	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Dusty	0.50
32:							
Hanksville, saline-sodic	50	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.50
Notal, saline-sodic	40	Slight		Moderate		Well suited	
				Slope/erodibility	0.50	Dusty	0.24
33:							
Kydestea	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.06
Vessilla	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.12
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
34:							
Kydestea	40	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
						Dusty	0.12
Vessilla	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Rock fragments	0.50
						Dusty	0.08
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
35:							
Lavodnas	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
Retsabal	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
36:							
Mathis, cool	70	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated		Not rated	
37:							
Metuck	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Dusty	0.12
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated		Not rated	
Vessilla	25	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Dusty	0.10
38:							
Mezzo family	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
39:							
Mido	65	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
40:							
Mido	40	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Sandiness	0.50
Strych	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Reef	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.02
41:							
Mikim	50	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Dusty	0.19
Mivida, moist	40	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Dusty	0.11
42:							
Milok, cool	50	Slight		Moderate		Well suited	
				Slope/erodibility	0.50	Dusty	0.11
Clapper	40	Slight		Slight		Well suited	
						Dusty	0.12
43:							
Milok, steep	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.24
Strych	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.23
44:							
Mivida	80	Slight		Slight		Well suited	
45:							
Mivida	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Dusty	0.15
Gish	15	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.48
Cannonville	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
						Rock fragments	0.50

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
46:							
Moab	60	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
						Dusty	0.08
Abra family	30	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.21
47:							
Moclom, warm	45	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated		Not rated	
48:							
Moenkopie, warm	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Rock fragments	0.50
						Dusty	0.10
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated		Not rated	
49:							
Moenkopie	60	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
						Dusty	0.08
Rock outcrop	30	Not rated		Not rated		Not rated	
50:							
Molen family	50	Slight		Moderate		Well suited	
				Slope/erodibility	0.50	Dusty	0.17
Lazear	18	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Dusty	0.26
Gerst	15	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Dusty	0.31
51:							
Monue	55	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.13
Fruitland	20	Slight		Slight		Moderately suited	
						Rock fragments	0.50
						Dusty	0.02

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
52:							
Monue, saline-sodic	50	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.01
Myton, saline-sodic	20	Slight		Slight		Well suited	
						Dusty	0.04
Uzona, saline-sodic	20	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.39
53:							
Monue	60	Slight		Moderate		Well suited	
				Slope/erodibility	0.50	Dusty	0.15
Sheppard	25	Slight		Slight		Well suited	
54:							
Mulford	90	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.42
55:							
Mussentuchit	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.50
Goblin	25	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Dusty	0.50
Swell family	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Slope	0.50
						Dusty	0.01
56:							
Nepalto	95	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
57:							
Nizhoni	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.05
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated		Not rated	
58:							
Nizhoni	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.04

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
58:							
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated		Not rated	
59:							
Nizhoni	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated		Not rated	
Pinepoint, dry	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
60:							
Notom	40	Slight		Slight		Well suited	
Begay, moist	20	Slight		Slight		Well suited	
						Dusty	0.03
Bowington	10	Slight		Slight		Poorly suited	
						Flooding	1.00
						Wetness	1.00
61:							
Notom	50	Slight		Slight		Poorly suited	
						Rock fragments	1.00
						Flooding	0.50
Aquic Torrifluvents	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Flooding	1.00
						Slope	1.00
62:							
Parkwash	70	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated		Not rated	
63:							
Pherson family	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Flooding	0.50
						Rock fragments	0.50
Sandyranch	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Riverwash	20	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
64:							
Polychrome	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
Badland, Chinle Formation	20	Not rated		Not rated		Not rated	
Cerropelon family	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.27
65:							
Querencia, saline-sodic	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Dusty	0.20
Lybrook, saline-sodic	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
66:							
Radnik	45	Slight		Slight		Moderately suited	
						Low strength	0.50
						Flooding	0.50
						Dusty	0.01
Kwakina	25	Slight		Slight		Moderately suited	
						Low strength	0.50
						Flooding	0.50
Pherson family	15	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Rock fragments	0.50
						Low strength	0.50
67:							
Radnik	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Rock fragments	0.50
						Dusty	0.01
Notom	25	Slight		Slight		Poorly suited	
						Flooding	1.00
Oxyaquic Torrifluvents	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Flooding	0.50
						Slope	0.50
68:							
Razito	55	Slight		Slight		Moderately suited	
						Rock fragments	0.50
Riverwash	40	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
69:							
Reef	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Dusty	0.18
Retsabal	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Dusty	0.50
Rock outcrop, Carmel Formation	10	Not rated		Not rated		Not rated	
70:							
Reef	70	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.15
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
71:							
Reef	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.10
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated		Not rated	
72:							
Reef	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.24
Rock outcrop	30	Not rated		Not rated		Not rated	
73:							
Reef	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
						Rock fragments	0.50
Rock outcrop, Kayenta Formation	40	Not rated		Not rated		Not rated	
74:							
Reef, warm	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Sandiness	0.50
						Dusty	0.03
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
74:							
Lemrac	15	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.19
75:							
Reef	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Rock fragments	0.50
						Dusty	0.21
Rizno	40	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Rock fragments	0.50
						Dusty	0.15
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated		Not rated	
76:							
Remorris	85	Slight		Moderate		Well suited	
				Slope/erodibility	0.50	Dusty	0.10
77:							
Remorris, strongly alkaline	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Low strength	0.50
						Dusty	0.36
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated		Not rated	
78:							
Remorris	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Low strength	0.50
						Dusty	0.26
Milok, extremely stony	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
						Dusty	0.15
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
79:							
Remorris	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Dusty	0.33
Peachsprings, strongly saline	20	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Dusty	0.25
80:							
Retsabal	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Dusty	0.50
Lemrac	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Dusty	0.50
81:							
Rizno	50	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
Mido, warm	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Sandiness	0.50
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated		Not rated	
82:							
Rizno	60	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
83:							
Rizno, warm	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Low strength	0.50
						Dusty	0.04
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated		Not rated	
84:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Arches	30	Slight		Slight		Well suited	

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
85:							
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated		Not rated	
Arches	30	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
86:							
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated		Not rated	
Daklos	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Moclom	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Sandiness	0.50
87:							
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated		Not rated	
Myton	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.01
Somorent	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Low strength	0.50
						Dusty	0.50
88:							
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated		Not rated	
Nalcase	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Sandiness	0.50
89:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Needle	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
90:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Mezzo family, dry	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
90:							
Strell family	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
91:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Santrick	30	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
Nalcase	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
92:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Typic Torriorthents	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.05
93:							
Rosced family	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.05
Quezcan, sodic	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Rock fragments	0.50
						Dusty	0.18
94:							
Saemo	95	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.14
95:							
Sandyranch	40	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
Aquic Torrifluvents	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Flooding	1.00
						Wetness	1.00
						Slope	1.00
						Low strength	0.50
						Dusty	0.05
Water	15	Not rated		Not rated		Not rated	
96:							
Sandyranch	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Flooding	0.50
Mido	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
96:							
Mident	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
97:							
Sandyranch	45	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
Radnik	30	Slight		Slight		Moderately suited	
						Flooding	0.50
						Dusty	0.05
Riverwash	15	Not rated		Not rated		Not rated	
98:							
Seeg	40	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
Moffat	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Needle	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
99:							
Simel, saline	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Dusty	0.50
Catahoula, saline	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated		Not rated	
100:							
Simel	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
						Dusty	0.45
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated		Not rated	
101:							
Simel	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Low strength	0.50
						Dusty	0.50

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
101:							
Simel, steep	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Low strength	0.50
						Dusty	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
102:							
Skos	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.50
Badland, Moenkopi Formation	35	Not rated		Not rated		Not rated	
103:							
Strych	85	Slight		Slight		Moderately suited	
						Slope	0.50
						Rock fragments	0.50
104:							
Sulphurcreek	90	Slight		Slight		Moderately suited	
						Low strength	0.50
						Dusty	0.30
105:							
Tesihim	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Dusty	0.02
Rizno, steep	18	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated		Not rated	
Badland	10	Not rated		Not rated		Not rated	
106:							
Tineoyler	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Dusty	0.20
107:							
Ustic Torriorthents	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
						Dusty	0.04

Table 11.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map unit symbol and soil name	Pct. of map unit	Hazard of 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
107:							
Rock outcrop	30	Not rated		Not rated		Not rated	
Badland	25	Not rated		Not rated		Not rated	
108:							
Water	100	Not rated		Not rated		Not rated	

Table 11.—Land Management, Part III (Site Preparation)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1:					
Abra, moist	30	Well suited		Well suited	
Sazi, moist	30	Well suited		Well suited	
Strych, moist	30	Well suited		Well suited	
2:					
Aquima	80	Well suited		Well suited	
3:					
Arches	45	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
Mido	25	Well suited		Well suited	
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated	
4:					
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated	
Emco family	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
				Stickiness; high plasticity index	0.50
5:					
Barx	55	Well suited		Well suited	
Remorris	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Rock fragments	0.50
6:					
Beclabito	55	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
		Slope	0.50	Slope	0.50
		Restrictive layer	0.50	Stickiness; high plasticity index	0.50
Lybrook, saline-sodic	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Stickiness; high plasticity index	0.50
				Rock fragments	0.50

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
7:					
Begay, moist	80	Well suited		Well suited	
8:					
Begay	90	Well suited		Well suited	
9:					
Begay, moist	80	Well suited		Well suited	
10:					
Begay, saline	50	Well suited		Well suited	
Querencia, saline-sodic	35	Well suited		Well suited	
11:					
Begay, saline-sodic	50	Well suited		Well suited	
Begay, moist	25	Well suited		Well suited	
Elias	20	Well suited		Well suited	
12:					
Begay	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Ignacio	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Retsabal	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
				Rock fragments	0.50
13:					
Begay, moist	65	Well suited		Well suited	
Rizno, moist	15	Unsuited		Poorly suited	
		Restrictive layer	1.00	Rock fragments	0.50
		Rock fragments	0.50		
14:					
Begay	60	Well suited		Well suited	
Strych	30	Well suited		Poorly suited	
				Rock fragments	0.50
15:					
Bullpen	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Daklos	35	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
Puertecito	20	Unsuited		Poorly suited	
		Restrictive layer	1.00	Rock fragments	0.50
		Rock fragments	0.50	Restrictive layer	0.50

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
16:					
Calladito, saline-sodic	50	Well suited		Well suited	
Yarts, saline-sodic	35	Well suited		Well suited	
17:					
Catahoula	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated	
18:					
Chilton	55	Poorly suited		Unsuited	
		Slope	0.50	Rock fragments	1.00
				Slope	0.50
Begay	20	Well suited		Well suited	
19:					
Chinchin	45	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Badland, Chinle Formation	40	Not rated		Not rated	
20:					
Chipeta, saline-sodic	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Stent family	25	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	0.50	Slope	0.50
		Restrictive layer	0.50		
21:					
Daklos	40	Unsuited		Unsuited	
		Restrictive layer	1.00	Rock fragments	1.00
		Rock fragments	1.00	Slope	0.50
		Slope	0.50		
Lazear, dry	35	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
				Rock fragments	0.50
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated	
22:					
Daklos	60	Unsuited		Unsuited	
		Restrictive layer	1.00	Rock fragments	1.00
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
22:					
Reef	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	1.00
		Rock fragments	0.50		
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated	
23:					
Daklos	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Rock fragments	0.50
Rizno	25	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated	
24:					
Earlweed	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Anasazi	30	Poorly suited		Well suited	
		Restrictive layer	0.50		
25:					
Eslendo, saline	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Happle, saline-sodic	20	Unsuited		Unsuited	
		Slope	1.00	Rock fragments	1.00
		Rock fragments	1.00	Slope	1.00
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated	
26:					
Foy family	50	Unsuited		Poorly suited	
		Rock fragments	1.00	Rock fragments	0.50
Whitesage family	45	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	0.50	Slope	0.50
27:					
Gladel	55	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Rock fragments	0.50
Plumasano	35	Well suited		Well suited	
28:					
Goblin	80	Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	0.50
		Slope	0.50		

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
29:					
Goblin	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Rock fragments	0.50
Clapper	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
30:					
Goblin	60	Unsuited		Poorly suited	
		Restrictive layer	1.00	Restrictive layer	0.50
Ivanpatch	30	Well suited		Well suited	
31:					
Hanksville, saline-sodic	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Rock fragments	0.50
Chipeta, saline	30	Well suited		Well suited	
32:					
Hanksville, saline-sodic	50	Well suited		Well suited	
Notal, saline-sodic	40	Well suited		Well suited	
33:					
Kydestea	50	Unsuited		Unsuited	
		Restrictive layer	1.00	Rock fragments	1.00
		Rock fragments	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
Vessilla	30	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	0.50	Slope	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
34:					
Kydestea	40	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Rock fragments	0.50
		Slope	0.50	Slope	0.50
Vessilla	35	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Rock fragments	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
35:					
Lavodnas	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Retsabal	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
36:					
Mathis, cool	70	Unsuited		Unsuited	
		Slope	1.00	Rock fragments	1.00
		Rock fragments	1.00	Slope	1.00
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated	
37:					
Metuck	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.50
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated	
Vessilla	25	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
38:					
Mezzo family	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
39:					
Mido	65	Well suited		Well suited	
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated	
40:					
Mido	40	Well suited		Well suited	
Strych	30	Well suited		Well suited	
Reef	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	1.00
		Rock fragments	0.50	Restrictive layer	1.00
41:					
Mikim	50	Well suited		Well suited	
Mivida, moist	40	Well suited		Well suited	
42:					
Milok, cool	50	Well suited		Poorly suited	
				Rock fragments	0.50
Clapper	40	Well suited		Well suited	

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
43:					
Milok, steep	40	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	0.50	Slope	0.50
Strych	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
44:					
Mivida	80	Well suited		Well suited	
45:					
Mivida	50	Well suited		Well suited	
Gish	15	Well suited		Well suited	
Cannonville	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Stickiness; high plasticity index	0.50
				Rock fragments	0.50
46:					
Moab	60	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
Abra family	30	Well suited		Well suited	
47:					
Moclom, warm	45	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated	
48:					
Moenkopie, warm	60	Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	0.50
		Slope	0.50	Restrictive layer	0.50
		Rock fragments	0.50	Rock fragments	0.50
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated	
49:					
Moenkopie	60	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
Rock outcrop	30	Not rated		Not rated	
50:					
Molen family	50	Poorly suited		Well suited	
		Restrictive layer	0.50		

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
50:					
Lazear	18	Unsuited		Well suited	
		Restrictive layer	1.00		
Gerst	15	Well suited		Well suited	
51:					
Monue	55	Well suited		Well suited	
Fruitland	20	Well suited		Poorly suited	
				Rock fragments	0.50
52:					
Monue, saline-sodic	50	Well suited		Well suited	
Myton, saline-sodic	20	Well suited		Poorly suited	
				Rock fragments	0.50
Uzona, saline-sodic	20	Well suited		Well suited	
53:					
Monue	60	Well suited		Well suited	
Sheppard	25	Well suited		Well suited	
54:					
Mulford	90	Well suited		Well suited	
55:					
Mussentuchit	45	Poorly suited		Poorly suited	
		Slope	0.50	Rock fragments	0.50
		Rock fragments	0.50	Slope	0.50
Goblin	25	Well suited		Poorly suited	
				Restrictive layer	0.50
Swell family	20	Well suited		Well suited	
56:					
Nepalto	95	Poorly suited		Poorly suited	
		Slope	0.50	Rock fragments	0.50
		Rock fragments	0.50	Slope	0.50
57:					
Nizhoni	60	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Rock fragments	0.50
		Slope	0.50	Slope	0.50
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated	
58:					
Nizhoni	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Rock fragments	0.50

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
58:					
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated	
59:					
Nizhoni	40	Unsuited		Well suited	
		Restrictive layer	1.00		
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated	
Pinepoint, dry	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
60:					
Notom	40	Well suited		Poorly suited	
				Rock fragments	0.50
Begay, moist	20	Well suited		Well suited	
Bowington	10	Well suited		Well suited	
61:					
Notom	50	Poorly suited		Unsuited	
		Rock fragments	0.50	Rock fragments	1.00
Aquic Torrifluvents	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
62:					
Parkwash	70	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated	
63:					
Pherson family	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Sandyranch	25	Well suited		Well suited	
Riverwash	20	Not rated		Not rated	
64:					
Polychrome	50	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	1.00	Slope	1.00
Badland, Chinle Formation	20	Not rated		Not rated	
Cerropelon family	15	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	1.00	Slope	1.00

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
65:					
Querencia, saline-sodic	50	Well suited		Well suited	
Lybrook, saline-sodic	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Stickiness; high plasticity index	0.50
66:					
Radnik	45	Well suited		Well suited	
Kwakina	25	Well suited		Well suited	
Pherson family	15	Well suited		Poorly suited	
				Rock fragments	0.50
67:					
Radnik	50	Well suited		Poorly suited	
				Rock fragments	0.50
Notom	25	Well suited		Poorly suited	
				Rock fragments	0.50
Oxyaquic Torrifluvents	20	Well suited		Well suited	
68:					
Razito	55	Well suited		Poorly suited	
				Rock fragments	0.50
Riverwash	40	Not rated		Not rated	
69:					
Reef	60	Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	0.50
		Slope	0.50	Rock fragments	0.50
		Rock fragments	0.50		
Retsabal	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop, Carmel Formation	10	Not rated		Not rated	
70:					
Reef	70	Unsuited		Unsuited	
		Restrictive layer	1.00	Slope	1.00
		Slope	1.00	Rock fragments	1.00
		Rock fragments	1.00	Restrictive layer	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
71:					
Reef	75	Unsuited		Unsuited	
		Restrictive layer	1.00	Rock fragments	1.00
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
71:					
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated	
72:					
Reef	65	Unsuited		Unsuited	
		Slope	1.00	Rock fragments	1.00
		Restrictive layer	1.00	Slope	1.00
		Rock fragments	1.00	Restrictive layer	1.00
Rock outcrop	30	Not rated		Not rated	
73:					
Reef	40	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Rock fragments	0.50
				Slope	0.50
Rock outcrop, Kayenta Formation	40	Not rated		Not rated	
74:					
Reef, warm	40	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Rock fragments	0.50
				Slope	0.50
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated	
Lemrac	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
75:					
Reef	45	Unsuited		Poorly suited	
		Restrictive layer	1.00	Restrictive layer	0.50
				Rock fragments	0.50
Rizno	40	Unsuited		Poorly suited	
		Restrictive layer	1.00	Restrictive layer	0.50
				Rock fragments	0.50
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated	
76:					
Remorris	85	Well suited		Well suited	
77:					
Remorris, strongly alkaline	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated	

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
78:					
Remorris	40	Unsuited		Unsuited	
		Restrictive layer	1.00	Slope	1.00
		Slope	1.00	Rock fragments	1.00
		Rock fragments	1.00		
Milok, extremely stony	25	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated	
79:					
Remorris	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Peachsprings, strongly saline	20	Well suited		Well suited	
80:					
Retsabal	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
Lemrac	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
81:					
Rizno	50	Unsuited		Well suited	
		Restrictive layer	1.00		
Mido, warm	30	Well suited		Well suited	
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated	
82:					
Rizno	60	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
Rock outcrop	20	Not rated		Not rated	
83:					
Rizno, warm	60	Unsuited		Unsuited	
		Restrictive layer	1.00	Rock fragments	1.00
		Rock fragments	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated	

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
84:					
Rock outcrop	60	Not rated		Not rated	
Arches	30	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
85:					
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated	
Arches	30	Unsuited		Well suited	
		Restrictive layer	1.00		
86:					
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated	
Daklos	25	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Rock fragments	0.50
				Slope	0.50
Moclom	20	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
87:					
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated	
Myton	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	1.00	Rock fragments	1.00
Somorent	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00
88:					
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated	
Nalcase	25	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
89:					
Rock outcrop	60	Not rated		Not rated	
Needle	35	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
90:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Mezzo family, dry	30	Well suited		Well suited	
Strell family	15	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
91:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Santrick	30	Unsuited		Well suited	
		Restrictive layer	1.00		
Nalcase	15	Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	0.50
		Slope	0.50	Restrictive layer	0.50
92:					
Rock outcrop	60	Not rated		Not rated	
Typic Torriorthents	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00
93:					
Rosced family	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	1.00	Rock fragments	1.00
Quezcan, sodic	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
94:					
Saemo	95	Poorly suited		Unsuited	
		Slope	0.50	Rock fragments	1.00
		Rock fragments	0.50	Slope	0.50
95:					
Sandyranch	40	Well suited		Well suited	
Aquic Torrifluvents	15	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Water	15	Not rated		Not rated	
96:					
Sandyranch	35	Well suited		Well suited	
Mido	30	Well suited		Well suited	
Mident	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
97:					
Sandyranch	45	Well suited		Well suited	
Radnik	30	Well suited		Well suited	
Riverwash	15	Not rated		Not rated	
98:					
Seeg	40	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
Moffat	30	Well suited		Well suited	
Needle	25	Unsuited		Poorly suited	
		Restrictive layer	1.00	Rock fragments	0.50
99:					
Simel, saline	40	Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	0.50
		Slope	0.50		
Catahoula, saline	25	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	0.50	Slope	0.50
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated	
100:					
Simel	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated	
101:					
Simel	50	Unsuited		Unsuited	
		Restrictive layer	1.00	Rock fragments	1.00
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
Simel, steep	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	1.00
		Rock fragments	1.00		
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
102:					
Skos	60	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00		
Badland, Moenkopi Formation	35	Not rated		Not rated	

Table 11.—Land Management, Part III (Site Preparation)—Continued

Map unit symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
103:					
Strych	85	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
104:					
Sulphurcreek	90	Well suited		Well suited	
105:					
Tesihim	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Rock fragments	0.50
Rizno, steep	18	Unsuited		Unsuited	
		Restrictive layer	1.00	Rock fragments	1.00
		Rock fragments	1.00	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated	
Badland	10	Not rated		Not rated	
106:					
Tineoyler	90	Well suited		Well suited	
107:					
Ustic Torriorthents	45	Unsuited		Unsuited	
		Slope	1.00	Rock fragments	1.00
		Rock fragments	0.50	Slope	1.00
		Restrictive layer	0.50		
Rock outcrop	30	Not rated		Not rated	
Badland	25	Not rated		Not rated	
108:					
Water	100	Not rated		Not rated	

Table 11.—Land Management, Part IV (Site Restoration)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit 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
1:					
Abra, moist	30	Low		Moderate	
				Available water	0.50
Sazi, moist	30	Low		High	
				Available water	1.00
Strych, moist	30	Low		High	
				Available water	1.00
2:					
Aquima	80	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
3:					
Arches	45	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Mido	25	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated	
4:					
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated	
Emco family	30	High		High	
		Texture/slope/ surface depth/ rock fragments	1.00	Salinity	1.00
				Available water	1.00
				Soil reaction	0.50
5:					
Barx	55	Low		Moderate	
				Available water	0.50
Remorris	20	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
6:					
Beclabito	55	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
				Salinity	0.50
Lybrook, saline-sodic	30	High		High	
		Texture/surface depth/rock fragments	1.00	Salinity	1.00
				Soil reaction	0.50
				Available water	0.50
7:					
Begay, moist	80	Low		Moderate	
				Available water	0.50
8:					
Begay	90	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
9:					
Begay, moist	80	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
10:					
Begay, saline	50	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Querencia, saline-sodic	35	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
				Salinity	0.50
11:					
Begay, saline-sodic	50	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
Begay, moist	25	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
Elias	20	Low		Moderate	
				Soil reaction	0.50
				Salinity	0.50
				Available water	0.50
12:					
Begay	40	Low		Moderate	
				Soil reaction	0.50
Ignacio	25	Low		High	
				Available water	1.00
				Soil reaction	0.50
Retsabal	15	Low		High	
				Available water	1.00

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
13:					
Begay, moist	65	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
Rizno, moist	15	Low		High	
				Available water	1.00
				Soil reaction	0.50
14:					
Begay	60	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
Strych	30	Low		High	
				Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50
15:					
Bullpen	35	High		High	
		Texture/surface depth/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Daklos	35	Low		High	
				Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50
Puertecito	20	Low		High	
				Available water	1.00
16:					
Calladito, saline-sodic	50	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Yarts, saline-sodic	35	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
17:					
Catahoula	40	High		High	
		Texture/slope/surface layer thickness	1.00	Available water	1.00
				Soil reaction	0.50
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated	

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
18:					
Chilton	55	Low		Moderate	
				Available water	0.50
Begay	20	Low		High	
				Available water	1.00
19:					
Chinchin	45	Low		Moderate	
				Carbonate content	0.50
				Soil reaction	0.50
				Available water	0.50
Badland, Chinle Formation	40	Not rated		Not rated	
20:					
Chipeta, saline-sodic	65	High		High	
		Texture/slope/ surface depth/ rock fragments	1.00	Salinity	1.00
				Available water	1.00
				Soil reaction	0.50
Stent family	25	Low		High	
				Available water	1.00
				Soil reaction	0.50
21:					
Daklos	40	High		Moderate	
		Texture/slope/ surface layer thickness	1.00	Available water	0.50
				Soil reaction	0.50
Lazear, dry	35	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated	
22:					
Daklos	60	Low		Moderate	
				Available water	0.50
				Carbonate content	0.50
				Soil reaction	0.50
Reef	15	Low		Moderate	
				Carbonate content	0.50
				Soil reaction	0.50
				Available water	0.50
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated	
23:					
Daklos	40	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
23:					
Rizno	25	Low		High	
				Available water	1.00
				Soil reaction	0.50
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated	
24:					
Earlweed	60	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Anasazi	30	Low		High	
				Available water	1.00
				Soil reaction	0.50
25:					
Eslendo, saline	60	Low		High	
				Available water	1.00
				Salinity	1.00
				Soil reaction	0.50
Happle, saline-sodic	20	Low		High	
				Available water	1.00
				Salinity	1.00
				Soil reaction	0.50
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated	
26:					
Foy family	50	Low		High	
				Available water	1.00
				Soil reaction	0.50
Whitesage family	45	Low		Moderate	
				Soil reaction	0.50
27:					
Gladel	55	Low		High	
				Available water	1.00
Plumasano	35	Low		Moderate	
				Available water	0.50
28:					
Goblin	80	Low		High	
				Available water	1.00
				Salinity	0.50
29:					
Goblin	50	High		High	
		Texture/slope/ surface depth/ rock fragments	1.00	Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
29:					
Clapper	30	Low		High	
				Available water	1.00
30:					
Goblin	60	Low		High	
				Available water	1.00
Ivanpatch	30	High		High	
		Texture/rock fragments	1.00	Available water	1.00
				Salinity	0.50
				Soil reaction	0.50
31:					
Hanksville, saline-sodic	60	Low		High	
				Salinity	1.00
				Available water	1.00
				Soil reaction	0.50
Chipeta, saline	30	Low		High	
				Salinity	1.00
				Available water	1.00
				Soil reaction	0.50
32:					
Hanksville, saline-sodic	50	Low		High	
				Salinity	1.00
				Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50
Notal, saline-sodic	40	Low		High	
				Salinity	1.00
				Available water	1.00
				Soil reaction	0.50
33:					
Kydestea	50	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Available water	0.50
				Soil reaction	0.50
Vessilla	30	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
34:					
Kydestea	40	Low		High	
				Available water	1.00
				Soil reaction	0.50
Vessilla	35	Low		High	
				Available water	1.00
				Soil reaction	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
34:					
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
35:					
Lavodnas	45	Low		Moderate	
				Available water	0.50
Retsabal	40	Low		Moderate	
				Available water	0.50
36:					
Mathis, cool	70	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated	
37:					
Metuck	30	Low		Moderate	
				Carbonate content	0.50
				Soil reaction	0.50
				Available water	0.50
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated	
Vessilla	25	Low		High	
				Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50
38:					
Mezzo family	80	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
39:					
Mido	65	High		High	
		Texture/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated	
40:					
Mido	40	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
40:					
Strych	30	Low		High	
				Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50
Reef	15	Low		Moderate	
				Carbonate content	0.50
				Soil reaction	0.50
				Available water	0.50
41:					
Mikim	50	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
Mivida, moist	40	Low		Moderate	
				Available water	0.50
42:					
Milok, cool	50	Low		High	
				Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50
Clapper	40	Low		High	
				Available water	1.00
				Soil reaction	0.50
43:					
Milok, steep	40	Low		Moderate	
				Soil reaction	0.50
Strych	40	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
44:					
Mivida	80	High		High	
		Texture/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
45:					
Mivida	50	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Gish	15	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
Cannonville	15	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
46:					
Moab	60	Low		High	
				Carbonate content	1.00
				Available water	1.00
				Soil reaction	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
46:					
Abra family	30	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
47:					
Moclom, warm	45	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated	
48:					
Moenkopie, warm	60	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated	
49:					
Moenkopie	60	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
Rock outcrop	30	Not rated		Not rated	
50:					
Molen family	50	Low		Moderate	
				Available water	0.50
Lazear	18	Low		High	
				Available water	1.00
				Soil reaction	0.50
Gerst	15	Low		High	
				Available water	1.00
				Soil reaction	0.50
51:					
Monue	55	Low		Moderate	
				Salinity	0.50
				Available water	0.50
				Soil reaction	0.50
Fruitland	20	Low		High	
				Available water	1.00
				Soil reaction	0.50
52:					
Monue, saline-sodic	50	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
52:					
Myton, saline-sodic	20	Low		High	
				Available water	1.00
				Soil reaction	0.50
Uzona, saline-sodic	20	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
53:					
Monue	60	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Sheppard	25	High		High	
		Texture/rock fragments	1.00	Available water	1.00
54:					
Mulford	90	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Available water	0.50
				Soil reaction	0.50
55:					
Mussentuchit	45	Low		Moderate	
				Available water	0.50
Goblin	25	Low		High	
				Available water	1.00
				Soil reaction	0.50
				Salinity	0.50
Swell family	20	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
				Carbonate content	0.50
56:					
Nepalto	95	Low		High	
				Available water	1.00
57:					
Nizhoni	60	Low		High	
				Available water	1.00
				Soil reaction	0.50
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated	
58:					
Nizhoni	60	Low		Moderate	
				Available water	0.50
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated	

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
59:					
Nizhoni	40	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated	
Pinepoint, dry	20	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
60:					
Notom	40	High		High	
		Texture/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Begay, moist	20	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Bowington	10	High		High	
		Texture/rock fragments	1.00	Available water	1.00
				Wetness	1.00
				Soil reaction	0.50
61:					
Notom	50	High		High	
		Texture/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Aquic Torrifluvents	20	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
62:					
Parkwash	70	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated	
63:					
Pherson family	30	Low		High	
				Available water	1.00
Sandyranch	25	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
63:					
Riverwash	20	Not rated		Not rated	
64:					
Polychrome	50	High		Moderate	
		Texture/rock fragments	1.00	Available water	0.50
				Soil reaction	0.50
Badland, Chinle Formation	20	Not rated		Not rated	
Cerropelon family	15	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
65:					
Querencia, saline-sodic	50	Low		High	
				Salinity	1.00
				Available water	1.00
				Soil reaction	0.50
Lybrook, saline-sodic	30	Low		High	
				Salinity	1.00
				Available water	0.50
				Soil reaction	0.50
66:					
Radnik	45	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Kwakina	25	Low		High	
				Available water	1.00
				Soil reaction	0.50
Pherson family	15	Low		High	
				Available water	1.00
				Soil reaction	0.50
67:					
Radnik	50	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Notom	25	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
Oxyaquic Torrifluvents	20	High		High	
		Texture/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
68:					
Razito	55	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
Riverwash	40	Not rated		Not rated	
69:					
Reef	60	Low		High	
				Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50
Retsabal	15	High		Moderate	
		Texture/slope/surface layer thickness	1.00	Salinity	0.50
				Available water	0.50
Rock outcrop, Carmel Formation	10	Not rated		Not rated	
70:					
Reef	70	Low		High	
				Available water	1.00
				Soil reaction	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
71:					
Reef	75	Low		High	
				Carbonate content	1.00
				Available water	1.00
				Soil reaction	0.50
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated	
72:					
Reef	65	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
Rock outcrop	30	Not rated		Not rated	
73:					
Reef	40	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Rock outcrop, Kayenta Formation	40	Not rated		Not rated	
74:					
Reef, warm	40	Low		High	
				Available water	1.00
				Soil reaction	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
74:					
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated	
Lemrac	15	Low		Moderate	
				Salinity	0.50
75:					
Reef	45	Low		High	
				Available water	1.00
Rizno	40	Low		High	
				Available water	1.00
				Soil reaction	0.50
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated	
76:					
Remorris	85	Low		High	
				Available water	1.00
				Salinity	0.50
77:					
Remorris, strongly alkaline	60	Low		High	
				Available water	1.00
				Soil reaction	1.00
				Carbonate content	0.50
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated	
78:					
Remorris	40	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Milok, extremely stony	25	Low		Moderate	
				Available water	0.50
				Carbonate content	0.50
				Soil reaction	0.50
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated	
79:					
Remorris	50	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
79:					
Peachsprings, strongly saline	20	Low		High	
				Salinity	1.00
				Available water	1.00
				Soil reaction	0.50
80:					
Retsabal	60	Low		High	
				Available water	1.00
Lemrac	20	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
81:					
Rizno	50	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Mido, warm	30	High		High	
		Texture/rock fragments	1.00	Available water	1.00
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated	
82:					
Rizno	60	Low		High	
				Available water	1.00
				Soil reaction	0.50
Rock outcrop	20	Not rated		Not rated	
83:					
Rizno, warm	60	Low		Moderate	
				Available water	0.50
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated	
84:					
Rock outcrop	60	Not rated		Not rated	
Arches	30	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
85:					
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated	

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
85:					
Arches	30	High Texture/surface layer thickness/rock fragments	1.00	High Available water	1.00
86:					
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated	
Daklos	25	Low		Moderate Available water Soil reaction	0.50 0.50
Moclom	20	High Texture/surface layer thickness/rock fragments	1.00	High Available water	1.00
87:					
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated	
Myton	25	Low		High Available water Soil reaction	1.00 0.50
Somorent	25	Low		High Available water Soil reaction	1.00 0.50
88:					
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated	
Nalcase	25	High Texture/surface layer thickness/rock fragments	1.00	High Available water	1.00
89:					
Rock outcrop	60	Not rated		Not rated	
Needle	35	High Texture/surface layer thickness/rock fragments	1.00	High Available water	1.00
90:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
90:					
Mezzo family, dry---	30	Moderate		High	
		Texture/surface layer thickness/rock fragments	0.50	Available water	1.00
Strell family-------	15	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
91:					
Rock outcrop, Navajo Sandstone---	50	Not rated		Not rated	
Santrick-----------	30	High		High	
		Texture/rock fragments	1.00	Available water	1.00
Nalcase------------	15	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
92:					
Rock outcrop--------	60	Not rated		Not rated	
Typic Torriorthents	40	Low		High	
				Available water	1.00
93:					
Rosced family-------	60	Low		Moderate	
				Available water	0.50
Quezcan, sodic------	25	Moderate		High	
		Texture/slope/ rock fragments	0.50	Available water	1.00
				Soil reaction	0.50
94:					
Saemo---------------	95	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
95:					
Sandyranch----------	40	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
Aquic Torrifluvents	15	Low		High	
				Wetness	1.00
				Available water	0.50
				Soil reaction	0.50
Water---------------	15	Not rated		Not rated	

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
96:					
Sandyranch	35	High Texture/surface layer thickness/rock fragments	1.00	High Available water Soil reaction	1.00 0.50
Mido	30	High Texture/surface layer thickness/rock fragments	1.00	High Available water Soil reaction	1.00 0.50
Mident	15	High Texture/slope/surface layer thickness	1.00	High Available water Soil reaction	1.00 0.50
97:					
Sandyranch	45	High Texture/surface layer thickness/rock fragments	1.00	High Available water Soil reaction	1.00 0.50
Radnik	30	Low		High Available water Soil reaction	1.00 0.50
Riverwash	15	Not rated		Not rated	
98:					
Seeg	40	High Texture/surface layer thickness/rock fragments	1.00	High Available water Soil reaction	1.00 0.50
Moffat	30	High Texture/rock fragments	1.00	High Available water Soil reaction	1.00 0.50
Needle	25	High Texture/surface layer thickness/rock fragments	1.00	High Available water Soil reaction	1.00 0.50
99:					
Simel, saline	40	Low		High Salinity Available water Soil reaction	1.00 1.00 0.50
Catahoula, saline	25	Low		High Available water Soil reaction	1.00 0.50

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
99:					
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated	
100:					
Simel	40	Low		High	
				Available water	1.00
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated	
101:					
Simel	50	Low		Moderate	
				Available water	0.50
				Soil reaction	0.50
Simel, steep	25	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
102:					
Skos	60	Low		Moderate	
				Soil reaction	0.50
				Available water	0.50
Badland, Moenkopi Formation	35	Not rated		Not rated	
103:					
Strych	85	Low		High	
				Available water	1.00
				Carbonate content	0.50
				Soil reaction	0.50
104:					
Sulphurcreek	90	Low		Moderate	
				Available water	0.50
105:					
Tesihim	50	Low		Moderate	
				Available water	0.50
Rizno, steep	18	Low		High	
				Available water	1.00
				Soil reaction	0.50
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated	
Badland	10	Not rated		Not rated	

Table 11.—Land Management, Part IV (Site Restoration)—Continued

Map unit 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
106:					
Tineoyler	90	Moderate Texture/rock fragments	0.50	Moderate Available water	0.50
107:					
Ustic Torriorthents	45	Low		High Available water	1.00
Rock outcrop	30	Not rated		Not rated	
Badland	25	Not rated		Not rated	
108:					
Water	100	Not rated		Not rated	

Table 12.—Recreation, Part I (Camp and Picnic Areas)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1:					
Abra, moist	30	Somewhat limited		Somewhat limited	
		Dusty	0.19	Dusty	0.19
Sazi, moist	30	Somewhat limited		Somewhat limited	
		Dusty	0.15	Dusty	0.15
Strych, moist	30	Somewhat limited		Somewhat limited	
		Dusty	0.13	Dusty	0.13
2:					
Aquima	80	Somewhat limited		Somewhat limited	
		Dusty	0.11	Dusty	0.11
3:					
Arches	45	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
Mido	25	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated	
4:					
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated	
Emco family	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Too clayey	0.50
		Slow water movement	0.41	Slow water movement	0.41
5:					
Barx	55	Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16
		Dusty	0.04	Dusty	0.04
		Too sandy	0.01	Too sandy	0.01
Remorris	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
6:					
Beclabito	55	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Sodium content	1.00	Sodium content	1.00
		Slow water movement	0.96	Slow water movement	0.96
		Dusty	0.38	Dusty	0.38
Lybrook, saline-sodic	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Salinity	1.00	Salinity	1.00
		Large stones content	1.00	Large stones content	1.00
		Sodium content	1.00	Sodium content	1.00
		Dusty	0.50	Dusty	0.50
7:					
Begay, moist	80	Somewhat limited		Somewhat limited	
		Too sandy	0.05	Too sandy	0.05
		Dusty	0.01	Dusty	0.01
8:					
Begay	90	Somewhat limited		Somewhat limited	
		Dusty	0.09	Dusty	0.09
9:					
Begay, moist	80	Very limited		Somewhat limited	
		Flooding	1.00	Dusty	0.07
		Dusty	0.07		
10:					
Begay, saline	50	Somewhat limited		Somewhat limited	
		Dusty	0.07	Dusty	0.07
Querencia, saline-sodic	35	Very limited		Very limited	
		Sodium content	1.00	Sodium content	1.00
		Dusty	0.19	Dusty	0.19
11:					
Begay, saline-sodic	50	Somewhat limited		Somewhat limited	
		Dusty	0.13	Dusty	0.13
Begay, moist	25	Somewhat limited		Somewhat limited	
		Dusty	0.07	Dusty	0.07
Elias	20	Very limited		Very limited	
		Sodium content	1.00	Sodium content	1.00
		Dusty	0.29	Dusty	0.29
12:					
Begay	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.13	Too sandy	0.13

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
12:					
Ignacio	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.07	Dusty	0.07
Retsabal	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
13:					
Begay, moist	65	Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04
		Dusty	0.04	Dusty	0.04
Rizno, moist	15	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.16	Slope	0.16
		Dusty	0.09	Dusty	0.09
14:					
Begay	60	Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16
		Dusty	0.01	Dusty	0.01
Strych	30	Somewhat limited		Somewhat limited	
		Dusty	0.12	Dusty	0.12
15:					
Bullpen	35	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.13	Dusty	0.13
		Gravel content	0.08	Gravel content	0.08
Daklos	35	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.84	Slope	0.84
		Dusty	0.12	Dusty	0.12
Puertecito	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.18	Dusty	0.18
16:					
Calladito, saline-sodic	50	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Yarts, saline-sodic	35	Somewhat limited		Somewhat limited	
		Too sandy	0.13	Too sandy	0.13

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
17:					
Catahoula	40	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Gravel content	0.19	Gravel content	0.19
		Dusty	0.04	Dusty	0.04
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated	
18:					
Chilton	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Dusty	0.16	Dusty	0.16
Begay	20	Somewhat limited		Somewhat limited	
		Dusty	0.10	Dusty	0.10
19:					
Chinchin	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.34	Dusty	0.34
		Slow water movement	0.26	Slow water movement	0.26
Badland, Chinle Formation	40	Not rated		Not rated	
20:					
Chipeta, saline-sodic	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Sodium content	1.00	Sodium content	1.00
		Dusty	0.50	Dusty	0.50
		Slow water movement	0.41	Slow water movement	0.41
Stent family	25	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Gravel content	0.20	Gravel content	0.20
		Dusty	0.09	Dusty	0.09
21:					
Daklos	40	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00
		Too sandy	0.40	Too sandy	0.40
		Dusty	0.02	Dusty	0.02

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
21:					
Lazear, dry	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.80	Gravel content	0.80
		Dusty	0.31	Dusty	0.31
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated	
22:					
Daklos	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.15	Gravel content	0.15
		Dusty	0.03	Dusty	0.03
Reef	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.27	Dusty	0.27
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated	
23:					
Daklos	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.15	Dusty	0.15
		Gravel content	0.08	Gravel content	0.08
Rizno	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.39	Gravel content	0.39
		Dusty	0.09	Dusty	0.09
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated	
24:					
Earlweed	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.88	Too sandy	0.88
Anasazi	30	Not limited		Not limited	

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
25:					
Eslendo, saline-----	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Salinity	1.00	Salinity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.45	Dusty	0.45
		Large stones content	0.19	Large stones content	0.19
Happle, saline-sodic	20	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Salinity	1.00	Slope	1.00
		Large stones content	1.00	Salinity	1.00
		Gravel content	0.17	Gravel content	0.17
		Too sandy	0.13	Too sandy	0.13
Rock outcrop, Mesaverde Formation sandstone----------	15	Not rated		Not rated	
26:					
Foy family----------	50	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	0.63	Slope	0.63
		Dusty	0.02	Dusty	0.02
Whitesage family----	45	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.16	Dusty	0.16
		Gravel content	0.03	Gravel content	0.03
27:					
Gladel----------	55	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.16	Slope	0.16
		Dusty	0.04	Dusty	0.04
Plumasano-----------	35	Somewhat limited		Somewhat limited	
		Dusty	0.04	Dusty	0.04
		Slope	0.04	Slope	0.04
28:					
Goblin----------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.21	Dusty	0.21
29:					
Goblin----------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
		Slow water movement	0.15	Slow water movement	0.15

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
29:					
Clapper	30	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.04	Dusty	0.04
30:					
Goblin	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
		Slope	0.37	Slope	0.37
		Large stones content	0.19	Large stones content	0.19
Ivanpatch	30	Somewhat limited		Somewhat limited	
		Too sandy	0.76	Too sandy	0.76
		Dusty	0.22	Dusty	0.22
		Slope	0.04	Slope	0.04
31:					
Hanksville, saline-sodic	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Sodium content	1.00	Sodium content	1.00
		Salinity	0.88	Salinity	0.88
		Dusty	0.50	Dusty	0.50
		Slow water movement	0.15	Slow water movement	0.15
Chipeta, saline	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Salinity	0.88	Salinity	0.88
		Dusty	0.50	Dusty	0.50
		Slow water movement	0.41	Slow water movement	0.41
		Slope	0.16	Slope	0.16
32:					
Hanksville, saline-sodic	50	Very limited		Very limited	
		Sodium content	1.00	Sodium content	1.00
		Dusty	0.50	Dusty	0.50
		Slow water movement	0.15	Slow water movement	0.15
Notal, saline-sodic	40	Very limited		Very limited	
		Sodium content	1.00	Sodium content	1.00
		Dusty	0.24	Dusty	0.24
33:					
Kydestea	50	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.26	Gravel content	0.26
		Dusty	0.06	Dusty	0.06

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
33:					
Vessilla	30	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.12	Dusty	0.12
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
34:					
Kydestea	40	Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.12	Dusty	0.12
Vessilla	35	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.37	Slope	0.37
		Dusty	0.08	Dusty	0.08
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
35:					
Lavodnas	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
Retsabal	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
36:					
Mathis, cool	70	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Too sandy	0.13	Too sandy	0.13
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated	
37:					
Metuck	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.73	Gravel content	0.73
		Dusty	0.12	Dusty	0.12

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
37:					
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated	
Vessilla	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.10	Dusty	0.10
		Gravel content	0.08	Gravel content	0.08
38:					
Mezzo family	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.92	Too sandy	0.92
39:					
Mido	65	Somewhat limited		Somewhat limited	
		Too sandy	0.68	Too sandy	0.68
		Slope	0.16	Slope	0.16
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated	
40:					
Mido	40	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Slope	0.63	Slope	0.63
Strych	30	Somewhat limited		Somewhat limited	
		Large stones content	0.76	Large stones content	0.76
		Too sandy	0.32	Too sandy	0.32
Reef	15	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.02	Dusty	0.02
		Gravel content	0.01	Gravel content	0.01
41:					
Mikim	50	Somewhat limited		Somewhat limited	
		Dusty	0.19	Dusty	0.19
		Slope	0.16	Slope	0.16
Mivida, moist	40	Somewhat limited		Somewhat limited	
		Dusty	0.11	Dusty	0.11
42:					
Milok, cool	50	Somewhat limited		Somewhat limited	
		Dusty	0.11	Dusty	0.11
Clapper	40	Somewhat limited		Somewhat limited	
		Dusty	0.12	Dusty	0.12

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
43:					
Milok, steep	40	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.24	Dusty	0.24
Strych	40	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.23	Dusty	0.23
44:					
Mivida	80	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88
45:					
Mivida	50	Somewhat limited		Somewhat limited	
		Dusty	0.15	Dusty	0.15
Gish	15	Very limited		Very limited	
		Sodium content	1.00	Sodium content	1.00
		Slow water movement	0.96	Slow water movement	0.96
		Dusty	0.48	Dusty	0.48
Cannonville	15	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Sodium content	1.00	Slope	1.00
		Large stones content	1.00	Sodium content	1.00
		Dusty	0.50	Dusty	0.50
		Slow water movement	0.41	Slow water movement	0.41
46:					
Moab	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	0.16	Slope	0.16
		Dusty	0.08	Dusty	0.08
		Gravel content	0.04	Gravel content	0.04
Abra family	30	Somewhat limited		Somewhat limited	
		Dusty	0.21	Dusty	0.21
47:					
Moclom, warm	45	Very limited		Very limited	
		Flooding	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too sandy	0.76
		Too sandy	0.76	Slope	0.16
		Slope	0.16		
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated	

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
48:					
Moenkopie, warm	60	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Gravel content	1.00	Slope	1.00
		Large stones content	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.13	Too sandy	0.13
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated	
49:					
Moenkopie	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.82	Too sandy	0.82
		Dusty	0.08	Dusty	0.08
Rock outcrop	30	Not rated		Not rated	
50:					
Molen family	50	Somewhat limited		Somewhat limited	
		Dusty	0.17	Dusty	0.17
Lazear	18	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.26	Dusty	0.26
		Gravel content	0.24	Gravel content	0.24
Gerst	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.31	Dusty	0.31
51:					
Monue	55	Somewhat limited		Somewhat limited	
		Dusty	0.13	Dusty	0.13
Fruitland	20	Somewhat limited		Somewhat limited	
		Dusty	0.02	Dusty	0.02
52:					
Monue, saline-sodic	50	Somewhat limited		Somewhat limited	
		Dusty	0.01	Dusty	0.01
Myton, saline-sodic	20	Somewhat limited		Somewhat limited	
		Gravel content	0.39	Gravel content	0.39
		Dusty	0.04	Dusty	0.04
Uzona, saline-sodic	20	Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96
		Dusty	0.39	Dusty	0.39
53:					
Monue	60	Very limited		Somewhat limited	
		Flooding	1.00	Dusty	0.15
		Dusty	0.15		
Sheppard	25	Somewhat limited		Somewhat limited	
		Too sandy	0.76	Too sandy	0.76

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54:					
Mulford	90	Very limited		Somewhat limited	
		Flooding	1.00	Dusty	0.42
		Dusty	0.42	Slow water movement	0.41
		Slow water movement	0.41		
55:					
Mussentuchit	45	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50
Goblin	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
		Slope	0.16	Slope	0.16
Swell family	20	Somewhat limited		Somewhat limited	
		Dusty	0.01	Dusty	0.01
56:					
Nepalto	95	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Gravel content	0.99	Gravel content	0.99
		Too sandy	0.13	Too sandy	0.13
57:					
Nizhoni	60	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.05	Dusty	0.05
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated	
58:					
Nizhoni	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.04	Dusty	0.04
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated	
59:					
Nizhoni	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.96	Too sandy	0.96
		Slope	0.16	Slope	0.16

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
59:					
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated	
Pinepoint, dry	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.88	Too sandy	0.88
60:					
Notom	40	Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00
		Too sandy	1.00		
Begay, moist	20	Somewhat limited		Somewhat limited	
		Dusty	0.03	Dusty	0.03
		Too sandy	0.02	Too sandy	0.02
Bowington	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Flooding	0.40
61:					
Notom	50	Very limited		Very limited	
		Flooding	1.00	Large stones content	1.00
		Large stones content	1.00	Too sandy	0.88
		Too sandy	0.88		
Aquic Torrifluvents	20	Very limited		Very limited	
		Flooding	1.00	Slope	1.00
		Slope	1.00	Too sandy	0.88
		Too sandy	0.88	Flooding	0.40
		Depth to saturated zone	0.13	Depth to saturated zone	0.06
62:					
Parkwash	70	Very limited		Very limited	
		Depth to bedrock	1.00	Too sandy	1.00
		Too sandy	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated	
63:					
Pherson family	30	Very limited		Very limited	
		Flooding	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too sandy	0.02
		Too sandy	0.02		
Sandyranch	25	Very limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.88
		Too sandy	0.88		
Riverwash	20	Not rated		Not rated	

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
64:					
Polychrome	50	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Too sandy	0.99	Too sandy	0.99
Badland, Chinle Formation	20	Not rated		Not rated	
Cerropelon family	15	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.27	Dusty	0.27
65:					
Querencia, saline-sodic	50	Very limited		Very limited	
		Sodium content	1.00	Sodium content	1.00
		Dusty	0.20	Dusty	0.20
Lybrook, saline-sodic	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Sodium content	1.00	Sodium content	1.00
		Dusty	0.50	Dusty	0.50
		Slow water movement	0.41	Slow water movement	0.41
66:					
Radnik	45	Very limited		Somewhat limited	
		Flooding	1.00	Dusty	0.01
		Dusty	0.01		
Kwakina	25	Very limited		Not limited	
		Flooding	1.00		
Pherson family	15	Very limited		Somewhat limited	
		Flooding	1.00	Large stones content	0.76
		Large stones content	0.76	Too sandy	0.13
		Too sandy	0.13		
67:					
Radnik	50	Somewhat limited		Somewhat limited	
		Large stones content	0.19	Large stones content	0.19
		Dusty	0.01	Dusty	0.01
Notom	25	Very limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.96
		Too sandy	0.96		
Oxyaquic Torrifluvents	20	Very limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.88
		Too sandy	0.88	Slope	0.16
		Slope	0.16		

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68:					
Razito	55	Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00
		Too sandy	1.00	Large stones content	0.76
		Large stones content	0.76		
Riverwash	40	Not rated		Not rated	
69:					
Reef	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.18	Dusty	0.18
Retsabal	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
		Too sandy	0.50	Too sandy	0.50
		Salinity	0.13	Salinity	0.13
Rock outcrop, Carmel Formation	10	Not rated		Not rated	
70:					
Reef	70	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.15	Dusty	0.15
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
71:					
Reef	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.10	Dusty	0.10
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated	
72:					
Reef	65	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1	Depth to bedrock	1.00
		Dusty	1.00	Dusty	0.24
		Gravel content	0.24	Gravel content	0.03
Rock outcrop	30	Not rated	0.03	Not rated	

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
73:					
Reef	40	Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.25	Too sandy	0.25
		Large stones content	0.19	Large stones content	0.19
Rock outcrop, Kayenta Formation	40	Not rated		Not rated	
74:					
Reef, warm	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.03	Dusty	0.03
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated	
Lemrac	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Dusty	0.19	Dusty	0.19
75:					
Reef	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.97	Gravel content	0.97
		Dusty	0.21	Dusty	0.21
		Large stones content	0.19	Large stones content	0.19
		Slope	0.04	Slope	0.04
Rizno	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.19	Large stones content	0.19
		Dusty	0.15	Dusty	0.15
		Slope	0.04	Slope	0.04
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated	
76:					
Remorris	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.10	Dusty	0.10
77:					
Remorris, strongly alkaline	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.36	Dusty	0.36

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
77:					
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated	
78:					
Remorris	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.26	Dusty	0.26
Milok, extremely stony	25	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	0.63	Slope	0.63
		Dusty	0.15	Dusty	0.15
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated	
79:					
Remorris	50	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.33	Dusty	0.33
		Gravel content	0.08	Gravel content	0.08
Peachsprings, strongly saline	20	Somewhat limited		Somewhat limited	
		Dusty	0.25	Dusty	0.25
		Slope	0.16	Slope	0.16
80:					
Retsabal	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.50	Dusty	0.50
Lemrac	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50
81:					
Rizno	50	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
Mido, warm	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
81:					
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated	
82:					
Rizno	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.68	Gravel content	0.68
		Too sandy	0.13	Too sandy	0.13
Rock outcrop	20	Not rated		Not rated	
83:					
Rizno, warm	60	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.20	Gravel content	0.20
		Too sandy	0.13	Too sandy	0.13
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated	
84:					
Rock outcrop	60	Not rated		Not rated	
Arches	30	Very limited		Very limited	
		Depth to bedrock	1.00	Too sandy	1.00
		Too sandy	1.00	Depth to bedrock	1.00
85:					
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated	
Arches	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.92	Too sandy	0.92
86:					
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated	
Daklos	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
Moclom	20	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.63	Slope	0.63
		Gravel content	0.46	Gravel content	0.46

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
87:					
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated	
Myton	25	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Gravel content	0.80	Gravel content	0.80
		Dusty	0.01	Dusty	0.01
Somorent	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
88:					
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated	
Nalcase	25	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.16	Slope	0.16
89:					
Rock outcrop	60	Not rated		Not rated	
Needle	35	Very limited		Very limited	
		Depth to bedrock	1.00	Too sandy	1.00
		Too sandy	1.00	Depth to bedrock	1.00
90:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Mezzo family, dry	30	Somewhat limited		Somewhat limited	
		Too sandy	0.96	Too sandy	0.96
Strell family	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00
		Too sandy	0.92	Too sandy	0.92
91:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Santrick	30	Somewhat limited		Somewhat limited	
		Too sandy	0.50	Too sandy	0.50
Nalcase	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.50	Too sandy	0.50

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
92:					
Rock outcrop	60	Not rated		Not rated	
Typic Torriorthents	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.92	Gravel content	0.92
		Dusty	0.05	Dusty	0.05
93:					
Rosced family	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.05	Dusty	0.05
Quezcan, sodic	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Slow water movement	0.41	Slow water movement	0.41
		Dusty	0.18	Dusty	0.18
94:					
Saemo	95	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.14	Dusty	0.14
95:					
Sandyranch	40	Very limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.88
		Too sandy	0.88		
Aquic Torrifluvents	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Slope	1.00
		Slope	1.00	Flooding	0.40
		Dusty	0.05	Dusty	0.05
Water	15	Not rated		Not rated	
96:					
Sandyranch	35	Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00
		Too sandy	1.00		
Mido	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Mident	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.88	Too sandy	0.88

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
97:					
Sandyranch	45	Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00
		Too sandy	1.00		
Radnik	30	Very limited		Somewhat limited	
		Flooding	1.00	Dusty	0.05
		Dusty	0.05		
Riverwash	15	Not rated		Not rated	
98:					
Seeg	40	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Too sandy	0.88	Too sandy	0.88
		Slope	0.16	Slope	0.16
Moffat	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Needle	25	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.19	Large stones content	0.19
99:					
Simel, saline	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Salinity	1.00	Salinity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
Catahoula, saline	25	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated	
100:					
Simel	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.45	Dusty	0.45
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated	

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
101:					
Simel	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.50	Dusty	0.50
Simel, steep	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.50	Dusty	0.50
		Gravel content	0.07	Gravel content	0.07
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
102:					
Skos	60	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50
		Gravel content	0.08	Gravel content	0.08
Badland, Moenkopi Formation	35	Not rated		Not rated	
103:					
Strych	85	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
104:					
Sulphurcreek	90	Very limited		Somewhat limited	
		Flooding	1.00	Dusty	0.30
		Dusty	0.30		
105:					
Tesihim	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.32	Too sandy	0.32
		Dusty	0.02	Dusty	0.02
Rizno, steep	18	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated	
Badland	10	Not rated		Not rated	

Table 12.—Recreation, Part I (Camp and Picnic Areas)—Continued

Map unit symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
106:					
Tineoyler	90	Very limited		Somewhat limited	
		Flooding	1.00	Dusty	0.20
		Dusty	0.20		
107:					
Ustic Torriorthents	45	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.04	Dusty	0.04
Rock outcrop	30	Not rated		Not rated	
Badland	25	Not rated		Not rated	
108:					
Water	100	Not rated		Not rated	

Table 12.—Recreation, Part II (Trail Management)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1:					
Abra, moist	30	Somewhat limited		Somewhat limited	
		Dusty	0.19	Dusty	0.19
Sazi, moist	30	Somewhat limited		Somewhat limited	
		Dusty	0.15	Dusty	0.15
Strych, moist	30	Somewhat limited		Somewhat limited	
		Dusty	0.13	Dusty	0.13
2:					
Aquima	80	Somewhat limited		Somewhat limited	
		Dusty	0.11	Dusty	0.11
3:					
Arches	45	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Mido	25	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated	
4:					
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated	
Emco family	30	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Too clayey	0.50	Too clayey	0.50
		Dusty	0.37	Dusty	0.37
5:					
Barx	55	Somewhat limited		Somewhat limited	
		Dusty	0.04	Dusty	0.04
		Too sandy	0.01	Too sandy	0.01
Remorris	20	Very limited		Somewhat limited	
		Slope	1.00	Slope	0.78
		Dusty	0.50	Dusty	0.50
6:					
Beclabito	55	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Dusty	0.38
		Dusty	0.38	Slope	0.22

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
6:					
Lybrook, saline-sodic	30	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Dusty	0.50
		Dusty	0.50	Too clayey	0.50
		Too clayey	0.50		
7:					
Begay, moist	80	Somewhat limited		Somewhat limited	
		Too sandy	0.05	Too sandy	0.05
		Dusty	0.01	Dusty	0.01
8:					
Begay	90	Somewhat limited		Somewhat limited	
		Dusty	0.09	Dusty	0.09
9:					
Begay, moist	80	Somewhat limited		Somewhat limited	
		Dusty	0.07	Dusty	0.07
10:					
Begay, saline	50	Somewhat limited		Somewhat limited	
		Dusty	0.07	Dusty	0.07
Querencia, saline-sodic	35	Somewhat limited		Somewhat limited	
		Dusty	0.19	Dusty	0.19
11:					
Begay, saline-sodic	50	Somewhat limited		Somewhat limited	
		Dusty	0.13	Dusty	0.13
Begay, moist	25	Somewhat limited		Somewhat limited	
		Dusty	0.07	Dusty	0.07
Elias	20	Somewhat limited		Somewhat limited	
		Dusty	0.29	Dusty	0.29
12:					
Begay	40	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	0.50	Too sandy	0.13
		Too sandy	0.13		
Ignacio	25	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	0.44
		Dusty	0.07	Dusty	0.07
Retsabal	15	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	0.50	Dusty	0.50
		Dusty	0.50		

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
13:					
Begay, moist	65	Somewhat limited		Somewhat limited	
		Dusty	0.04	Dusty	0.04
Rizno, moist	15	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.09	Dusty	0.09
14:					
Begay	60	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.01	Dusty	0.01
Strych	30	Somewhat limited		Somewhat limited	
		Dusty	0.12	Dusty	0.12
15:					
Bullpen	35	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Dusty	0.13
		Dusty	0.13		
Daklos	35	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.12	Dusty	0.12
Puertecito	20	Somewhat limited		Somewhat limited	
		Dusty	0.18	Dusty	0.18
16:					
Calladito, saline-sodic	50	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Yarts, saline-sodic	35	Somewhat limited		Somewhat limited	
		Too sandy	0.13	Too sandy	0.13
17:					
Catahoula	40	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.04	Dusty	0.04
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated	
18:					
Chilton	55	Somewhat limited		Somewhat limited	
		Slope	0.50	Dusty	0.16
		Dusty	0.16		
Begay	20	Somewhat limited		Somewhat limited	
		Dusty	0.10	Dusty	0.10

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
19:					
Chinchin	45	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	0.78
		Dusty	0.34	Dusty	0.34
Badland, Chinle Formation	40	Not rated		Not rated	
20:					
Chipeta, saline-sodic	65	Very limited		Very limited	
		Slope	1.00	Water erosion	1.00
		Water erosion	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50
Stent family	25	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.78
		Dusty	0.09	Dusty	0.09
21:					
Daklos	40	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.78
		Too sandy	0.40	Too sandy	0.40
		Dusty	0.02	Dusty	0.02
Lazear, dry	35	Very limited		Somewhat limited	
		Slope	1.00	Dusty	0.31
		Dusty	0.31	Slope	0.22
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated	
22:					
Daklos	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	0.08	Dusty	0.03
		Dusty	0.03		
Reef	15	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.27	Dusty	0.27
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated	

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
23:					
Daklos	40	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.15	Dusty	0.15
Rizno	25	Somewhat limited		Somewhat limited	
		Slope	0.82	Dusty	0.09
		Dusty	0.09		
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated	
24:					
Earlweed	60	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88
		Slope	0.68		
Anasazi	30	Not limited		Not limited	
25:					
Eslendo, saline	60	Very limited		Very limited	
		Slope	1.00	Water erosion	1.00
		Water erosion	1.00	Slope	1.00
		Dusty	0.45	Dusty	0.45
		Large stones content	0.19	Large stones content	0.19
Happle, saline-sodic	20	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Too sandy	0.13	Too sandy	0.13
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated	
26:					
Foy family	50	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.02	Dusty	0.02
Whitesage family	45	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	0.18	Dusty	0.16
		Dusty	0.16		
27:					
Gladel	55	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.04	Dusty	0.04
Plumasano	35	Somewhat limited		Somewhat limited	
		Dusty	0.04	Dusty	0.04

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
28:					
Goblin	80	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.21	Dusty	0.21
29:					
Goblin	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.50	Dusty	0.50
Clapper	30	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.04	Dusty	0.04
30:					
Goblin	60	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.50	Dusty	0.50
		Large stones content	0.19	Large stones content	0.19
Ivanpatch	30	Somewhat limited		Somewhat limited	
		Too sandy	0.76	Too sandy	0.76
		Dusty	0.22	Dusty	0.22
31:					
Hanksville, saline-sodic	60	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.50	Dusty	0.50
		Slope	0.32		
Chipeta, saline	30	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.50	Dusty	0.50
32:					
Hanksville, saline-sodic	50	Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50
Notal, saline-sodic	40	Somewhat limited		Somewhat limited	
		Dusty	0.24	Dusty	0.24
33:					
Kydestea	50	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.44
		Dusty	0.06	Dusty	0.06
Vessilla	30	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.78
		Dusty	0.12	Dusty	0.12

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
33:					
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
34:					
Kydestea	40	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.12	Dusty	0.12
Vessilla	35	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.08	Dusty	0.08
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
35:					
Lavodnas	45	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	1.00	Dusty	0.50
		Dusty	0.50	Slope	0.22
Retsabal	40	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.50	Dusty	0.50
		Slope	0.08		
36:					
Mathis, cool	70	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Too sandy	0.13	Too sandy	0.13
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated	
37:					
Metuck	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Dusty	0.12	Dusty	0.12
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated	
Vessilla	25	Somewhat limited		Somewhat limited	
		Dusty	0.10	Dusty	0.10
38:					
Mezzo family	80	Somewhat limited		Somewhat limited	
		Too sandy	0.92	Too sandy	0.92
		Slope	0.50		

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
39:					
Mido	65	Somewhat limited Too sandy	 0.68	Somewhat limited Too sandy	 0.68
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated	
40:					
Mido	40	Very limited Too sandy	 1.00	Very limited Too sandy	 1.00
Strych	30	Somewhat limited Large stones content Too sandy	 0.76 0.32	Somewhat limited Large stones content Too sandy	 0.76 0.32
Reef	15	Very limited Large stones content Slope Dusty	 1.00 1.00 0.02	Very limited Large stones content Slope Dusty	 1.00 1.00 0.02
41:					
Mikim	50	Very limited Water erosion Dusty	 1.00 0.19	Very limited Water erosion Dusty	 1.00 0.19
Mivida, moist	40	Somewhat limited Dusty	 0.11	Somewhat limited Dusty	 0.11
42:					
Milok, cool	50	Somewhat limited Dusty	 0.11	Somewhat limited Dusty	 0.11
Clapper	40	Somewhat limited Dusty	 0.12	Somewhat limited Dusty	 0.12
43:					
Milok, steep	40	Very limited Large stones content Water erosion Dusty Slope	 1.00 1.00 0.24 0.08	Very limited Large stones content Water erosion Dusty	 1.00 1.00 0.24
Strych	40	Very limited Large stones content Slope Dusty	 1.00 1.00 0.23	Very limited Large stones content Slope Dusty	 1.00 1.00 0.23
44:					
Mivida	80	Somewhat limited Too sandy	 0.88	Somewhat limited Too sandy	 0.88
45:					
Mivida	50	Somewhat limited Dusty	 0.15	Somewhat limited Dusty	 0.15
Gish	15	Somewhat limited Dusty	 0.48	Somewhat limited Dusty	 0.48

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
45:					
Cannonville	15	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.50	Dusty	0.50
46:					
Moab	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.08	Dusty	0.08
Abra family	30	Somewhat limited		Somewhat limited	
		Dusty	0.21	Dusty	0.21
47:					
Moclom, warm	45	Somewhat limited		Somewhat limited	
		Too sandy	0.76	Too sandy	0.76
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated	
48:					
Moenkopie, warm	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Too sandy	0.13	Too sandy	0.13
		Dusty	0.10	Dusty	0.10
		Slope	0.08		
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated	
49:					
Moenkopie	60	Somewhat limited		Somewhat limited	
		Too sandy	0.82	Too sandy	0.82
		Dusty	0.08	Dusty	0.08
Rock outcrop	30	Not rated		Not rated	
50:					
Molen family	50	Somewhat limited		Somewhat limited	
		Dusty	0.17	Dusty	0.17
Lazear	18	Somewhat limited		Somewhat limited	
		Dusty	0.26	Dusty	0.26
Gerst	15	Somewhat limited		Somewhat limited	
		Dusty	0.31	Dusty	0.31
51:					
Monue	55	Somewhat limited		Somewhat limited	
		Dusty	0.13	Dusty	0.13
Fruitland	20	Somewhat limited		Somewhat limited	
		Dusty	0.02	Dusty	0.02

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
52:					
Monue, saline-sodic	50	Somewhat limited		Somewhat limited	
		Dusty	0.01	Dusty	0.01
Myton, saline-sodic	20	Somewhat limited		Somewhat limited	
		Dusty	0.04	Dusty	0.04
Uzona, saline-sodic	20	Somewhat limited		Somewhat limited	
		Dusty	0.39	Dusty	0.39
53:					
Monue	60	Somewhat limited		Somewhat limited	
		Dusty	0.15	Dusty	0.15
Sheppard	25	Somewhat limited		Somewhat limited	
		Too sandy	0.76	Too sandy	0.76
54:					
Mulford	90	Somewhat limited		Somewhat limited	
		Dusty	0.42	Dusty	0.42
55:					
Mussentuchit	45	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.50	Dusty	0.50
		Slope	0.50		
Goblin	25	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.50	Dusty	0.50
Swell family	20	Somewhat limited		Somewhat limited	
		Dusty	0.01	Dusty	0.01
56:					
Nepalto	95	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Too sandy	0.13	Too sandy	0.13
		Slope	0.02		
57:					
Nizhoni	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.05	Dusty	0.05
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated	
58:					
Nizhoni	60	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.04	Dusty	0.04

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
58:					
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated	
59:					
Nizhoni	40	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Too sandy	0.96	Too sandy	0.96
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated	
Pinepoint, dry	20	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88
		Slope	0.50		
60:					
Notom	40	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Begay, moist	20	Somewhat limited		Somewhat limited	
		Dusty	0.03	Dusty	0.03
		Too sandy	0.02	Too sandy	0.02
Bowington	10	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
		Flooding	0.40	Flooding	0.40
61:					
Notom	50	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Too sandy	0.88	Too sandy	0.88
Aquic Torrifluvents	20	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88
		Slope	0.50	Flooding	0.40
		Flooding	0.40		
62:					
Parkwash	70	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Slope	0.02		
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated	
63:					
Pherson family	30	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.22
		Too sandy	0.02	Too sandy	0.02

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
63:					
Sandyranch	25	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88
Riverwash	20	Not rated		Not rated	
64:					
Polychrome	50	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Too sandy	0.99	Too sandy	0.99
Badland, Chinle Formation	20	Not rated		Not rated	
Cerropelon family	15	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.27	Dusty	0.27
65:					
Querencia, saline-sodic	50	Somewhat limited		Somewhat limited	
		Dusty	0.20	Dusty	0.20
Lybrook, saline-sodic	30	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	0.98	Dusty	0.50
		Dusty	0.50		
66:					
Radnik	45	Somewhat limited		Somewhat limited	
		Dusty	0.01	Dusty	0.01
Kwakina	25	Not limited		Not limited	
Pherson family	15	Somewhat limited		Somewhat limited	
		Large stones content	0.76	Large stones content	0.76
		Too sandy	0.13	Too sandy	0.13
67:					
Radnik	50	Somewhat limited		Somewhat limited	
		Large stones content	0.19	Large stones content	0.19
		Dusty	0.01	Dusty	0.01
Notom	25	Somewhat limited		Somewhat limited	
		Too sandy	0.96	Too sandy	0.96
Oxyaquic Torrifluvents	20	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68:					
Razito	55	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Large stones content	0.76	Large stones content	0.76
Riverwash	40	Not rated		Not rated	
69:					
Reef	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	0.68	Dusty	0.18
		Dusty	0.18		
Retsabal	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50
		Too sandy	0.50	Too sandy	0.50
Rock outcrop, Carmel Formation	10	Not rated		Not rated	
70:					
Reef	70	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.15	Dusty	0.15
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
71:					
Reef	75	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	0.78
		Dusty	0.10	Dusty	0.10
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated	
72:					
Reef	65	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.24	Dusty	0.24
Rock outcrop	30	Not rated		Not rated	
73:					
Reef	40	Somewhat limited		Somewhat limited	
		Slope	0.50	Too sandy	0.25
		Too sandy	0.25	Large stones content	0.19
		Large stones content	0.19		

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
73:					
Rock outcrop, Kayenta Formation	40	Not rated		Not rated	
74:					
Reef, warm	40	Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00
		Slope	0.50	Dusty	0.03
		Dusty	0.03		
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated	
Lemrac	15	Very limited		Very limited	
		Slope	1.00	Water erosion	1.00
		Water erosion	1.00	Slope	1.00
		Dusty	0.19	Dusty	0.19
75:					
Reef	45	Somewhat limited		Somewhat limited	
		Dusty	0.21	Dusty	0.21
		Large stones content	0.19	Large stones content	0.19
Rizno	40	Somewhat limited		Somewhat limited	
		Large stones content	0.19	Large stones content	0.19
		Dusty	0.15	Dusty	0.15
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated	
76:					
Remorris	85	Somewhat limited		Somewhat limited	
		Dusty	0.10	Dusty	0.10
77:					
Remorris, strongly alkaline	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.36	Dusty	0.36
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated	
78:					
Remorris	40	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.26	Dusty	0.26

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
78:					
Milok, extremely stony	25	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.15	Dusty	0.15
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated	
79:					
Remorris	50	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.33	Dusty	0.33
Peachsprings, strongly saline	20	Somewhat limited		Somewhat limited	
		Dusty	0.25	Dusty	0.25
80:					
Retsabal	60	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Large stones content	1.00	Large stones content	1.00
		Slope	0.50	Dusty	0.50
		Dusty	0.50		
Lemrac	20	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Dusty	0.50	Dusty	0.50
81:					
Rizno	50	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Mido, warm	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated	
82:					
Rizno	60	Somewhat limited		Somewhat limited	
		Too sandy	0.13	Too sandy	0.13
Rock outcrop	20	Not rated		Not rated	
83:					
Rizno, warm	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.68
		Too sandy	0.13	Too sandy	0.13
		Dusty	0.04	Dusty	0.04

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
83:					
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated	
84:					
Rock outcrop	60	Not rated		Not rated	
Arches	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
85:					
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated	
Arches	30	Somewhat limited		Somewhat limited	
		Too sandy	0.92	Too sandy	0.92
86:					
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated	
Daklos	25	Somewhat limited		Not limited	
		Slope	0.02		
Moclom	20	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
87:					
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated	
Myton	25	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.01	Dusty	0.01
Somorent	25	Very limited		Very limited	
		Slope	1.00	Water erosion	1.00
		Water erosion	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.50	Dusty	0.50
88:					
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated	
Nalcase	25	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
89:					
Rock outcrop	60	Not rated		Not rated	
Needle	35	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
90:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Mezzo family, dry	30	Somewhat limited		Somewhat limited	
		Too sandy	0.96	Too sandy	0.96
Strell family	15	Somewhat limited		Somewhat limited	
		Too sandy	0.92	Too sandy	0.92
91:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Santrick	30	Somewhat limited		Somewhat limited	
		Too sandy	0.50	Too sandy	0.50
Nalcase	15	Very limited		Very limited	
		Slope	1.00	Water erosion	1.00
		Water erosion	1.00	Too sandy	0.50
		Too sandy	0.50	Slope	0.01
92:					
Rock outcrop	60	Not rated		Not rated	
Typic Torriorthents	40	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.05	Dusty	0.05
93:					
Rosced family	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.05	Dusty	0.05
Quezcan, sodic	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.18	Dusty	0.18
94:					
Saemo	95	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.22
		Dusty	0.14	Dusty	0.14

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
95:					
Sandyranch	40	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88
Aquic Torrifluvents	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00
		Flooding	0.40	Flooding	0.40
		Dusty	0.05	Dusty	0.05
Water	15	Not rated		Not rated	
96:					
Sandyranch	35	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Mido	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Mident	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.88	Too sandy	0.88
97:					
Sandyranch	45	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Radnik	30	Somewhat limited		Somewhat limited	
		Dusty	0.05	Dusty	0.05
Riverwash	15	Not rated		Not rated	
98:					
Seeg	40	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Too sandy	0.88	Too sandy	0.88
Moffat	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Needle	25	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Large stones content	0.19	Large stones content	0.19
99:					
Simel, saline	40	Very limited		Very limited	
		Slope	1.00	Water erosion	1.00
		Water erosion	1.00	Slope	0.78
		Dusty	0.50	Dusty	0.50
Catahoula, saline	25	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.22
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated	

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100:					
Simel	40	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	0.78
		Dusty	0.45	Dusty	0.45
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated	
101:					
Simel	50	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Dusty	0.50	Dusty	0.50
		Slope	0.18		
Simel, steep	25	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
102:					
Skos	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50
Badland, Moenkopi Formation	35	Not rated		Not rated	
103:					
Strych	85	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
104:					
Sulphurcreek	90	Somewhat limited		Somewhat limited	
		Dusty	0.30	Dusty	0.30
105:					
Tesihim	50	Somewhat limited		Somewhat limited	
		Too sandy	0.32	Too sandy	0.32
		Slope	0.02	Dusty	0.02
		Dusty	0.02		
Rizno, steep	18	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.78

Table 12.—Recreation, Part II (Trail Management)—Continued

Map unit symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
105:					
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated	
Badland	10	Not rated		Not rated	
106:					
Tineoyler	90	Somewhat limited		Somewhat limited	
		Dusty	0.20	Dusty	0.20
107:					
Ustic Torriorthents	45	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.86
		Dusty	0.04	Dusty	0.04
Rock outcrop	30	Not rated		Not rated	
Badland	25	Not rated		Not rated	
108:					
Water	100	Not rated		Not rated	

Table 13.—Dwellings and Small Commercial Buildings

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Abra, moist	30	Somewhat limited Shrink-swell	 0.50	Somewhat limited Shrink-swell	 0.50	Somewhat limited Shrink-swell	 0.50
Sazi, moist	30	Not limited		Somewhat limited Depth to hard bedrock	 0.92	Not limited	
Strych, moist	30	Somewhat limited Large stones	 0.09	Somewhat limited Large stones	 0.09	Somewhat limited Large stones	 0.09
2:							
Aquima	80	Somewhat limited Shrink-swell	 0.50	Somewhat limited Shrink-swell	 0.50	Somewhat limited Shrink-swell	 0.50
3:							
Arches	45	Very limited Depth to hard bedrock	 1.00	Very limited Depth to hard bedrock	 1.00	Very limited Depth to hard bedrock Slope	 1.00 0.50
Mido	25	Not limited		Not limited		Very limited Slope	 1.00
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated		Not rated	
4:							
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated		Not rated	
Emco family	30	Very limited Shrink-swell Slope Depth to soft bedrock	 1.00 1.00 0.50	Very limited Shrink-swell Depth to soft bedrock Slope	 1.00 1.00 1.00	Very limited Slope Shrink-swell Depth to soft bedrock	 1.00 1.00 1.00
5:							
Barx	55	Somewhat limited Slope	 0.16	Somewhat limited Slope	 0.16	Very limited Slope	 1.00
Remorris	20	Very limited Slope Depth to soft bedrock Shrink-swell	 1.00 0.50 0.50	Very limited Slope Depth to soft bedrock Shrink-swell	 1.00 1.00 0.50	Very limited Slope Depth to soft bedrock Shrink-swell	 1.00 1.00 0.50
6:							
Beclabito	55	Very limited Shrink-swell Slope Depth to hard bedrock	 1.00 1.00 0.50	Very limited Shrink-swell Depth to hard bedrock Slope	 1.00 1.00 1.00	Very limited Slope Shrink-swell Depth to hard bedrock	 1.00 1.00 0.50

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6:							
Lybrook, saline-sodic	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
				Depth to soft bedrock	0.02		
7:							
Begay, moist	80	Not limited		Not limited		Somewhat limited	
						Slope	0.50
8:							
Begay	90	Not limited		Not limited		Very limited	
						Slope	1.00
9:							
Begay, moist	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
10:							
Begay, saline	50	Not limited		Not limited		Not limited	
Querencia, saline-sodic	35	Not limited		Not limited		Not limited	
11:							
Begay, saline-sodic	50	Not limited		Not limited		Not limited	
Begay, moist	25	Not limited		Not limited		Not limited	
Elias	20	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
12:							
Begay	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Ignacio	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.74	Depth to hard bedrock	1.00	Depth to hard bedrock	0.74
Retsabal	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Subsidence risk	0.32	Subsidence risk	0.32	Subsidence risk	0.32
13:							
Begay, moist	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Rizno, moist	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Slope	0.16	Slope	1.00

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14:							
Begay	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Strych	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones	0.09	Large stones	0.09	Large stones	0.09
15:							
Bullpen	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Daklos	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.84	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Depth to soft bedrock	0.50	Slope	0.84	Slope	1.00
		Large stones	0.11	Large stones	0.11	Large stones	0.11
Puertecito	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.31	Large stones	0.31	Large stones	0.31
						Slope	0.13
16:							
Calladito, saline-sodic	50	Not limited		Not limited		Not limited	
Yarts, saline-sodic	35	Not limited		Not limited		Not limited	
17:							
Catahoula	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.01	Depth to hard bedrock	0.99	Large stones	0.01
				Large stones	0.01		
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated		Not rated	
18:							
Chilton	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.04	Large stones	0.04	Large stones	0.04
Begay	20	Not limited		Not limited		Not limited	
19:							
Chinchin	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Badland, Chinle Formation	40	Not rated		Not rated		Not rated	

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20:							
Chipeta, saline-sodic	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Stent family	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.88	Depth to hard bedrock	1.00	Depth to hard bedrock	0.88
21:							
Daklos	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Depth to soft bedrock	0.50	Slope	1.00	Slope	1.00
Lazear, dry	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated		Not rated	
22:							
Daklos	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.12	Large stones	0.12	Large stones	0.12
Reef	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.01	Large stones	0.01	Large stones	0.01
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated		Not rated	
23:							
Daklos	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rizno	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated		Not rated	

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24:							
Earlweed	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Anasazi	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Depth to hard bedrock	0.54
						Slope	0.13
25:							
Eslendo, saline	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Happle, saline-sodic	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated		Not rated	
26:							
Foy family	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Large stones	0.42	Large stones	0.42	Large stones	0.42
Whitesage family	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
27:							
Gladel	55	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
Plumasano	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
28:							
Goblin	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
29:							
Goblin	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Slope	1.00	Depth to soft bedrock	1.00
		Subsidence risk	0.01	Subsidence risk	0.01	Subsidence risk	0.01
Clapper	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.05	Depth to hard bedrock	0.88	Large stones	0.05
				Large stones	0.05		

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
30:							
Goblin	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to hard bedrock	1.00
Ivanpatch	30	Somewhat limited		Somewhat limited		Very limited	
		Severe subsidence risk	0.63	Severe subsidence risk	0.63	Slope	1.00
		Slope	0.04	Slope	0.04	Severe subsidence risk	0.63
31:							
Hanksville, saline-sodic	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Chipeta, saline	30	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Shrink-swell	1.00
		Slope	0.16	Slope	0.16	Depth to soft bedrock	1.00
32:							
Hanksville, saline-sodic	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to soft bedrock	0.86	Shrink-swell	0.50
				Shrink-swell	0.50		
Notal, saline-sodic	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.47	Shrink-swell	0.48	Shrink-swell	0.47
33:							
Kydestea	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.58	Large stones	0.58	Large stones	0.58
Vessilla	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
34:							
Kydestea	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Vessilla	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.37	Slope	0.37	Slope	1.00

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
34:							
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
35:							
Lavodnas	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Retsabal	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Subsidence risk	0.03	Subsidence risk	0.03	Subsidence risk	0.03
36:							
Mathis, cool	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.11	Large stones	0.11	Large stones	0.11
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated		Not rated	
37:							
Metuck	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated		Not rated	
Vessilla	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
38:							
Mezzo family	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
39:							
Mido	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated		Not rated	
40:							
Mido	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Strych	30	Not limited		Not limited		Very limited	
						Slope	1.00

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40:							
Reef	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.01	Large stones	0.01	Large stones	0.01
41:							
Mikim	50	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.16	Slope	0.16	Shrink-swell	0.50
Mivida, moist	40	Not limited		Not limited		Somewhat limited	
						Slope	0.13
42:							
Milok, cool	50	Not limited		Not limited		Not limited	
Clapper	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.01	Shrink-swell	0.11	Shrink-swell	0.01
43:							
Milok, steep	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Strych	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.01	Large stones	0.01	Large stones	0.01
44:							
Mivida	80	Not limited		Not limited		Not limited	
45:							
Mivida	50	Not limited		Not limited		Not limited	
Gish	15	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Cannonville	15	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.42		
46:							
Moab	60	Somewhat limited		Somewhat limited		Very limited	
		Large stones	0.36	Large stones	0.36	Slope	1.00
		Slope	0.16	Slope	0.16	Large stones	0.36
Abra family	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.31	Depth to hard bedrock	0.77	Shrink-swell	0.31
				Shrink-swell	0.10		
47:							
Moclom, warm	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Slope	0.16	Slope	1.00

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
47:							
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated		Not rated	
48:							
Moenkopie, warm	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated		Not rated	
49:							
Moenkopie	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
						Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
50:							
Molen family	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
Lazear	18	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
						Slope	0.50
Gerst	15	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Shrink-swell	0.03	Shrink-swell	0.03	Slope	1.00
						Shrink-swell	0.03
51:							
Monue	55	Not limited		Not limited		Not limited	
Fruitland	20	Not limited		Not limited		Not limited	
52:							
Monue, saline-sodic	50	Not limited		Not limited		Not limited	
Myton, saline-sodic	20	Not limited		Not limited		Not limited	
Uzona, saline-sodic	20	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.89	Shrink-swell	1.00	Shrink-swell	0.89
53:							
Monue	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Sheppard	25	Not limited		Not limited		Not limited	

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
54:							
Mulford	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
55:							
Mussentuchit	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Severe subsidence risk	0.89	Slope	1.00	Severe subsidence risk	0.89
				Severe subsidence risk	0.89		
				Depth to soft bedrock	0.68		
Goblin	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
		Subsidence risk	0.01	Subsidence risk	0.01	Subsidence risk	0.01
Swell family	20	Very limited		Very limited		Very limited	
		Severe subsidence risk	1.00	Severe subsidence risk	1.00	Severe subsidence risk	1.00
						Slope	1.00
56:							
Nepalto	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
57:							
Nizhoni	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated		Not rated	
58:							
Nizhoni	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated		Not rated	
59:							
Nizhoni	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Slope	0.16	Slope	1.00

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
59:							
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated		Not rated	
Pinepoint, dry	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
60:							
Notom	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Begay, moist	20	Not limited		Not limited		Not limited	
Bowington	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
61:							
Notom	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Large stones	1.00	Large stones	1.00	Large stones	1.00
Aquic Torrifluvents	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.13	Slope	1.00	Depth to saturated zone	0.13
62:							
Parkwash	70	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated		Not rated	
63:							
Pherson family	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.14	Large stones	0.14	Large stones	0.14
Sandyranch	25	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.50
Riverwash	20	Not rated		Not rated		Not rated	
64:							
Polychrome	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	1.00	Large stones	1.00	Large stones	1.00
				Depth to soft bedrock	0.32		
Badland, Chinle Formation	20	Not rated		Not rated		Not rated	

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
64:							
Cerropelon family---	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.04	Depth to soft bedrock	0.26	Shrink-swell	0.04
				Shrink-swell	0.04		
65:							
Querencia, saline-sodic-------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Lybrook, saline-sodic-------	30	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
66:							
Radnik----------	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Kwakina----------	25	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Pherson family------	15	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
67:							
Radnik----------	50	Not limited		Not limited		Not limited	
Notom----------	25	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Oxyaquic Torrifluvents------	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slope	0.16	Depth to saturated zone	0.38	Slope	1.00
				Slope	0.16		
68:							
Razito----------	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Riverwash----------	40	Not rated		Not rated		Not rated	
69:							
Reef----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Retsabal----------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Rock outcrop, Carmel Formation---	10	Not rated		Not rated		Not rated	

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70:							
Reef	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	1.00	Large stones	1.00	Large stones	1.00
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
71:							
Reef	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.10	Large stones	0.10	Large stones	0.10
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated		Not rated	
72:							
Reef	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.08	Large stones	0.08	Large stones	0.08
Rock outcrop	30	Not rated		Not rated		Not rated	
73:							
Reef	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop, Kayenta Formation	40	Not rated		Not rated		Not rated	
74:							
Reef, warm	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated		Not rated	
Lemrac	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Subsidence risk	0.03	Depth to soft bedrock	0.32	Subsidence risk	0.03
				Subsidence risk	0.03		
75:							
Reef	45	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.21	Large stones	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Large stones	0.21

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75:							
Rizno	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated		Not rated	
76:							
Remorris	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
77:							
Remorris, strongly alkaline	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated		Not rated	
78:							
Remorris	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.92	Depth to hard bedrock	1.00	Depth to soft bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to hard bedrock	0.92
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Milok, extremely stony	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated		Not rated	
79:							
Remorris	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Peachsprings, strongly saline	20	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.37	Shrink-swell	0.42	Slope	1.00
		Slope	0.16	Slope	0.16	Shrink-swell	0.37

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
80:							
Retsabal	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
		Subsidence risk	0.02	Subsidence risk	0.02	Subsidence risk	0.02
Lemrac	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Sever subsidence risk	0.99	Depth to hard bedrock	1.00	Sever subsidence risk	0.99
		Depth to hard bedrock	0.97	Severe subsidence risk	0.99	Depth to hard bedrock	0.97
81:							
Rizno	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
						Slope	0.13
Mido, warm	30	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated		Not rated	
82:							
Rizno	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
						Slope	0.88
Rock outcrop	20	Not rated		Not rated		Not rated	
83:							
Rizno, warm	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated		Not rated	
84:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Arches	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
85:							
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated		Not rated	

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
85:							
Arches	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
						Slope	0.13
86:							
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated		Not rated	
Daklos	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Moclom	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.63	Slope	0.63	Slope	1.00
87:							
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated		Not rated	
Myton	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.13	Large stones	0.13	Large stones	0.13
Somorent	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
88:							
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated		Not rated	
Nalcase	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
89:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Needle	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
						Slope	0.88
90:							
Rock outcrop, Navajo sandstone	50	Not rated		Not rated		Not rated	
Mezzo family, dry	30	Not limited		Not limited		Very limited	
						Slope	1.00

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
90:							
Strell family	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
91:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Santrick	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.84	Depth to hard bedrock	1.00	Depth to hard bedrock	0.84
Nalcase	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
92:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Typic Torriorthents	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
93:							
Rosced family	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.99	Large stones	0.99	Large stones	0.99
Quezcan, sodic	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
				Depth to soft bedrock	0.95		
94:							
Saemo	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
95:							
Sandyranch	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Aquic Torrifluvents	15	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.99		
Water	15	Not rated		Not rated		Not rated	

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
96:							
Sandyranch	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.13
Mido	30	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Mident	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.99	Depth to hard bedrock	1.00	Depth to soft bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to hard bedrock	0.99
97:							
Sandyranch	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.13
Radnik	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Riverwash	15	Not rated		Not rated		Not rated	
98:							
Seeg	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Moffat	30	Not limited		Not limited		Very limited	
						Slope	1.00
Needle	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
						Slope	1.00
99:							
Simel, saline	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Catahoula, saline	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.03	Large stones	0.03	Large stones	0.03
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated		Not rated	
100:							
Simel	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100:							
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated		Not rated	
101:							
Simel	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Simel, steep	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
102:							
Skos	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Badland, Moenkopi Formation	35	Not rated		Not rated		Not rated	
103:							
Strych	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones	0.83	Large stones	0.83	Slope	1.00
						Large stones	0.83
104:							
Sulphurcreek	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
105:							
Tesihim	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft	1.00	Depth to soft	1.00
		Depth to soft bedrock	0.50	bedrock		bedrock	
				Slope	1.00	Slope	1.00
Rizno, steep	18	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated		Not rated	
Badland	10	Not rated		Not rated		Not rated	

Table 13.—Dwellings and Small Commercial Buildings—Continued

Map unit symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106:							
Tineoyler	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
107:							
Ustic Torriorthents	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Large stones	0.98	Slope	1.00	Large stones	0.99
		Depth to hard bedrock	0.95	Large stones	0.98	Depth to hard bedrock	0.95
Rock outcrop	30	Not rated		Not rated		Not rated	
Badland	25	Not rated		Not rated		Not rated	
108:							
Water	100	Not rated		Not rated		Not rated	

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Abra, moist	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.19	Dusty	0.19
		Frost action	0.50	Unstable excavation walls	0.01		
		Shrink-swell	0.50				
Sazi, moist	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to hard bedrock	0.92	Dusty	0.15
		Frost action	0.50	Dusty	0.15		
				Unstable excavation walls	0.01		
Strych, moist	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.13	Droughty	0.86
		Frost action	0.50	Large stones	0.09	Dusty	0.13
		Large stones	0.09	Unstable excavation walls	0.01		
2:							
Aquima	80	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.11	Dusty	0.11
		Frost action	0.50	Unstable excavation walls	0.01		
		Shrink-swell	0.50				
3:							
Arches	45	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Unstable excavation walls	0.01	Droughty	1.00
Mido	25	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	1.00	Droughty	0.34
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated		Not rated	
4:							
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated		Not rated	
Emco family	30	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Unstable excavation walls	0.51	Slope	1.00
		Slope	1.00	Dusty	0.37	Too clayey	1.00
						Dusty	0.37

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
5:							
Barx	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.16	Slope	0.16
		Slope	0.16	Dusty	0.04	Dusty	0.04
				Unstable excavation walls	0.01		
Remorris	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Low strength	1.00	Dusty	0.50	Droughty	0.82
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.50
		Shrink-swell	0.50				
6:							
Beclabito	55	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00			Sodium content	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	0.50
		Depth to hard bedrock	0.50	Unstable excavation walls	0.51	Dusty	0.38
			0.50	Dusty	0.38	Large stones content	0.32
Lybrook, saline-sodic	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Unstable excavation walls	0.51	Salinity	1.00
		Low strength	1.00	Dusty	0.50	Too clayey	1.00
				Too clayey	0.50	Sodium content	1.00
				Depth to soft bedrock	0.02	Droughty	0.87
7:							
Begay, moist	80	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.01	Dusty	0.01
		Frost action	0.50	Dusty	0.01		
8:							
Begay	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.09	Dusty	0.09
		Frost action	0.50	Unstable excavation walls	0.01		
9:							
Begay, moist	80	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.07	Dusty	0.07
		Frost action	0.50	Unstable excavation walls	0.01		
		Flooding	0.20				
10:							
Begay, saline	50	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.07	Dusty	0.07
		Frost action	0.50	Unstable excavation walls	0.01		

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
10:							
Querencia, saline-sodic	35	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Dusty	0.19	Sodium content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.19
11:							
Begay, saline-sodic	50	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.13	Dusty	0.13
		Frost action	0.50	Unstable excavation walls	0.01		
Begay, moist	25	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.07	Dusty	0.07
		Frost action	0.50	Unstable excavation walls	0.01		
Elias	20	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Dusty	0.29	Sodium content	1.00
		Frost action	0.50	Too clayey	0.02	Dusty	0.29
		Shrink-swell	0.50	Unstable excavation walls	0.01		
12:							
Begay	40	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Unstable excavation walls	0.01		
		Frost action	0.50				
Ignacio	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00			Droughty	0.99
		Depth to hard bedrock	0.74	Slope	1.00	Depth to bedrock	0.74
				Dusty	0.07	Dusty	0.07
		Frost action	0.50	Unstable excavation walls	0.01		
Retsabal	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Dusty	0.50	Dusty	0.50
		Frost action	0.50	Unstable excavation walls	0.01		
13:							
Begay, moist	65	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.04	Slope	0.04
		Frost action	0.50	Dusty	0.04	Dusty	0.04
		Slope	0.04	Unstable excavation walls	0.01		
Rizno, moist	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Low strength	1.00	Slope	0.16	Slope	0.16
		Frost action	0.50	Dusty	0.09	Dusty	0.09
		Slope	0.16	Unstable excavation walls	0.01	Large stones content	0.01

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14:							
Begay	60	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.16	Slope	0.16
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.01
		Slope	0.16	Dusty	0.01		
Strych	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.12	Droughty	0.99
		Frost action	0.50	Large stones	0.09	Dusty	0.12
		Large stones	0.09	Unstable excavation walls	0.04		
15:							
Bullpen	35	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Dusty	0.13	Large stones content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.13
		Shrink-swell	0.50			Gravel content	0.08
Daklos	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Droughty	1.00
		Low strength	1.00	Slope	0.84	Slope	0.84
		Slope	0.84	Unstable excavation walls	0.51	Dusty	0.12
		Frost action	0.50	Dusty	0.12	Large stones content	0.01
Puertecito	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Large stones	0.31	Droughty	1.00
		Frost action	0.50	Dusty	0.18	Dusty	0.18
		Large stones	0.31	Unstable excavation walls	0.01		
16:							
Calladito, saline-sodic	50	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	1.00	Droughty	0.98
Yarts, saline-sodic	35	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Unstable excavation walls	0.01		
		Frost action	0.50				
17:							
Catahoula	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Organic matter content	1.00	Droughty	0.31
		Frost action	0.50	Depth to hard bedrock	0.99	Gravel content	0.19
		Large stones	0.01	Dusty	0.04	Dusty	0.04
				Unstable excavation walls	0.01		

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17:							
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated		Not rated	
18:							
Chilton	55	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Dusty	0.16	Large stones content	0.46
		Frost action	0.50	Large stones	0.04	Droughty	0.20
		Large stones	0.04	Unstable excavation walls	0.01	Dusty	0.16
Begay	20	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.10	Dusty	0.10
		Frost action	0.50	Unstable excavation walls	0.01		
19:							
Chinchin	45	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.34	Depth to bedrock	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.34
		Shrink-swell	0.50			Large stones content	0.08
Badland, Chinle Formation	40	Not rated		Not rated		Not rated	
20:							
Chipeta, saline-sodic	65	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Shrink-swell	1.00			Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.50	Sodium content	1.00
				Unstable excavation walls	0.01	Dusty	0.50
Stent family	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00			Droughty	1.00
		Depth to hard bedrock	0.88	Slope	1.00	Depth to bedrock	0.89
		Frost action	0.50	Dusty	0.09	Gravel content	0.20
				Unstable excavation walls	0.01	Dusty	0.09
21:							
Daklos	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Large stones content	1.00
		Low strength	1.00	Slope	1.00	Droughty	1.00
		Slope	1.00	Dusty	0.02	Slope	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.02

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21:							
Lazear, dry	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Low strength	1.00	Dusty	0.31	Slope	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Gravel content	0.80
		Shrink-swell	0.50			Dusty	0.31
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated		Not rated	
22:							
Daklos	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Low strength	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00	Dusty	0.27	Large stones content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Slope	1.00
		Large stones	0.12	Large stones	0.01	Gravel content	0.15
Reef	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Low strength	1.00	Dusty	0.27	Droughty	0.99
		Frost action	0.50	Unstable excavation walls	0.01	Large stones content	0.88
		Large stones	0.01	Large stones	0.01	Dusty	0.27
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated		Not rated	
23:							
Daklos	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.15	Depth to bedrock	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.15
						Gravel content	0.08
Rizno	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.15	Depth to bedrock	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Gravel content	0.39
						Dusty	0.09
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated		Not rated	
24:							
Earlweed	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Unstable excavation walls	0.53	Droughty	0.01

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24:							
Anasazi	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Droughty	0.82
		Frost action	0.50	Unstable excavation walls	0.01	Depth to bedrock	0.54
25:							
Eslendo, saline	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.45	Salinity	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Droughty	1.00
		Shrink-swell	0.50			Dusty	0.45
Happle, saline-sodic	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Unstable excavation walls	0.01	Salinity	1.00
		Frost action	0.50			Droughty	1.00
						Gravel content	0.17
						Large stones content	0.03
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated		Not rated	
26:							
Foy family	50	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Large stones content	0.99
		Slope	0.63	Large stones	0.42	Slope	0.63
		Frost action	0.50	Dusty	0.02	Droughty	0.54
		Large stones	0.42	Unstable excavation walls	0.01	Dusty	0.02
Whitesage family	45	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Dusty	0.16	Dusty	0.16
		Frost action	0.50	Unstable excavation walls	0.01	Gravel content	0.03
		Shrink-swell	0.50				
27:							
Gladel	55	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Slope	0.16	Droughty	1.00
		Frost action	0.50	Dusty	0.04	Slope	0.16
		Slope	0.16	Unstable excavation walls	0.01	Dusty	0.04
Plumasano	35	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.04	Dusty	0.04
		Frost action	0.50	Slope	0.04	Slope	0.04
		Slope	0.04	Unstable excavation walls	0.01		

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28:							
Goblin	80	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.21	Dusty	0.21
		Frost action	0.50	Unstable excavation walls	0.01		
29:							
Goblin	50	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Unstable excavation walls	0.51	Slope	1.00
		Frost action	0.50	Dusty	0.50	Dusty	0.50
Clapper	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.88	Large stones content	1.00
		Large stones	0.05	Large stones	0.05	Droughty	0.07
				Dusty	0.04	Dusty	0.04
				Unstable excavation walls	0.01		
30:							
Goblin	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Dusty	0.50	Droughty	1.00
		Slope	0.37	Slope	0.37	Dusty	0.50
				Unstable excavation walls	0.01	Slope	0.37
Ivanpatch	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.27	Droughty	0.98
		Slope	0.04	Dusty	0.22	Dusty	0.22
		Subsidence risk	0.01	Slope	0.04	Slope	0.04
31:							
Hanksville, saline-sodic	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.50	Sodium content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Droughty	0.94
		Shrink-swell	0.50			Salinity	0.88
						Dusty	0.50
Chipeta, saline	30	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Unstable excavation walls	0.51	Droughty	1.00
		Low strength	1.00	Dusty	0.50	Salinity	0.88
		Slope	0.16	Slope	0.16	Dusty	0.50
						Slope	0.16

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
32:							
Hanksville, saline-sodic	50	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Depth to soft bedrock	0.86	Droughty	1.00
		Frost action	0.50			Sodium content	1.00
		Shrink-swell	0.50	Dusty	0.50	Depth to bedrock	0.87
				Unstable excavation walls	0.01	Dusty	0.50
Notal, saline-sodic	40	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Dusty	0.24	Sodium content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Droughty	0.80
		Shrink-swell	0.47			Dusty	0.24
33:							
Kydestea	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Large stones	0.58	Depth to bedrock	1.00
		Large stones	0.58	Dusty	0.06	Gravel content	0.26
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.06
Vessilla	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.12	Depth to bedrock	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Large stones content	0.20
						Dusty	0.12
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
34:							
Kydestea	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Low strength	1.00	Slope	0.37	Depth to bedrock	1.00
		Slope	1.00	Dusty	0.08	Gravel content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Slope	1.00
						Dusty	0.12
Vessilla	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Low strength	1.00	Slope	0.37	Depth to bedrock	1.00
		Frost action	0.50	Dusty	0.08	Slope	0.37
		Slope	0.37	Unstable excavation walls	0.01	Large stones content	0.26
						Dusty	0.08
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
35:							
Lavodnas	45	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.50	Dusty	0.50
		Frost action	0.50	Unstable excavation walls	0.01		
Retsabal	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.50	Droughty	1.00
				Unstable excavation walls	0.01	Dusty	0.50
36:							
Mathis, cool	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Unstable excavation walls	0.22	Droughty	0.98
		Large stones	0.11	Large stones	0.11	Large stones content	0.03
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated		Not rated	
37:							
Metuck	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.12	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Gravel content	0.73
						Large stones content	0.20
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated		Not rated	
Vessilla	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.10	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.10
						Gravel content	0.08
38:							
Mezzo family	80	Very limited		Very limited		Very limited	
		Low strength	1.00	Unstable excavation walls	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	0.51
39:							
Mido	65	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.56	Slope	0.16
		Slope	0.16	Slope	0.16	Droughty	0.09

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
39:							
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated		Not rated	
40:							
Mido	40	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	1.00	Droughty	0.92
		Slope	0.63	Slope	0.63	Slope	0.63
Strych	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.01	Droughty	0.86
		Frost action	0.50			Large stones content	0.05
Reef	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.02	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Large stones content	0.95
		Large stones	0.01			Dusty	0.02
41:							
Mikim	50	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.19	Dusty	0.19
		Frost action	0.50	Slope	0.16	Slope	0.16
		Shrink-swell	0.50	Unstable excavation walls	0.01		
		Slope	0.16				
Mivida, moist	40	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.11	Dusty	0.11
		Frost action	0.50	Unstable excavation walls	0.01		
42:							
Milok, cool	50	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Dusty	0.11	Carbonate content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.11
Clapper	40	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.12	Dusty	0.12
		Frost action	0.50	Unstable excavation walls	0.01	Droughty	0.01
		Shrink-swell	0.01				
43:							
Milok, steep	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.24	Dusty	0.24
		Frost action	0.50	Unstable excavation walls	0.01		
Strych	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.23	Droughty	0.34
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.23
		Large stones	0.01	Large stones	0.01	Large stones content	0.03

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44:							
Mivida	80	Somewhat limited Frost action	 0.50	Somewhat limited Unstable excavation walls	 0.01	Not limited	
45:							
Mivida	50	Very limited Low strength Frost action	 1.00 0.50	Somewhat limited Dusty Unstable excavation walls	 0.15 0.01	Somewhat limited Dusty	 0.15
Gish	15	Very limited Shrink-swell Low strength	 1.00 1.00	Somewhat limited Dusty Unstable excavation walls Too clayey	 0.48 0.09 0.01	Very limited Sodium content Dusty	 1.00 0.48
Cannonville	15	Very limited Shrink-swell Low strength Slope	 1.00 1.00 1.00	Very limited Slope Unstable excavation walls Dusty Depth to soft bedrock Too clayey	 1.00 0.51 0.50 0.42 0.01	Very limited Slope Sodium content Dusty Depth to bedrock Droughty	 1.00 1.00 0.50 0.42 0.22
46:							
Moab	60	Very limited Low strength Frost action Large stones Slope	 1.00 0.50 0.36 0.16	Somewhat limited Large stones Slope Dusty Unstable excavation walls	 0.36 0.16 0.08 0.01	Very limited Carbonate content Droughty Large stones content Slope Dusty	 1.00 0.93 0.26 0.16 0.08
Abra family	30	Very limited Low strength Frost action Shrink-swell	 1.00 0.50 0.31	Somewhat limited Depth to hard bedrock Dusty Unstable excavation walls	 0.77 0.21 0.01	Somewhat limited Dusty	 0.21
47:							
Moclom, warm	45	Very limited Depth to hard bedrock Flooding Slope	 1.00 0.20 0.16	Very limited Depth to hard bedrock Slope Unstable excavation walls	 1.00 0.16 0.01	Very limited Droughty Depth to bedrock Slope	 1.00 1.00 0.16
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated		Not rated	

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48:							
Moenkopie, warm	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Low strength	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00	Dusty	0.10	Slope	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Gravel content	1.00
						Dusty	0.10
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated		Not rated	
49:							
Moenkopie	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Dusty	0.08	Droughty	1.00
				Unstable excavation walls	0.01	Dusty	0.08
Rock outcrop	30	Not rated		Not rated		Not rated	
50:							
Molen family	50	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.35
		Depth to hard bedrock	0.35	Dusty	0.17	Dusty	0.17
				Unstable excavation walls	0.01		
Lazear	18	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Dusty	0.26	Droughty	0.99
				Unstable excavation walls	0.01	Dusty	0.26
						Gravel content	0.24
Gerst	15	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Dusty	0.31	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.31
		Shrink-swell	0.03			Large stones	0.03
51:							
Monue	55	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.13	Dusty	0.13
		Frost action	0.50	Unstable excavation walls	0.01		
Fruitland	20	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.02	Large stones content	0.26
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.02
52:							
Monue, saline-sodic	50	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.01	Dusty	0.01
		Frost action	0.50	Dusty	0.01		

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52:							
Myton, saline-sodic	20	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Dusty	0.04	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Gravel content	0.39
						Dusty	0.04
Uzona, saline-sodic	20	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.39	Dusty	0.39
		Shrink-swell	0.89	Too clayey	0.13		
		Frost action	0.50	Unstable excavation walls	0.07		
53:							
Monue	60	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.15	Dusty	0.15
		Frost action	0.50	Unstable excavation walls	0.01		
		Flooding	0.20				
Sheppard	25	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.50	Droughty	0.69
54:							
Mulford	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.42	Dusty	0.42
		Frost action	0.50	Unstable excavation walls	0.01		
		Shrink-swell	0.50				
		Flooding	0.40				
55:							
Mussentuchit	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.68
		Subsidence risk	0.10	Depth to soft bedrock	0.68	Dusty	0.50
				Dusty	0.50	Droughty	0.44
				Unstable excavation walls	0.01		
Goblin	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Dusty	0.50	Dusty	0.50
		Slope	0.16	Slope	0.16	Slope	0.16
				Unstable excavation walls	0.01		
Swell family	20	Somewhat limited		Somewhat limited		Somewhat limited	
		Subsidence risk	0.60	Dusty	0.01	Dusty	0.01
		Frost action	0.50	Unstable excavation walls	0.01		
56:							
Nepalto	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Droughty	1.00
				Unstable excavation walls	0.01	Slope	1.00
						Gravel content	0.99
						Large stones content	0.01

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57:							
Nizhoni	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Dusty	0.05	Dusty	0.05
		Frost action	0.50	Unstable excavation walls	0.01		
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated		Not rated	
58:							
Nizhoni	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.04	Dusty	0.04
		Frost action	0.50	Unstable excavation walls	0.01		
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated		Not rated	
59:							
Nizhoni	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Low strength	1.00	Slope	0.16	Slope	0.16
		Frost action	0.50	Unstable excavation walls	0.01		
		Slope	0.16				
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated		Not rated	
Pinepoint, dry	20	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Unstable excavation walls	0.99	Droughty	0.61
60:							
Notom	40	Very limited		Very limited		Very limited	
		Low strength	1.00	Unstable excavation walls	1.00	Droughty	1.00
		Flooding	0.40				
Begay, moist	20	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.03	Dusty	0.03
		Frost action	0.50	Unstable excavation walls	0.01		
Bowington	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.80		
		Low strength	1.00	Unstable excavation walls	0.33	Droughty	0.16

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61:							
Notom	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Large stones	1.00	Droughty	1.00
		Low strength	1.00	Unstable excavation walls	0.97	Flooding	0.60
		Large stones	1.00	Flooding	0.60	Large stones content	0.01
Aquic Torrifluvents	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Unstable excavation walls	0.99	Droughty	0.83
		Depth to saturated zone	0.06	Flooding	0.80	Depth to saturated zone	0.06
62:							
Parkwash	70	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Slope	1.00	Droughty	1.00
		Slope	1.00	Unstable excavation walls	0.01	Slope	1.00
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated		Not rated	
63:							
Pherson family	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Flooding	0.60	Flooding	0.60
		Slope	1.00	Large stones	0.14	Droughty	0.48
		Frost action	0.50	Unstable excavation walls	0.03		
		Large stones	0.14				
Sandyranch	25	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.37	Droughty	0.09
		Flooding	0.40				
Riverwash	20	Not rated		Not rated		Not rated	
64:							
Polychrome	50	Very limited		Very limited		Very limited	
		Large stones	1.00	Large stones	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Large stones content	1.00
		Low strength	1.00	Unstable excavation walls	0.86	Droughty	1.00
		Frost action	0.50	Depth to soft bedrock	0.32	Depth to bedrock	0.32
Badland, Chinle Formation	20	Not rated		Not rated		Not rated	
Cerropelon family	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.27	Large stones content	1.00
		Frost action	0.50	Depth to soft bedrock	0.26	Dusty	0.27
		Shrink-swell	0.04	Unstable excavation walls	0.01	Depth to bedrock	0.26

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
65:							
Querencia, saline-sodic	50	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Dusty	0.20	Sodium content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Droughty	0.75
		Shrink-swell	0.50			Dusty	0.20
Lybrook, saline-sodic	30	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Unstable excavation walls	0.68	Sodium content	1.00
		Slope	1.00			Droughty	0.87
				Dusty	0.50	Dusty	0.50
66:							
Radnik	45	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Low strength	1.00	Unstable excavation walls	0.01	Dusty	0.01
		Frost action	0.50				
				Dusty	0.01		
Kwakina	25	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Low strength	1.00	Unstable excavation walls	0.04	Droughty	0.44
Pherson family	15	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.01	Droughty	0.34
		Frost action	0.50				
		Flooding	0.20				
67:							
Radnik	50	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	0.01	Dusty	0.01
		Frost action	0.50				
				Dusty	0.01		
Notom	25	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Droughty	0.99
		Low strength	1.00	Unstable excavation walls	0.48	Flooding	0.60
Oxyaquic Torrifluvents	20	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Low strength	1.00	Depth to saturated zone	0.38	Droughty	0.57
		Slope	0.16	Slope	0.16	Slope	0.16
				Unstable excavation walls	0.14		
68:							
Razito	55	Somewhat limited		Very limited		Somewhat limited	
		Flooding	0.40	Unstable excavation walls	1.00	Droughty	0.92
						Too sandy	0.50
Riverwash	40	Not rated		Not rated		Not rated	

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69:							
Reef	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Unstable excavation walls	0.51	Droughty	1.00
		Frost action	0.50			Large stones content	0.32
				Dusty	0.18	Dusty	0.18
Retsabal	15	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.50	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.10	Dusty	0.50
						Salinity	0.13
Rock outcrop, Carmel Formation	10	Not rated		Not rated		Not rated	
70:							
Reef	70	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Large stones	1.00	Depth to bedrock	1.00
		Large stones	1.00	Dusty	0.15	Large stones content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.15
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
71:							
Reef	75	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Large stones	0.10	Droughty	1.00
		Frost action	0.50	Dusty	0.10	Carbonate content	1.00
		Large stones	0.10	Unstable excavation walls	0.01	Large stones content	0.88
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated		Not rated	
72:							
Reef	65	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones	0.98	Droughty	1.00
		Large stones	0.08	Dusty	0.10	Large stones content	1.00
				Unstable excavation walls	0.01	Dusty	0.24
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73:							
Reef	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Slope	0.37	Droughty	1.00
		Slope	1.00	Dusty	0.10	Gravel content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Slope	1.00
Rock outcrop, Kayenta Formation	40	Not rated		Not rated		Not rated	
74:							
Reef, warm	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Dusty	0.10	Droughty	1.00
				Unstable excavation walls	0.01	Gravel content	1.00
						Dusty	0.03
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated		Not rated	
Lemrac	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to soft bedrock	0.32	Depth to bedrock	0.32
		Frost action	0.50	Dusty	0.19	Dusty	0.19
			0.50	Unstable excavation walls	0.01		
75:							
Reef	45	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Dusty	0.21	Droughty	1.00
		Frost action	0.50	Large stones	0.21	Gravel content	0.97
		Large stones	0.21	Slope	0.04	Dusty	0.21
		Slope	0.04	Unstable excavation walls	0.01	Slope	0.04
Rizno	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Dusty	0.21	Droughty	1.00
		Frost action	0.50	Slope	0.04	Dusty	0.15
		Slope	0.04	Unstable excavation walls	0.01	Slope	0.04
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated		Not rated	
76:							
Remorris	85	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Dusty	0.10	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.10

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
77:							
Remorris, strongly alkaline	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.36	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Large stones content	0.79
						Dusty	0.36
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated		Not rated	
78:							
Remorris	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Slope	1.00	Droughty	1.00
		Depth to hard bedrock	0.92	Unstable excavation walls	1.00	Dusty	0.26
		Frost action	0.50	Dusty	0.26	Large stones content	0.20
Milok, extremely stony	25	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Slope	0.63	Dusty	0.15	Dusty	0.15
		Frost action	0.50	Unstable excavation walls	0.01		
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated		Not rated	
79:							
Remorris	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.33	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.33
		Shrink-swell	0.50			Gravel content	0.08
Peachsprings, strongly saline	20	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.25	Dusty	0.25
		Frost action	0.50	Slope	0.16	Slope	0.16
		Shrink-swell	0.37	Unstable excavation walls	0.01	Droughty	0.03
		Slope	0.16				
80:							
Retsabal	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Slope	1.00	Droughty	1.00
		Slope	1.00	Dusty	0.50	Slope	1.00
				Unstable excavation walls	0.01	Dusty	0.50

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
80:							
Lemrac	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00			Depth to bedrock	0.97
		Depth to hard bedrock	0.97	Slope	1.00	Droughty	0.58
				Dusty	0.50	Dusty	0.50
		Subsidence risk	0.26	Unstable excavation walls	0.01		
81:							
Rizno	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
						Depth to bedrock	1.00
		Low strength	1.00	Unstable excavation walls	0.01		
		Frost action	0.50				
Mido, warm	30	Not limited		Very limited		Somewhat limited	
				Unstable excavation walls	1.00	Droughty	0.92
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated		Not rated	
82:							
Rizno	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Gravel content	0.68
		Frost action	0.50	Unstable excavation walls	0.01		
Rock outcrop	20	Not rated		Not rated		Not rated	
83:							
Rizno, warm	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.04	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Gravel content	0.20
						Dusty	0.04
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated		Not rated	
84:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Arches	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
				Unstable excavation walls	0.01		
85:							
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated		Not rated	

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
85:							
Arches	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Unstable excavation walls	0.01	Droughty	1.00
86:							
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated		Not rated	
Daklos	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Low strength	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00	Unstable excavation walls	0.01	Slope	1.00
		Frost action	0.50			Gravel content	1.00
Moclom	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Low strength	1.00	Slope	0.63	Depth to bedrock	1.00
		Slope	0.63	Unstable excavation walls	0.01	Slope	0.63
						Too sandy	0.50
						Gravel content	0.46
87:							
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated		Not rated	
Myton	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Large stones	0.13	Gravel content	0.80
		Frost action	0.50	Unstable excavation walls	0.01	Droughty	0.69
		Large stones	0.13	Dusty	0.01	Large stones content	0.16
						Dusty	0.01
Somorent	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Low strength	1.00	Dusty	0.50	Droughty	0.89
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.50
		Shrink-swell	0.50				
88:							
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated		Not rated	
Nalcase	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	0.16	Slope	0.16	Droughty	1.00
				Unstable excavation walls	0.01	Slope	0.16

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Needle	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
				Unstable excavation walls	0.01	Too sandy	0.50
90:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Mezzo family, dry	30	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	1.00	Droughty	0.83
Strell family	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Unstable excavation walls	0.01		
91:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Santrick	30	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Droughty	0.98
		Depth to hard bedrock	0.84			Depth to bedrock	0.84
				Unstable excavation walls	0.25		
Nalcase	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Unstable excavation walls	0.01		
92:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Typic Torriorthents	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00			Droughty	1.00
				Slope	1.00	Depth to bedrock	1.00
				Dusty	0.05	Gravel content	0.92
				Unstable excavation walls	0.01	Dusty	0.05
93:							
Rosced family	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Large stones	0.99	Droughty	1.00
		Large stones	0.99	Unstable excavation walls	0.29	Dusty	0.05
		Frost action	0.50	Dusty	0.05		

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
93:							
Quezcan, sodic	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Depth to soft bedrock	0.95	Depth to bedrock	0.95
		Low strength	1.00	Unstable excavation walls	0.51	Dusty	0.18
				Dusty	0.18	Droughty	0.08
94:							
Saemo	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Dusty	0.14	Dusty	0.14
		Frost action	0.50	Unstable excavation walls	0.01	Large stones content	0.08
95:							
Sandyranch	40	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	1.00	Droughty	0.88
		Flooding	0.40				
Aquic Torrifluvents	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Slope	1.00	Depth to saturated zone	1.00
		Low strength	1.00	Depth to hard bedrock	0.99	Slope	1.00
		Slope	1.00	Flooding	0.80	Dusty	0.05
				Unstable excavation walls	0.28		
Water	15	Not rated		Not rated		Not rated	
96:							
Sandyranch	35	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Unstable excavation walls	1.00	Droughty	0.92
		Low strength	1.00	Flooding	0.60	Flooding	0.60
Mido	30	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	1.00	Droughty	0.92
Mident	15	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Low strength	1.00	Slope	1.00	Droughty	1.00
		Depth to hard bedrock	0.99	Unstable excavation walls	0.01		
97:							
Sandyranch	45	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Unstable excavation walls	1.00	Droughty	0.69
		Flooding	0.40				

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
97:							
Radnik	30	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Low strength	1.00	Dusty	0.05	Dusty	0.05
		Frost action	0.50	Unstable excavation walls	0.01		
Riverwash	15	Not rated		Not rated		Not rated	
98:							
Seeg	40	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.16	Droughty	0.60
		Frost action	0.50	Unstable excavation walls	0.01	Slope	0.16
		Slope	0.16				
Moffat	30	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Unstable excavation walls	0.01		
		Frost action	0.50				
Needle	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Low strength	1.00	Unstable excavation walls	0.01	Depth to bedrock	1.00
99:							
Simel, saline	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Salinity	1.00
		Low strength	1.00	Dusty	0.50	Droughty	0.99
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.50
Catahoula, saline	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Unstable excavation walls	0.40	Large stones content	1.00
		Frost action	0.50				
		Large stones	0.03	Large stones	0.03	Droughty	0.99
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated		Not rated	
100:							
Simel	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Unstable excavation walls	1.00	Depth to bedrock	1.00
		Frost action	0.50	Dusty	0.45	Dusty	0.45
						Large stones content	0.01
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated		Not rated	

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101:							
Simel	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Dusty	0.50	Too dense	1.00
				Unstable excavation walls	0.01	Dusty	0.50
Simel, steep	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.50	Large stones content	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Dusty	0.50
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
102:							
Skos	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Low strength	1.00	Dusty	0.50	Depth to bedrock	1.00
		Frost action	0.50	Unstable excavation walls	0.05	Dusty	0.50
						Gravel content	0.08
Badland, Moenkopi Formation	35	Not rated		Not rated		Not rated	
103:							
Strych	85	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Large stones	0.83	Droughty	1.00
		Large stones	0.83	Unstable excavation walls	0.23	Carbonate content	1.00
		Frost action	0.50			Large stones content	0.01
104:							
Sulphurcreek	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.30	Dusty	0.30
		Frost action	0.50	Unstable excavation walls	0.01		
		Flooding	0.40				
105:							
Tesihim	50	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Droughty	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Frost action	0.50	Dusty	0.02	Slope	1.00
				Unstable excavation walls	0.01	Dusty	0.02

Table 14.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map unit symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
105:							
Rizno, steep	18	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Droughty	1.00
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated		Not rated	
Badland	10	Not rated		Not rated		Not rated	
106:							
Tineoyler	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Dusty	0.20	Dusty	0.20
		Frost action	0.50	Unstable excavation walls	0.01		
		Flooding	0.40				
107:							
Ustic Torriorthents	45	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.98	Large stones	0.98	Depth to bedrock	0.95
		Depth to hard bedrock	0.95	Dusty	0.04	Large stones content	0.32
				Unstable excavation walls	0.01	Dusty	0.04
Rock outcrop	30	Not rated		Not rated		Not rated	
Badland	25	Not rated		Not rated		Not rated	
108:							
Water	100	Not rated		Not rated		Not rated	

Table 15.—Sewage Disposal

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1:					
Abra, moist	30	Very limited Slow water movement	1.00	Somewhat limited Seepage Slope	0.50 0.08
Sazi, moist	30	Somewhat limited Depth to bedrock	0.97	Very limited Seepage Depth to hard bedrock	1.00 0.92
Strych, moist	30	Somewhat limited Large stones	0.09	Very limited Seepage Slope Large stones	1.00 0.32 0.21
2:					
Aquima	80	Somewhat limited Slow water movement	0.50	Somewhat limited Seepage Slope	0.50 0.32
3:					
Arches	45	Very limited Depth to bedrock	1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 0.92 0.28
Mido	25	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 1.00
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated	
4:					
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated	
Emco family	30	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00
5:					
Barx	55	Somewhat limited Slope	0.16	Very limited Seepage Slope	1.00 1.00
Remorris	20	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
6:					
Beclabito	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Seepage	0.28
Lybrook, saline-sodic	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	1.00	Slope	1.00
		Slope	1.00		
7:					
Begay, moist	80	Not limited		Very limited	
				Seepage	1.00
				Slope	0.92
8:					
Begay	90	Not limited		Very limited	
				Seepage	1.00
				Slope	1.00
9:					
Begay, moist	80	Somewhat limited		Very limited	
		Flooding	0.20	Seepage	1.00
				Flooding	0.20
10:					
Begay, saline	50	Not limited		Very limited	
				Seepage	1.00
				Slope	0.32
Querencia, saline-sodic	35	Not limited		Very limited	
				Seepage	1.00
				Slope	0.32
11:					
Begay, saline-sodic	50	Somewhat limited		Very limited	
		Slow water movement	0.50	Seepage	1.00
Begay, moist	25	Not limited		Very limited	
				Seepage	1.00
Elias	20	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.50
12:					
Begay	40	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
				Slope	1.00
Ignacio	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
12:					
Retsabal	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
13:					
Begay, moist	65	Somewhat limited		Very limited	
		Slope	0.04	Seepage	1.00
				Slope	1.00
Rizno, moist	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Seepage	1.00
				Slope	1.00
14:					
Begay	60	Somewhat limited		Very limited	
		Slope	0.16	Seepage	1.00
				Slope	1.00
Strych	30	Somewhat limited		Very limited	
		Large stones	0.09	Seepage	1.00
				Large stones	0.71
				Slope	0.08
15:					
Bullpen	35	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	0.88
		Depth to bedrock	0.96	Seepage	0.50
				Large stones	0.13
Daklos	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.84	Depth to soft bedrock	1.00
		Large stones	0.11	Seepage	1.00
				Slope	1.00
				Large stones	0.84
Puertecito	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.31	Large stones	1.00
				Slope	0.68
				Seepage	0.28
16:					
Calladito, saline-sodic	50	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.32
Yarts, saline-sodic	35	Not limited		Very limited	
				Seepage	1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
17:					
Catahoula	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Seepage	1.00
		Large stones	0.01	Depth to hard bedrock	0.99
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated	
18:					
Chilton	55	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
		Large stones	0.04	Slope	1.00
				Large stones	1.00
Begay	20	Not limited		Very limited	
				Seepage	1.00
19:					
Chinchin	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Badland, Chinle Formation	40	Not rated		Not rated	
20:					
Chipeta, saline-sodic	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
Stent family	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
21:					
Daklos	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Seepage	1.00
				Slope	1.00
				Large stones	0.08
Lazear, dry	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated	

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
22:					
Daklos	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	0.12	Large stones	0.86
Reef	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	0.01	Seepage	1.00
				Large stones	0.34
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated	
23:					
Daklos	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
Rizno	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated	
24:					
Earlweed	60	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
				Slope	1.00
Anasazi	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
				Seepage	1.00
				Slope	0.68
25:					
Eslendo, saline	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
Happle, saline-sodic	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated	

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
26:					
Foy family	50	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Large stones	0.42	Large stones	1.00
				Seepage	1.00
Whitesage family	45	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.50
		Slope	1.00		
27:					
Gladel	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16		
				Slope	1.00
				Seepage	0.28
Plumasano	35	Somewhat limited		Very limited	
		Slope	0.04	Seepage	1.00
				Slope	1.00
28:					
Goblin	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
				Depth to soft bedrock	1.00
				Slope	1.00
29:					
Goblin	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00		
				Slope	1.00
Clapper	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.96	Seepage	1.00
		Large stones	0.05	Large stones	1.00
				Depth to hard bedrock	0.88
30:					
Goblin	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.37		
				Slope	1.00
Ivanpatch	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
		Slope	0.04		
31:					
Hanksville, saline-sodic	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Depth to soft bedrock	0.88
		Depth to bedrock	0.96		

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
31:					
Chipeta, saline-----	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.16	Slope	1.00
32:					
Hanksville, saline-sodic-------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Seepage	0.50
Notal, saline-sodic	40	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
		Depth to bedrock	0.25	Slope	0.32
33:					
Kydestea-----------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	0.58	Large stones	1.00
				Seepage	0.28
Vessilla-----------	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
Rock outcrop, Moenkopi Formation sandstone----------	15	Not rated		Not rated	
34:					
Kydestea-----------	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
Vessilla-----------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.37	Slope	1.00
				Seepage	0.28
Rock outcrop, Moenkopi Formation sandstone----------	15	Not rated		Not rated	
35:					
Lavodnas-----------	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	1.00
				Seepage	0.28

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
35:					
Retsabal	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
36:					
Mathis, cool	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones	0.11	Seepage	1.00
				Large stones	0.62
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated	
37:					
Metuck	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated	
Vessilla	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
38:					
Mezzo family	80	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	1.00		
39:					
Mido	65	Somewhat limited		Very limited	
		Slope	0.16	Slope	1.00
				Seepage	1.00
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated	
40:					
Mido	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	0.63	Slope	1.00
Strych	30	Not limited		Very limited	
				Seepage	1.00
				Slope	1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
40:					
Reef	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	0.01	Large stones	0.32
				Seepage	0.28
41:					
Mikim	50	Somewhat limited		Very limited	
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.96
		Slope	0.16	Seepage	0.50
Mivida, moist	40	Not limited		Very limited	
				Seepage	1.00
				Slope	0.68
42:					
Milok, cool	50	Not limited		Very limited	
				Seepage	1.00
				Slope	0.32
Clapper	40	Somewhat limited		Very limited	
		Slow water movement	0.50	Seepage	1.00
43:					
Milok, steep	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
Strych	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones	0.01	Seepage	1.00
44:					
Mivida	80	Not limited		Very limited	
				Seepage	1.00
				Slope	0.08
45:					
Mivida	50	Not limited		Very limited	
				Seepage	1.00
				Slope	0.32
Gish	15	Very limited		Not limited	
		Slow water movement	1.00		
Cannonville	15	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00		
46:					
Moab	60	Somewhat limited		Very limited	
		Large stones	0.36	Seepage	1.00
		Slope	0.16	Slope	1.00
				Large stones	0.99

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
46:					
Abra family	30	Somewhat limited		Very limited	
		Depth to bedrock	0.91	Seepage	1.00
		Slow water movement	0.50	Depth to hard bedrock	0.77
47:					
Moclom, warm	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Flooding	0.20		
		Slope	0.16	Slope	1.00
				Flooding	0.20
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated	
48:					
Moenkopie, warm	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
				Slope	1.00
				Seepage	0.28
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated	
49:					
Moenkopie	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
				Slope	1.00
Rock outcrop	30	Not rated		Not rated	
50:					
Molen family	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slow water movement	0.50		
				Seepage	1.00
				Slope	0.08
Lazear	18	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
				Slope	0.92
				Seepage	0.50
Gerst	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
				Slope	1.00
51:					
Monue	55	Not limited		Very limited	
				Seepage	1.00
Fruitland	20	Not limited		Very limited	
				Seepage	1.00
				Slope	0.08

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
52:					
Monue, saline-sodic	50	Not limited		Very limited	
				Seepage	1.00
Myton, saline-sodic	20	Not limited		Very limited	
				Seepage	1.00
Uzona, saline-sodic	20	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.50
53:					
Monue	60	Somewhat limited		Very limited	
		Flooding	0.20	Seepage	1.00
				Flooding	0.20
				Slope	0.08
Sheppard	25	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
54:					
Mulford	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.50
		Flooding	0.40	Flooding	0.40
55:					
Mussentuchit	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
				Depth to soft bedrock	1.00
				Seepage	1.00
				Slope	1.00
Goblin	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16		
				Depth to soft bedrock	1.00
				Slope	1.00
Swell family	20	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
				Slope	1.00
56:					
Nepalto	95	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
57:					
Nizhoni	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
				Slope	1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
57:					
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated	
58:					
Nizhoni	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated	
59:					
Nizhoni	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Seepage	1.00
				Slope	1.00
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated	
Pinepoint, dry	20	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.07		
60:					
Notom	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Flooding	0.40	Flooding	0.40
Begay, moist	20	Not limited		Very limited	
				Seepage	1.00
Bowington	10	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
61:					
Notom	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Large stones	1.00	Large stones	0.39
				Slope	0.08

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
61:					
Aquic Torrifluvents	20	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00
62:					
Parkwash	70	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	1.00		
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated	
63:					
Pherson family	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slope	1.00	Seepage	1.00
		Large stones	0.14	Slope	1.00
				Large stones	0.07
Sandyranch	25	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.92
		Flooding	0.40	Flooding	0.40
Riverwash	20	Not rated		Not rated	
64:					
Polychrome	50	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Large stones	1.00	Slope	1.00
		Depth to bedrock	1.00	Large stones	1.00
		Filtering capacity	1.00	Seepage	1.00
Badland, Chinle Formation	20	Not rated		Not rated	
Cerropelon family	15	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	0.50
65:					
Querencia, saline-sodic	50	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
				Slope	0.08
		Depth to bedrock	0.50	Depth to soft bedrock	0.08

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
65:					
Lybrook, saline-sodic	30	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00		
66:					
Radnik	45	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
				Seepage	1.00
Kwakina	25	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
				Seepage	1.00
Pherson family	15	Somewhat limited		Very limited	
		Flooding	0.20	Seepage	1.00
				Flooding	0.20
				Slope	0.08
67:					
Radnik	50	Not limited		Very limited	
				Seepage	1.00
				Slope	0.32
Notom	25	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
Oxyaquic Torrifluvents	20	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
		Depth to saturated zone	0.87	Depth to saturated zone	0.22
		Slope	0.16		
68:					
Razito	55	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Flooding	0.40	Flooding	0.40
Riverwash	40	Not rated		Not rated	
69:					
Reef	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
				Slope	1.00
				Seepage	1.00
Retsabal	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00		
				Slope	1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
69:					
Rock outcrop, Carmel Formation	10	Not rated		Not rated	
70:					
Reef	70	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	1.00	Large stones	1.00
				Seepage	0.28
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
71:					
Reef	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	0.10	Large stones	0.83
				Seepage	0.28
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated	
72:					
Reef	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	0.08	Large stones	0.78
				Seepage	0.39
Rock outcrop	30	Not rated		Not rated	
73:					
Reef	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop, Kayenta Formation	40	Not rated		Not rated	
74:					
Reef, warm	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated	

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
74:					
Lemrac	15	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
				Seepage	1.00
75:					
Reef	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.21	Slope	1.00
		Slope	0.04	Large stones	0.96
				Seepage	0.28
Rizno	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.04	Slope	1.00
				Seepage	0.28
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated	
76:					
Remorris	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
				Seepage	1.00
				Slope	0.32
77:					
Remorris, strongly alkaline	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated	
78:					
Remorris	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	1.00
				Seepage	0.50
Milok, extremely stony	25	Somewhat limited		Very limited	
		Depth to bedrock	0.95	Slope	1.00
		Slope	0.63	Seepage	1.00
				Depth to soft bedrock	0.86

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
78:					
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated	
79:					
Remorris	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
Peachsprings, strongly saline	20	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.16	Seepage	0.50
80:					
Retsabal	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
Lemrac	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
81:					
Rizno	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
				Seepage	1.00
				Slope	0.68
Mido, warm	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.92
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated	
82:					
Rizno	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
				Depth to soft bedrock	1.00
				Slope	1.00
Rock outcrop	20	Not rated		Not rated	
83:					
Rizno, warm	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
83:					
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated	
84:					
Rock outcrop	60	Not rated		Not rated	
Arches	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
				Slope	0.08
85:					
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated	
Arches	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
				Slope	0.68
86:					
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated	
Daklos	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
				Slope	1.00
Moclom	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.63		
				Slope	1.00
87:					
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated	
Myton	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones	0.13	Seepage	1.00
				Large stones	0.65
Somorent	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00		
				Slope	1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
88:					
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated	
Nalcase	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Slope	1.00
89:					
Rock outcrop	60	Not rated		Not rated	
Needle	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
				Slope	1.00
90:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Mezzo family, dry	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
Strell family	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	1.00		
91:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Santrick	30	Very limited		Very limited	
		Filtering capacity	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00
				Slope	0.32
Nalcase	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
92:					
Rock outcrop	60	Not rated		Not rated	
Typic Torriorthents	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
93:					
Rosced family	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Large stones	0.99	Large stones	1.00
Quezcan, sodic	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
94:					
Saemo	95	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
95:					
Sandyranch	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Flooding	0.40	Flooding	0.40
				Slope	0.32
Aquic Torrifluvents	15	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to hard bedrock	0.99
Water	15	Not rated		Not rated	
96:					
Sandyranch	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.68
Mido	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.92
Mident	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	1.00
				Seepage	0.28
97:					
Sandyranch	45	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.68
		Flooding	0.40	Flooding	0.40

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
97:					
Radnik	30	Very limited Flooding	1.00	Very limited Flooding Seepage	1.00 1.00
Riverwash	15	Not rated		Not rated	
98:					
Seeg	40	Somewhat limited Slope	0.16	Very limited Seepage Slope	1.00 1.00
Moffat	30	Not limited		Very limited Seepage Slope	1.00 1.00
Needle	25	Very limited Depth to bedrock	1.00	Very limited Depth to hard bedrock Slope	1.00 1.00
99:					
Simel, saline	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00
Catahoula, saline	25	Very limited Slope Filtering capacity Large stones	1.00 1.00 0.03	Very limited Slope Large stones Seepage	1.00 1.00 1.00
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated	
100:					
Simel	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated	
101:					
Simel	50	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope Seepage	1.00 1.00 1.00 0.28

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
101:					
Simel, steep	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	1.00
				Seepage	0.28
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
102:					
Skos	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Badland, Moenkopi Formation	35	Not rated		Not rated	
103:					
Strych	85	Somewhat limited		Very limited	
		Large stones	0.83	Seepage	1.00
				Slope	1.00
				Large stones	0.52
104:					
Sulphurcreek	90	Somewhat limited		Very limited	
		Slow water movement	0.50	Seepage	1.00
		Flooding	0.40	Flooding	0.40
105:					
Tesihim	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
Rizno, steep	18	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated	
Badland	10	Not rated		Not rated	
106:					
Tineoyler	90	Somewhat limited		Very limited	
		Flooding	0.40	Seepage	1.00
				Flooding	0.40
				Slope	0.08

Table 15.—Sewage Disposal—Continued

Map unit symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
107:					
Ustic Torriorthents	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Large stones	0.98	Seepage	1.00
				Slope	1.00
				Large stones	1.00
Rock outcro	30	Not rated		Not rated	
Badland	25	Not rated		Not rated	
108:					
Water	100	Not rated		Not rated	

Table 16.—Source of Gravel and Sand

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1:					
Abra, moist	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sazi, moist	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
Strych, moist	30	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.01
		Bottom layer	0.00	Thickest layer	0.05
2:					
Aquima	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
3:					
Arches	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.16
		Thickest layer	0.00	Thickest layer	0.96
Mido	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.18
		Thickest layer	0.00	Thickest layer	0.98
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated	
4:					
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated	
Emco family	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
5:					
Barx	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.09
Remorris	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
6:					
Beclabito	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lybrook, saline-sodic	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7:					
Begay, moist	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.10
8:					
Begay	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.06
9:					
Begay, moist	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.10
10:					
Begay, saline	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.10
Querencia, saline-sodic	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.05
11:					
Begay, saline-sodic	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.01
Begay, moist	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
Elias	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
12:					
Begay	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.11
Ignacio	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
Retsabal	15	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.33	Thickest layer	0.07

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
13:					
Begay, moist	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.10
Rizno, moist	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
14:					
Begay	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.10
Strych	30	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.05
		Bottom layer	0.40	Thickest layer	0.07
15:					
Bullpen	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.01
Daklos	35	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.05
Puertecito	20	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.01
16:					
Calladito, saline-sodic	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.20
		Thickest layer	0.00	Thickest layer	0.96
Yarts, saline-sodic	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.12
17:					
Catahoula	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.10
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated	
18:					
Chilton	55	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.02
Begay	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
19:					
Chinchin	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Badland, Chinle Formation	40	Not rated		Not rated	
20:					
Chipeta, saline-sodic	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Stent family	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
21:					
Daklos	40	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.14	Thickest layer	0.10
Lazear, dry	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated	
22:					
Daklos	60	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.04
		Bottom layer	0.00	Thickest layer	0.09
Reef	15	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated	
23:					
Daklos	40	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.03
Rizno	25	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.01
		Bottom layer	0.00	Thickest layer	0.06
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated	

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
24:					
Earlweed	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.50
Anasazi	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.11
25:					
Eslendo, saline	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Happle, saline-sodic	20	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.10
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated	
26:					
Foy family	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.09
Whitesage family	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
27:					
Gladel	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.08
Plumasano	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.09
28:					
Goblin	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.10
29:					
Goblin	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Clapper	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.10
30:					
Goblin	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
Ivanpatch	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.06
		Thickest layer	0.00	Thickest layer	0.38

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
31:					
Hanksville, saline-sodic	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Chipeta, saline	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
32:					
Hanksville, saline-sodic	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Notal, saline-sodic	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
33:					
Kydestea	50	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.07
Vessilla	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
34:					
Kydestea	40	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.03
Vessilla	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
35:					
Lavodnas	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Retsabal	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
36:					
Mathis, cool	70	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.20

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
36:					
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated	
37:					
Metuck	30	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.02
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated	
Vessilla	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.05
38:					
Mezzo family	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.13
		Thickest layer	0.00	Thickest layer	0.77
39:					
Mido	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.40
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated	
40:					
Mido	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.20
		Thickest layer	0.00	Thickest layer	0.99
Strych	30	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.09
		Bottom layer	0.45	Thickest layer	0.12
Reef	15	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.01
		Bottom layer	0.00	Thickest layer	0.09
41:					
Mikim	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mivida, moist	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
42:					
Milok, cool	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
Clapper	40	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.03

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
43:					
Milok, steep	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Strych	40	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.30	Thickest layer	0.00
44:					
Mivida	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.11
45:					
Mivida	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.05
Gish	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Cannonville	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
46:					
Moab	60	Fair		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.08	Thickest layer	0.06
Abra family	30	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.01
		Bottom layer	0.00	Thickest layer	0.01
47:					
Moclom, warm	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.10
		Thickest layer	0.00	Thickest layer	0.28
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated	
48:					
Moenkopie, warm	60	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.06
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated	
49:					
Moenkopie	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.07
Rock outcrop	30	Not rated		Not rated	

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
50:					
Molen family	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.01
Lazear	18	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Gerst	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
51:					
Monue	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
Fruitland	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.10
52:					
Monue, saline-sodic	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.07
Myton, saline-sodic	20	Fair		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.03	Thickest layer	0.10
Uzona, saline-sodic	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
53:					
Monue	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.08
Sheppard	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.31
54:					
Mulford	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
55:					
Mussentuchit	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.10
Goblin	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Swell family	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.10

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
56:					
Nepalto	95	Fair		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.38	Thickest layer	0.11
57:					
Nizhoni	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.07
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated	
58:					
Nizhoni	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.08
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated	
59:					
Nizhoni	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.32
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated	
Pinepoint, dry	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.70
60:					
Notom	40	Fair		Fair	
		Bottom layer	0.60	Bottom layer	0.18
		Thickest layer	0.65	Thickest layer	0.72
Begay, moist	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.09
Bowington	10	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.06
		Thickest layer	0.00	Thickest layer	0.40
61:					
Notom	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Aquic Torrifluvents	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.12
		Thickest layer	0.00	Thickest layer	0.52

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
62:					
Parkwash	70	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.23
		Thickest layer	0.00	Thickest layer	0.99
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated	
63:					
Pherson family	30	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.06	Thickest layer	0.15
Sandyranch	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.36
Riverwash	20	Not rated		Not rated	
64:					
Polychrome	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Badland, Chinle Formation	20	Not rated		Not rated	
Cerropelon family	15	Fair		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.13	Thickest layer	0.00
65:					
Querencia, saline-sodic	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lybrook, saline-sodic	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
66:					
Radnik	45	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.11
		Bottom layer	0.00	Bottom layer	0.11
Kwakina	25	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.12
		Bottom layer	0.00	Thickest layer	0.15
Pherson family	15	Fair		Fair	
		Bottom layer	0.05	Bottom layer	0.06
		Thickest layer	0.33	Thickest layer	0.12
67:					
Radnik	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.10

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
67:					
Notom	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.24
Oxyaquic Torrifluvents	20	Fair		Fair	
		Thickest layer	0.03	Bottom layer	0.02
		Bottom layer	0.03	Thickest layer	0.23
68:					
Razito	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.38
		Thickest layer	0.00	Thickest layer	0.90
Riverwash	40	Not rated		Not rated	
69:					
Reef	60	Fair		Fair	
		Thickest layer	0.06	Bottom layer	0.00
		Bottom layer	0.50	Thickest layer	0.01
Retsabal	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.22
Rock outcrop, Carmel Formation	10	Not rated		Not rated	
70:					
Reef	70	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	
71:					
Reef	75	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.01
		Bottom layer	0.00	Thickest layer	0.06
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated	
72:					
Reef	65	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop	30	Not rated		Not rated	
73:					
Reef	40	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.08
		Bottom layer	0.00	Thickest layer	0.15
Rock outcrop, Kayenta Formation	40	Not rated		Not rated	

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
74:					
Reef, warm	40	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.01
		Bottom layer	0.50	Thickest layer	0.09
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated	
Lemrac	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.08
75:					
Reef	45	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rizno	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated	
76:					
Remorris	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
77:					
Remorris, strongly alkaline	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated	
78:					
Remorris	40	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Milok, extremely stony	25	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.05
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated	

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
79:					
Remorris	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Peachsprings, strongly saline	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
80:					
Retsabal	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lemrac	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
81:					
Rizno	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.35
Mido, warm	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.18
		Thickest layer	0.00	Thickest layer	0.99
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated	
82:					
Rizno	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.11
Rock outcrop	20	Not rated		Not rated	
83:					
Rizno, warm	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.09
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated	
84:					
Rock outcrop	60	Not rated		Not rated	
Arches	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.25
		Thickest layer	0.00	Thickest layer	0.99
85:					
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated	

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
85:					
Arches	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.58
86:					
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated	
Daklos	25	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.04
		Bottom layer	0.00	Thickest layer	0.10
Moclom	20	Poor		Good	
		Thickest layer	0.00	Bottom layer	0.93
		Bottom layer	0.00		
87:					
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated	
Myton	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.10
Somorent	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
88:					
Rock outcrop, Navajo sandstone	60	Not rated		Not rated	
Nalcase	25	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.35
		Thickest layer	0.00		
89:					
Rock outcrop	60	Not rated		Not rated	
Needle	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.31
		Thickest layer	0.00	Thickest layer	0.90
90:					
Rock outcrop, Navajo sandstone	50	Not rated		Not rated	
Mezzo family, dry	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.27
		Thickest layer	0.00	Thickest layer	0.99
Strell family	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.63

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
91:					
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated	
Santrick	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.09
		Thickest layer	0.00	Thickest layer	0.22
Nalcase	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.21
92:					
Rock outcrop	60	Not rated		Not rated	
Typic Torriorthents	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.06
		Thickest layer	0.00	Thickest layer	0.08
93:					
Rosced family	60	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Quezcan, sodic	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
94:					
Saemo	95	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
95:					
Sandyranch	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.18
		Thickest layer	0.00	Thickest layer	0.97
Aquic Torrifluvents	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.10
		Thickest layer	0.00	Thickest layer	0.12
Water	15	Not rated		Not rated	
96:					
Sandyranch	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.44
		Thickest layer	0.00	Thickest layer	0.93
Mido	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.14
		Thickest layer	0.00	Thickest layer	0.90
Mident	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.50

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
97:					
Sandyranch	45	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.30
		Thickest layer	0.00		
Radnik	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.11
Riverwash	15	Not rated		Not rated	
98:					
Seeg	40	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.06
		Bottom layer	0.28	Thickest layer	0.11
Moffat	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.12
Needle	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.90
99:					
Simel, saline	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Catahoula, saline	25	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.10
		Bottom layer	0.15	Thickest layer	0.31
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated	
100:					
Simel	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated	
101:					
Simel	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Simel, steep	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated	

Table 16.—Source of Gravel and Sand—Continued

Map unit symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
102:					
Skos	60	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.75	Thickest layer	0.00
Badland, Moenkopi Formation	35	Not rated		Not rated	
103:					
Strych	85	Fair		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.15	Thickest layer	0.07
104:					
Sulphurcreek	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.04
105:					
Tesihim	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.10
Rizno, steep	18	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.10
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated	
Badland	10	Not rated		Not rated	
106:					
Tineoyler	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.09
107:					
Ustic Torriorthents	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.07
Rock outcrop	30	Not rated		Not rated	
Badland	25	Not rated		Not rated	
108:					
Water	100	Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Abra, moist	30	Fair		Poor		Fair	
		Carbonate content	0.32	Low strength	0.00	Carbonate content	0.94
		Low content of organic matter	0.50	Shrink-swell	0.87	Rock fragments	0.97
		Water erosion	0.99	Dusty	0.94		
Sazi, moist	30	Fair		Poor		Fair	
		Low content of organic matter	0.50	Low strength	0.00	Exchange capacity	0.98
		Water erosion	0.68	Depth to bedrock	0.08		
		Droughty	0.96	Dusty	0.96		
Strych, moist	30	Poor		Poor		Poor	
		Stone content	0.00	Low strength	0.00	Rock fragments	0.00
		Carbonate content	0.32	Stones	0.00	Hard to reclaim (rock fragments)	0.01
		Low content of organic matter	0.50	Dusty	0.99	Carbonate content	0.84
2:							
Aquima	80	Poor		Poor		Good	
		Too alkaline	0.00	Low strength	0.00		
		Low content of organic matter	0.50	Shrink-swell	0.87		
				Dusty	0.99		
3:							
Arches	45	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Wind erosion	0.00	Low strength	0.00	Too sandy	0.00
		Droughty	0.00			Exchange capacity	0.11
Mido	25	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.35
		Low content of organic matter	0.00				
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated		Not rated	
4:							
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated		Not rated	
Emco family	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Salinity	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Too clayey	0.00	Slope	0.00	Too clayey	0.00

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
5:							
Barx	55	Poor		Good		Fair	
		Low content of organic matter	0.00			Slope	0.84
		Carbonate content	0.92			Exchange capacity	0.96
Remorris	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.88	Low strength	0.00	Exchange capacity	0.86
6:							
Beclabito	55	Poor		Poor		Poor	
		Sodium content	0.00	Low strength	0.00	Hard to reclaim (rock fragments)	0.00
		Too alkaline	0.00	Depth to bedrock	0.00		
		Droughty	0.13	Slope	0.00	Slope	0.00
						Rock fragments	0.41
Lybrook, saline-sodic	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Salinity	0.00
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Sodium content	0.00	Slope	0.00	Too clayey	0.00
7:							
Begay, moist	80	Fair		Poor		Fair	
		Low content of organic matter	0.50	Low strength	0.00	Exchange capacity	0.91
8:							
Begay	90	Poor		Poor		Good	
		Low content of organic matter	0.00	Low strength	0.00		
9:							
Begay, moist	80	Fair		Poor		Fair	
		Low content of organic matter	0.50	Low strength	0.00	Exchange capacity	0.97
		Water erosion	0.68				
10:							
Begay, saline	50	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.98
Querencia, saline-sodic	35	Poor		Poor		Poor	
		Sodium content	0.00	Low strength	0.00	Sodium content	0.00
		Low content of organic matter	0.00	Dusty	0.94	Salinity	0.88
		Too alkaline	0.00			Exchange capacity	0.99
11:							
Begay, saline-sodic	50	Poor		Poor		Good	
		Too alkaline	0.00	Low strength	0.00		
		Salinity	0.03	Dusty	0.99		
		Low content of organic matter	0.50				

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
11:							
Begay, moist	25	Fair		Poor		Fair	
		Salinity	0.13	Low strength	0.00	Exchange capacity	0.99
		Low content of organic matter	0.50				
		Water erosion	0.90				
Elias	20	Poor		Poor		Poor	
		Too alkaline	0.00	Low strength	0.00	Sodium content	0.00
		Sodium content	0.00	Dusty	0.87	Salinity	0.50
		Salinity	0.13	Shrink-swell	0.87		
12:							
Begay	40	Poor		Poor		Poor	
		Low content of organic matter	0.00	Low strength	0.00	Slope	0.00
		Too sandy	0.86	Slope	0.50	Too sandy	0.86
		Water erosion	0.90			Exchange capacity	0.87
Ignacio	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.26	Low strength	0.00	Depth to bedrock	0.26
		Low content of organic matter	0.50	Slope	0.00	Exchange capacity	0.56
Retsabal	15	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.00	Slope	0.50	Slope	0.00
13:							
Begay, moist	65	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.91
		Water erosion	0.90			Slope	0.96
Rizno, moist	15	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Exchange capacity	0.60
		Low content of organic matter	0.00			Slope	0.84
14:							
Begay	60	Fair		Poor		Fair	
		Low content of organic matter	0.50	Low strength	0.00	Hard to reclaim (rock fragments)	0.60
		Stone content	0.93			Slope	0.84
		Water erosion	0.99			Exchange capacity	0.99
Strych	30	Poor		Poor		Poor	
		Droughty	0.00	Low strength	0.00	Rock fragments	0.00
		Stone content	0.43	Stones	0.38	Hard to reclaim (rock fragments)	0.00
		Low content of organic matter	0.50	Cobble content	0.90	Exchange capacity	0.60
15:							
Bullpen	35	Fair		Poor		Poor	
		Low content of organic matter	0.50	Low strength	0.00	Slope	0.00
		Too clayey	0.98	Slope	0.00	Too clayey	0.65
				Depth to bedrock	0.12	Rock fragments	0.76

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
15:							
Daklos	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Cobble content	0.09	Slope	0.16
Puertecito	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Exchange capacity	0.40
		Stone content	0.00	Stones	0.00	Rock fragments	0.50
16:							
Calladito, saline-sodic	50	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Salinity	0.00
		Wind erosion	0.00			Too sandy	0.00
		Low content of organic matter	0.00			Sodium content	0.03
Yarts, saline-sodic	35	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Too sandy	0.73
		Too alkaline	0.00			Exchange capacity	0.73
		Too sandy	0.73				
17:							
Catahoula	40	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.02	Low strength	0.00	Rock fragments	0.28
		Low content of organic matter	0.50	Stones	0.00	Hard to reclaim (rock fragments)	0.32
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated		Not rated	
18:							
Chilton	55	Poor		Poor		Poor	
		Low content of organic matter	0.00	Low strength	0.00	Hard to reclaim (rock fragments)	0.00
		Stone content	0.47	Stones	0.01	Slope	0.00
		Droughty	0.90	Slope	0.50	Rock fragments	0.03
Begay	20	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.98
19:							
Chinchin	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.88	Low strength	0.00	Exchange capacity	0.56
Badland, Chinle Formation	40	Not rated		Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20:							
Chipeta, saline-sodic	65	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Sodium content	0.00	Low strength	0.00	Sodium content	0.00
Stent family	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Stone content	0.00	Slope	0.00	Rock fragments	0.01
		Depth to bedrock	0.12	Low strength	0.00	Depth to bedrock	0.12
21:							
Daklos	40	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.00	Low strength	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
Lazear, dry	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Too alkaline	0.00	Low strength	0.00	Exchange capacity	0.58
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated		Not rated	
22:							
Daklos	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.00	Cobble content	0.08	Slope	0.00
Reef	15	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.00	Low strength	0.00	Depth to bedrock	0.00
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated		Not rated	
23:							
Daklos	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
				High gypsum content	0.00	Rock fragments	0.00
Rizno	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
				Slope	0.18	Rock fragments	0.00
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24:							
Earlweed	60	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.32	Too sandy	0.00
		Wind erosion	0.00			Slope	0.00
		Low content of organic matter	0.08			Exchange capacity	0.81
Anasazi	30	Poor		Poor		Fair	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.46
		Low content of organic matter	0.08			Exchange capacity	0.76
		Depth to bedrock	0.46			Too sandy	0.89
25:							
Eslendo, saline	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Salinity	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.00	Low strength	0.00	Slope	0.00
Happle, saline-sodic	20	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Salinity	0.00
		Low content of organic matter	0.00	Low strength	0.00	Slope	0.00
		Too alkaline	0.00	Stones	0.92	Rock fragments	0.02
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated		Not rated	
26:							
Foy family	50	Poor		Poor		Poor	
		Stone content	0.00	Low strength	0.00	Rock fragments	0.00
		Carbonate content	0.21	Stones	0.00	Hard to reclaim (rock fragments)	0.21
		Droughty	0.42	Cobble content	0.99	Slope	0.37
Whitesage family	45	Poor		Poor		Poor	
		Too alkaline	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.50	Slope	0.82	Rock fragments	0.88
		Carbonate content	0.97	Shrink-swell	0.87		
27:							
Gladel	55	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Exchange capacity	0.37
						Slope	0.84
Plumasano	35	Good		Poor		Fair	
				Low strength	0.00	Exchange capacity	0.91
						Slope	0.96
28:							
Goblin	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.00	Dusty	0.82	Exchange capacity	0.27

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
29:							
Goblin	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Too alkaline	0.00	Low strength	0.00	Exchange capacity	0.08
Clapper	30	Fair		Poor		Poor	
		Droughty	0.29	Slope	0.00	Slope	0.00
		Low content of organic matter	0.32	Depth to bedrock	0.12	Rock fragments	0.00
				Cobble content	0.43	Exchange capacity	0.59
30:							
Goblin	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Dusty	0.66	Exchange capacity	0.21
		Low content of organic matter	0.13			Sodium content	0.61
Ivanpatch	30	Poor		Poor		Poor	
		Wind erosion	0.00	Low strength	0.00	Salinity	0.00
		Low content of organic matter	0.00	Dusty	0.75	Too sandy	0.02
		Too sandy	0.02	Moderate gypsum content	0.99	Exchange capacity	0.69
31:							
Hanksville, saline-sodic	60	Poor		Poor		Poor	
		Droughty	0.00	Low strength	0.00	Salinity	0.00
		Salinity	0.00	Depth to bedrock	0.12	Slope	0.00
		Sodium content	0.00	Dusty	0.59	Sodium content	0.22
Chipeta, saline	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Salinity	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.00	Shrink-swell	0.13	Too clayey	0.50
32:							
Hanksville, saline-sodic	50	Poor		Poor		Poor	
		Droughty	0.00	Low strength	0.00	Salinity	0.00
		Salinity	0.00	Depth to bedrock	0.00	Sodium content	0.00
		Sodium content	0.00	Dusty	0.59	Depth to bedrock	0.14
Notal, saline-sodic	40	Poor		Poor		Poor	
		Salinity	0.00	Low strength	0.00	Salinity	0.00
		Sodium content	0.00	Dusty	0.73	Sodium content	0.00
		Too alkaline	0.00	Shrink-swell	0.88	Exchange capacity	0.94
33:							
Kydestea	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Stone content	0.00	High gypsum content	0.00	Exchange capacity	0.28
Vessilla	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.50	Slope	0.00	Exchange capacity	0.27

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
33:							
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
34:							
Kydestea	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
						Slope	0.00
Vessilla	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Exchange capacity	0.08
		Stone content	0.02	Stones	0.02	Slope	0.63
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
35:							
Lavodnas	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.00	Slope	0.00	Exchange capacity	0.24
Retsabal	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.00	Low strength	0.00	Slope	0.00
				Dusty	0.71	Exchange capacity	0.08
		Depth to bedrock	0.00				
36:							
Mathis, cool	70	Poor		Poor		Poor	
		Low content of organic matter	0.00	Low strength	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Droughty	0.06	Stones	0.29	Hard to reclaim (rock fragments)	0.00
		Stone content	0.30				
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated		Not rated	
37:							
Metuck	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Carbonate content	0.99	Low strength	0.00	Rock fragments	0.00
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated		Not rated	
Vessilla	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Carbonate content	0.99	High gypsum content	0.00	Rock fragments	0.16

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
38:							
Mezzo family	80	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00	Slope	0.50	Slope	0.00
		Low content of organic matter	0.50			Exchange capacity	0.49
39:							
Mido	65	Poor		Poor		Fair	
		Wind erosion	0.00	Low strength	0.00	Too sandy	0.01
		Low content of organic matter	0.00			Exchange capacity	0.62
		Too sandy	0.01			Slope	0.84
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated		Not rated	
40:							
Mido	40	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.15
		Low content of organic matter	0.00			Slope	0.37
Strych	30	Poor		Poor		Poor	
		Low content of organic matter	0.00	Low strength	0.00	Rock fragments	0.00
		Droughty	0.29			Hard to reclaim (rock fragments)	0.00
		Carbonate content	0.32			Exchange capacity	0.62
Reef	15	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.00	Low strength	0.00	Slope	0.00
41:							
Mikim	50	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Slope	0.84
				Depth to bedrock	0.04	Exchange capacity	0.99
		Too alkaline	0.00	Shrink-swell	0.87		
		Water erosion	0.37				
Mivida, moist	40	Fair		Poor		Good	
		Low content of organic matter	0.50	Low strength	0.00		
				Dusty	0.99		
		Water erosion	0.90				
42:							
Milok, cool	50	Poor		Poor		Fair	
		Carbonate content	0.00	Low strength	0.00	Carbonate content	0.22
		Low content of organic matter	0.50	Dusty	0.99	Rock fragments	0.95
						Exchange capacity	0.98
Clapper	40	Fair		Poor		Poor	
		Low content of organic matter	0.50	Low strength	0.00	Rock fragments	0.00
				Shrink-swell	0.97	Hard to reclaim (rock fragments)	0.03
		Carbonate content	0.99	Dusty	0.99		
						Exchange capacity	0.95

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43:							
Milok, steep	40	Fair		Poor		Poor	
		Low content of organic matter	0.50	Low strength	0.00	Slope	0.00
		Carbonate content	0.92	Dusty	0.90	Rock fragments	0.73
		Water erosion	0.99	Slope	0.92	Exchange capacity	0.98
Strych	40	Fair		Poor		Poor	
		Droughty	0.44	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Stone content	0.72	Stones	0.87	Hard to reclaim (rock fragments)	0.00
44:							
Mivida	80	Poor		Good		Fair	
		Wind erosion	0.00			Exchange capacity	0.82
		Too alkaline	0.00			Too sandy	0.98
		Low content of organic matter	0.13				
45:							
Mivida	50	Poor		Poor		Good	
		Too alkaline	0.00	Low strength	0.00		
		Carbonate content	0.08	Dusty	0.97		
		Low content of organic matter	0.50				
Gish	15	Poor		Poor		Poor	
		Salinity	0.00	Low strength	0.00	Sodium content	0.00
		Sodium content	0.00	Shrink-swell	0.25	Salinity	0.00
		Too alkaline	0.00	Dusty	0.72	Too clayey	0.30
Cannonville	15	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Salinity	0.00
		Sodium content	0.00	Depth to bedrock	0.00	Too clayey	0.00
		Low content of organic matter	0.00	Shrink-swell	0.13	Sodium content	0.00
46:							
Moab	60	Poor		Poor		Poor	
		Carbonate content	0.00	Low strength	0.00	Rock fragments	0.00
		Stone content	0.00	Stones	0.00	Hard to reclaim (rock fragments)	0.26
		Droughty	0.38			Carbonate content	0.41
Abra family	30	Poor		Poor		Fair	
		Too alkaline	0.00	Low strength	0.00	Carbonate content	0.99
		Low content of organic matter	0.50	Depth to bedrock	0.23		
		Carbonate content	0.92	Dusty	0.92		
47:							
Moclom, warm	45	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00			Too sandy	0.11
		Depth to bedrock	0.00			Exchange capacity	0.17
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48:							
Moenkopie, warm	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.00	Dusty	0.81	Rock fragments	0.23
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated		Not rated	
49:							
Moenkopie	60	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	High gypsum content	0.00	Rock fragments	0.07
		Depth to bedrock	0.00			Exchange capacity	0.25
				Dusty	0.84		
Rock outcrop	30	Not rated		Not rated		Not rated	
50:							
Molen family	50	Poor		Poor		Fair	
		Too alkaline	0.00	Depth to bedrock	0.00	Salinity	0.50
		Low content of organic matter	0.25	Dusty	0.97	Depth to bedrock	0.65
		Droughty	0.42			Exchange capacity	0.92
Lazear	18	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Dusty	0.90	Rock fragments	0.35
		Low content of organic matter	0.88			Exchange capacity	0.61
Gerst	15	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Rock fragments	0.57
		Low content of organic matter	0.50	Dusty	0.87	Exchange capacity	0.61
51:							
Monue	55	Fair		Poor		Poor	
		Low content of organic matter	0.50	Low strength	0.00	Salinity	0.00
				Dusty	0.79	Exchange capacity	0.98
Fruitland	20	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.93
				Dusty	0.84	Rock fragments	0.96
52:							
Monue, saline-sodic	50	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.99
		Too alkaline	0.00	Dusty	0.85		
		Salinity	0.00				
Myton, saline-sodic	20	Poor		Poor		Poor	
		Low content of organic matter	0.00	Low strength	0.00	Rock fragments	0.00
		Too alkaline	0.00	Dusty	0.83	Exchange capacity	0.60
		Droughty	0.84			Too sandy	0.98

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52:							
Uzona, saline-sodic	20	Poor		Poor		Fair	
		Salinity	0.00	Low strength	0.00	Salinity	0.88
		Low content of organic matter	0.00	Shrink-swell	0.44		
				Dusty	0.65		
		Too alkaline	0.00				
53:							
Monue	60	Fair		Poor		Fair	
		Low content of organic matter	0.50	Low strength	0.00	Exchange capacity	0.96
				Dusty			
		Water erosion	0.68		0.77		
Sheppard	25	Poor		Poor		Fair	
		Wind erosion	0.00	Low strength	0.00	Too sandy	0.05
		Low content of organic matter	0.00	Dusty	0.88	Exchange capacity	0.50
		Too sandy	0.05				
54:							
Mulford	90	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Hard to reclaim (rock fragments)	0.74
				Dusty	0.77		
		Water erosion	0.90	Shrink-swell	0.87	Rock fragments	0.99
55:							
Mussentuchit	45	Fair		Poor		Poor	
		Droughty	0.01	Depth to bedrock	0.00	Hard to reclaim (rock fragments)	0.00
		Low content of organic matter	0.04	Slope	0.50		
				Dusty	0.64	Slope	0.00
		Depth to bedrock	0.32			Depth to bedrock	0.32
Goblin	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	High gypsum content	0.00	Exchange capacity	0.16
		Low content of organic matter	0.13			Slope	0.84
				Dusty	0.64		
Swell family	20	Fair		Fair		Fair	
		Water erosion	0.06	Moderate gypsum content	0.84	Exchange capacity	0.64
		Low content of organic matter	0.13			Carbonate content	0.99
				Dusty	0.95		
		Salinity	0.72				
56:							
Nepalto	95	Fair		Fair		Poor	
		Droughty	0.07	Stones	0.80	Rock fragments	0.00
		Too sandy	0.26	Dusty	0.91	Hard to reclaim (rock fragments)	0.00
		Low content of organic matter	0.50	Slope	0.98		
						Slope	0.00
57:							
Nizhoni	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.50	High gypsum content	0.00	Exchange capacity	0.35

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57:							
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated		Not rated	
58:							
Nizhoni	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.00	Slope	0.00	Exchange capacity	0.05
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated		Not rated	
59:							
Nizhoni	40	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00	Too sandy	0.07
		Depth to bedrock	0.00			Exchange capacity	0.31
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated		Not rated	
Pinepoint, dry	20	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00	Slope	0.50	Slope	0.00
		Low content of organic matter	0.50			Exchange capacity	0.56
60:							
Notom	40	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00			Hard to reclaim (rock fragments)	0.00
		Low content of organic matter	0.00			Rock fragments	0.00
Begay, moist	20	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.99
		Water erosion	0.90				
Bowington	10	Poor		Poor		Poor	
		Wind erosion	0.00	Wetness	0.00	Wetness	0.00
		Low content of organic matter	0.00	Low strength	0.00	Too sandy	0.01
		Too sandy	0.01			Exchange capacity	0.60
61:							
Notom	50	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00	Stones	0.00	Hard to reclaim (rock fragments)	0.00
		Stone content	0.00	Cobble content	0.96	Exchange capacity	0.18

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61:							
Aquic Torrifluvents	20	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00	Slope	0.50	Hard to reclaim (rock fragments)	0.00
		Low content of organic matter	0.00	Wetness	0.71	Slope	0.00
62:							
Parkwash	70	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00	Too sandy	0.00
		Depth to bedrock	0.00	Slope	0.98	Slope	0.00
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated		Not rated	
63:							
Pherson family	30	Poor		Poor		Poor	
		Low content of organic matter	0.00	Low strength	0.00	Rock fragments	0.00
		Droughty	0.09	Slope	0.00	Hard to reclaim (rock fragments)	0.00
		Too sandy	0.74	Cobble content	0.42	Slope	0.00
Sandyranch	25	Poor		Poor		Fair	
		Wind erosion	0.00	Low strength	0.00	Too sandy	0.04
		Low content of organic matter	0.00			Exchange capacity	0.57
		Too sandy	0.04				
Riverwash	20	Not rated		Not rated		Not rated	
64:							
Polychrome	50	Poor		Poor		Poor	
		Wind erosion	0.00	Low strength	0.00	Rock fragments	0.00
		Stone content	0.00	Stones	0.00	Slope	0.00
		Droughty	0.00	Depth to bedrock	0.00	Exchange capacity	0.18
Badland, Chinle Formation	20	Not rated		Not rated		Not rated	
Cerropelon family	15	Fair		Poor		Poor	
		Droughty	0.37	Low strength	0.00	Rock fragments	0.00
		Depth to bedrock	0.74	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.00	Depth to bedrock	0.74
65:							
Querencia, saline-sodic	50	Poor		Poor		Poor	
		Salinity	0.00	Low strength	0.00	Salinity	0.00
		Sodium content	0.00	Shrink-swell	0.87	Sodium content	0.00
		Low content of organic matter	0.00	Depth to bedrock	0.92		
Lybrook, saline-sodic	30	Poor		Poor		Poor	
		Salinity	0.00	Low strength	0.00	Salinity	0.00
		Droughty	0.00	Depth to bedrock	0.00	Sodium content	0.00
		Sodium content	0.00	Slope	0.02	Slope	0.00

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66:							
Radnik	45	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.90
		Water erosion	0.90				
Kwakina	25	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Too sandy	0.29
		Too sandy	0.29			Exchange capacity	0.63
		Water erosion	0.68				
Pherson family	15	Poor		Poor		Poor	
		Low content of organic matter	0.00	Low strength	0.00	Rock fragments	0.00
		Water erosion	0.68			Hard to reclaim (rock fragments)	0.41
		Too sandy	0.80			Exchange capacity	0.44
67:							
Radnik	50	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.89
Notom	25	Poor		Poor		Poor	
		Wind erosion	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.00	Cobble content	0.74	Hard to reclaim (rock fragments)	0.00
		Droughty	0.11			Too sandy	0.17
Oxyaquic Torrifluvents	20	Poor		Poor		Poor	
		Wind erosion	0.00	Low strength	0.00	Hard to reclaim (rock fragments)	0.00
		Low content of organic matter	0.00			Too sandy	0.12
		Droughty	0.12			Exchange capacity	0.31
68:							
Razito	55	Poor		Fair		Poor	
		Too sandy	0.00	Dusty	0.91	Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.39
		Low content of organic matter	0.08				
Riverwash	40	Not rated		Not rated		Not rated	
69:							
Reef	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.50	Slope	0.32	Slope	0.00
Retsabal	15	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Exchange capacity	0.03
Rock outcrop, Carmel Formation	10	Not rated		Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70:							
Reef	70	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Stone content	0.00	Slope	0.00	Rock fragments	0.00
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
71:							
Reef	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.00	Low strength	0.00	Rock fragments	0.00
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated		Not rated	
72:							
Reef	65	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Cobble content	0.92	Cobble content	0.13	Slope	0.00
Rock outcrop	30	Not rated		Not rated		Not rated	
73:							
Reef	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.00	Slope	0.50	Slope	0.00
Rock outcrop, Kayenta Formation	40	Not rated		Not rated		Not rated	
74:							
Reef, warm	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.50	Depth to bedrock	0.00
		Low content of organic matter	0.00			Slope	0.00
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated		Not rated	
Lemrac	15	Poor		Poor		Poor	
		Low content of organic matter	0.00	Slope	0.00	Slope	0.00
		Droughty	0.31	Low strength	0.00	Exchange capacity	0.44
		Depth to bedrock	0.68	Depth to bedrock	0.00	Depth to bedrock	0.68
75:							
Reef	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Rock fragments	0.06
		Low content of organic matter	0.00	High gypsum content	0.00	Exchange capacity	0.18

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75:							
Rizno	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Rock fragments	0.13
		Low content of organic matter	0.00	Dusty	0.97	Exchange capacity	0.13
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated		Not rated	
76:							
Remorris	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Exchange capacity	0.68
		Low content of organic matter	0.00				
77:							
Remorris, strongly alkaline	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.36
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated		Not rated	
78:							
Remorris	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.00	Slope	0.00	Exchange capacity	0.52
Milok, extremely stony	25	Poor		Poor		Fair	
		Too alkaline	0.00	Low strength	0.00	Slope	0.37
		Carbonate content	0.26	Depth to bedrock	0.14	Carbonate content	0.45
		Low content of organic matter	0.50	Dusty	0.97	Rock fragments	0.97
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated		Not rated	
79:							
Remorris	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.62

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79:							
Peachsprings, strongly saline	20	Poor		Poor		Poor	
		Salinity	0.00	Low strength	0.00	Salinity	0.00
		Low content of organic matter	0.00	Dusty	0.89	Slope	0.84
		Water erosion	0.99	Shrink-swell	0.89		
80:							
Retsabal	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.00	Slope	0.50	Exchange capacity	0.09
Lemrac	20	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Low strength	0.00	Depth to bedrock	0.03
		Low content of organic matter	0.00	High gypsum content	0.00	Exchange capacity	0.26
81:							
Rizno	50	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00	Too sandy	0.04
		Depth to bedrock	0.00			Exchange capacity	0.30
Mido, warm	30	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.29
		Low content of organic matter	0.00				
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated		Not rated	
82:							
Rizno	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00			Rock fragments	0.00
		Too sandy	0.96			Exchange capacity	0.14
Rock outcrop	20	Not rated		Not rated		Not rated	
83:							
Rizno, warm	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.13	Slope	0.00	Exchange capacity	0.45
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
84:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Arches	30	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Exchange capacity	0.17
85:							
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated		Not rated	
Arches	30	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Wind erosion	0.00	Low strength	0.00	Too sandy	0.00
		Droughty	0.00			Exchange capacity	0.19
86:							
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated		Not rated	
Daklos	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Slope	0.98	Slope	0.00
Moclom	20	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Too sandy	0.00
		Wind erosion	0.00	Low strength	0.00	Depth to bedrock	0.00
		Droughty	0.00			Rock fragments	0.00
87:							
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated		Not rated	
Myton	25	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Too alkaline	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Stones	0.00	Hard to reclaim (rock fragments)	0.32
Somorent	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too alkaline	0.00	Low strength	0.00	Exchange capacity	0.82
88:							
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88:							
Nalcase	25	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Exchange capacity	0.03
89:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Needle	35	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Wind erosion	0.00	Dusty	0.91	Too sandy	0.00
		Droughty	0.00			Exchange capacity	0.19
90:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Mezzo family, dry	30	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.40
		Droughty	0.14				
Strell family	15	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Wind erosion	0.00	Low strength	0.00	Too sandy	0.00
		Droughty	0.00	High gypsum content	0.00	Slope	0.00
91:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Santrick	30	Poor		Poor		Fair	
		Wind erosion	0.00	Low strength	0.00	Depth to bedrock	0.16
		Droughty	0.00	Depth to bedrock	0.00	Too sandy	0.24
		Low content of organic matter	0.00			Exchange capacity	0.30
Nalcase	15	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Exchange capacity	0.14
92:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Typic Torriorthents	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.50	Dusty	0.85	Rock fragments	0.01
93:							
Rosced family	60	Poor		Poor		Poor	
		Stone content	0.00	Low strength	0.00	Slope	0.00
		Too alkaline	0.00	Slope	0.00	Rock fragments	0.00
		Droughty	0.00	Stones	0.00	Hard to reclaim (rock fragments)	0.03

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
93:							
Quezcan, sodic	25	Poor		Poor		Poor	
		Too alkaline	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.05	Slope	0.00	Depth to bedrock	0.05
		Droughty	0.09	Low strength	0.00	Too clayey	0.40
94:							
Saemo	95	Poor		Poor		Poor	
		Low content of organic matter	0.00	Low strength	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.24
		Stone content	0.10	Stones	0.07	Hard to reclaim (rock fragments)	0.76
		Droughty	0.99				
95:							
Sandyranch	40	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.29
		Low content of organic matter	0.00				
Aquic Torrifluvents	15	Poor		Poor		Poor	
		Low content of organic matter	0.00	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Slope	0.00
		Droughty	0.37	Depth to bedrock	0.01	Exchange capacity	0.71
		Too sandy	0.83				
Water	15	Not rated		Not rated		Not rated	
96:							
Sandyranch	35	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.19
		Low content of organic matter	0.00				
Mido	30	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.54
		Low content of organic matter	0.00				
Mident	15	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Wind erosion	0.00	Low strength	0.00	Slope	0.00
		Droughty	0.00	Slope	0.00	Too sandy	0.00
97:							
Sandyranch	45	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.23
		Low content of organic matter	0.50				
Radnik	30	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Hard to reclaim (rock fragments)	0.84
		Water erosion	0.68			Exchange capacity	0.88
Riverwash	15	Not rated		Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
98:							
Seeg	40	Poor		Poor		Poor	
		Wind erosion	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.00	Dusty	0.88	Hard to reclaim (rock fragments)	0.00
		Droughty	0.70			Exchange capacity	0.75
Moffat	30	Poor		Poor		Fair	
		Wind erosion	0.00	Low strength	0.00	Too sandy	0.63
		Too alkaline	0.00	Dusty	0.88	Rock fragments	0.88
		Low content of organic matter	0.50			Exchange capacity	0.89
Needle	25	Poor		Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00	Too sandy	0.00
		Wind erosion	0.00	Low strength	0.00	Depth to bedrock	0.00
		Droughty	0.00	Dusty	0.88	Exchange capacity	0.11
99:							
Simel, saline	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Salinity	0.00
		Salinity	0.00	Slope	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
Catahoula, saline	25	Poor		Poor		Poor	
		Low content of organic matter	0.00	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.00
		Droughty	0.02	Cobble content	0.26	Hard to reclaim (rock fragments)	0.00
		Too sandy	0.26				
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated		Not rated	
100:							
Simel	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.00	Slope	0.00	Exchange capacity	0.38
Rock outcrop, Moenkopi and Chinle Formations	35	Not rated		Not rated		Not rated	
101:							
Simel	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.00	Dusty	0.71	Exchange capacity	0.33
Simel, steep	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.46
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	

Table 17.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map unit symbol and soil name	Pct. of map unit	Source of reclamation material		Roadfill source		Topsoil source	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102:							
Skos	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88	Low strength	0.00	Depth to bedrock	0.00
Badland, Moenkopi Formation	35	Not rated		Not rated		Not rated	
103:							
Strych	85	Poor		Poor		Poor	
		Stone content	0.00	Low strength	0.00	Rock fragments	0.00
		Carbonate content	0.00	Stones	0.00	Hard to reclaim (rock fragments)	0.02
		Droughty	0.01	Cobble content	0.92	Carbonate content	0.31
104:							
Sulphurcreek	90	Poor		Poor		Good	
		Low content of organic matter	0.00	Low strength	0.00		
		Water erosion	0.90	Dusty	0.86		
105:							
Tesihim	50	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Slope	0.98	Slope	0.00
		Depth to bedrock	0.00			Exchange capacity	0.26
Rizno, steep	18	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
						Exchange capacity	0.27
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated		Not rated	
Badland	10	Not rated		Not rated		Not rated	
106:							
Tineoyler	90	Poor		Poor		Fair	
		Low content of organic matter	0.00	Low strength	0.00	Exchange capacity	0.90
		Water erosion	0.99	Dusty	0.93		
107:							
Ustic Torriorthents	45	Poor		Poor		Poor	
		Stone content	0.00	Low strength	0.00	Slope	0.00
		Droughty	0.00	Stones	0.00	Depth to bedrock	0.05
		Depth to bedrock	0.05	Depth to bedrock	0.00	Rock fragments	0.23
Rock outcrop	30	Not rated		Not rated		Not rated	
Badland	25	Not rated		Not rated		Not rated	
108:							
Water	100	Not rated		Not rated		Not rated	

Table 18.—Ponds and Embankments

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. 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 unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Abra, moist	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.05	Dusty	0.19	Depth to water	1.00
Sazi, moist	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.32	Depth to water	1.00
		Depth to bedrock	0.32	Dusty	0.15		
Strych, moist	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.62	Depth to water	1.00
		Slope	0.08	Dusty	0.13		
				Large stones	0.09		
2:							
Aquima	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Dusty	0.11	Depth to water	1.00
		Slope	0.08				
3:							
Arches	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.68				
Mido	25	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Piping	1.00		
Rock outcrop, Kayenta and Wingate Formations sandstone	15	Not rated		Not rated		Not rated	
4:							
Badland, Morrison Formation, Brushy Basin Member	50	Not rated		Not rated		Not rated	
Emco family	30	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.68	Salinity	1.00		
				Hard to pack	0.62		
				Dusty	0.37		
5:							
Barx	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.04	Depth to water	1.00
		Slope	1.00				
Remorris	20	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.66	Dusty	0.50		

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6:							
Beclabito	55	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.87	Thin layer	0.88		
		Seepage	0.54	Dusty	0.38		
Lybrook, saline-sodic	30	Very limited		Very limited		Very limited	
		Slope	1.00	Hard to pack	1.00	Depth to water	1.00
		Depth to bedrock	0.02	Thin layer	0.59		
				Salinity	0.50		
				Dusty	0.50		
7:							
Begay, moist	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.01	Depth to water	1.00
		Slope	0.68				
8:							
Begay	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.09	Depth to water	1.00
		Slope	1.00				
9:							
Begay, moist	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
				Dusty	0.07		
10:							
Begay, saline	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.07	Depth to water	1.00
		Slope	0.08				
Querencia, saline-sodic	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.08	Salinity	0.50		
				Dusty	0.19		
11:							
Begay, saline-sodic	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Salinity	0.97	Depth to water	1.00
				Piping	0.50		
				Dusty	0.13		
Begay, moist	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Salinity	0.88	Depth to water	1.00
				Piping	0.50		
				Dusty	0.07		
Elias	20	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
				Salinity	0.88		
				Dusty	0.29		
12:							
Begay	40	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12:							
Ignacio	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.94	Depth to water	1.00
		Slope	1.00	Dusty	0.07		
		Depth to bedrock	0.93				
Retsabal	15	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Piping	0.76		
				Dusty	0.50		
13:							
Begay, moist	65	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.04	Depth to water	1.00
		Slope	1.00				
Rizno, moist	15	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.09		
14:							
Begay	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	1.00	Dusty	0.01		
Strych	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
				Dusty	0.12		
				Large stones	0.09		
15:							
Bullpen	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.29	Depth to water	1.00
		Seepage	0.05	Dusty	0.13		
		Depth to bedrock	0.01				
Daklos	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
		Seepage	0.54	Dusty	0.12		
				Large stones	0.11		
Puertecito	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Seepage	0.54	Large stones	0.31		
		Slope	0.32	Dusty	0.18		
16:							
Calladito, saline-sodic	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.08	Piping	1.00		
				Salinity	0.50		
Yarts, saline-sodic	35	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17:							
Catahoula	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.44	Depth to water	1.00
		Slope	1.00	Seepage	0.28		
		Depth to bedrock	0.44	Dusty	0.04		
				Large stones	0.01		
Rock outcrop, Wingate Sandstone	40	Not rated		Not rated		Not rated	
18:							
Chilton	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.16	Depth to water	1.00
		Slope	1.00	Large stones	0.04		
Begay	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.10	Depth to water	1.00
19:							
Chinchin	45	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.34		
Badland, Chinle Formation	40	Not rated		Not rated		Not rated	
20:							
Chipeta, saline-sodic	65	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.81	Salinity	1.00		
		Seepage	0.04	Piping	1.00		
				Dusty	0.50		
Stent family	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.97	Depth to water	1.00
		Slope	1.00	Dusty	0.09		
		Depth to bedrock	0.97				
21:							
Daklos	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
				Dusty	0.02		
Lazear, dry	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.31		
Rock outcrop, Shinarump Member, Chinle Formation	15	Not rated		Not rated		Not rated	
22:							
Daklos	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Large stones	0.12		
				Dusty	0.03		

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
22:							
Reef	15	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.27		
				Large stones	0.01		
Rock outcrop, Carmel Formation sandy limestone	15	Not rated		Not rated		Not rated	
23:							
Daklos	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.15		
Rizno	25	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.09		
Rock outcrop, Kaibab Limestone	20	Not rated		Not rated		Not rated	
24:							
Earlweed	60	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
Anasazi	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.89	Depth to water	1.00
		Depth to bedrock	0.88				
		Slope	0.32				
25:							
Eslendo, saline	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.52	Salinity	0.50		
				Piping	0.50		
				Dusty	0.45		
Happle, saline-sodic	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Salinity	0.88	Depth to water	1.00
		Slope	1.00	Piping	0.78		
Rock outcrop, Mesaverde Formation sandstone	15	Not rated		Not rated		Not rated	
26:							
Foy family	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.45	Depth to water	1.00
		Slope	1.00	Large stones	0.42		
				Dusty	0.02		
Whitesage family	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Dusty	0.16	Depth to water	1.00
		Seepage	0.70				

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
27:							
Gladel	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.04		
		Seepage	0.54				
Plumasano	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.04	Depth to water	1.00
		Slope	1.00				
28:							
Goblin	80	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.21		
				Piping	0.05		
29:							
Goblin	50	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.66	Piping	1.00		
				Dusty	0.50		
Clapper	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.29	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
		Depth to bedrock	0.29	Large stones	0.05		
				Dusty	0.04		
30:							
Goblin	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.50		
				Piping	0.40		
Ivanpatch	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Salinity	0.50	Depth to water	1.00
		Slope	1.00	Dusty	0.22		
				Piping	0.18		
31:							
Hanksville, saline-sodic	60	Very limited		Very limited		Very limited	
		Slope	1.00	Salinity	1.00	Depth to water	1.00
		Seepage	0.05	Piping	1.00		
		Depth to bedrock	0.01	Dusty	0.50		
				Thin layer	0.29		
Chipeta, saline	30	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.65	Salinity	1.00		
				Dusty	0.50		
32:							
Hanksville, saline-sodic	50	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Salinity	1.00	Depth to water	1.00
		Depth to bedrock	0.27	Piping	1.00		
				Thin layer	0.97		
				Dusty	0.50		

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
32:							
Notal, saline-sodic	40	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Salinity	1.00	Depth to water	1.00
		Slope	0.08	Piping	1.00		
				Dusty	0.24		
33:							
Kydestea	50	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Large stones	0.58		
				Dusty	0.06		
Vessilla	30	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Piping	1.00		
		Seepage	0.54	Dusty	0.12		
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
34:							
Kydestea	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.12		
Vessilla	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.08		
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
35:							
Lavodnas	45	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Piping	0.98		
		Gypsum content	1.00	Dusty	0.50		
		Seepage	0.54				
Retsabal	40	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.96	Thin layer	1.00		
				Dusty	0.50		
36:							
Mathis, cool	70	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Piping	0.50		
				Large stones	0.11		
Rock outcrop, Wingate Sandstone	30	Not rated		Not rated		Not rated	
37:							
Metuck	30	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.12		

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
37:							
Rock outcrop, Kaibab Formation limey sandstone	25	Not rated		Not rated		Not rated	
Vessilla	25	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.10		
38:							
Mezzo family	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Piping	1.00		
39:							
Mido	65	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00				
Rock outcrop, Entrada Formation sandstone	25	Not rated		Not rated		Not rated	
40:							
Mido	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.11		
Strych	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				
Reef	15	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.02		
				Large stones	0.01		
41:							
Mikim	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.50	Depth to water	1.00
		Seepage	0.70	Thin layer	0.37		
		Depth to bedrock	0.01	Dusty	0.19		
Mivida, moist	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.32	Dusty	0.11		
42:							
Milok, cool	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.11	Depth to water	1.00
		Slope	0.08				
Clapper	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
				Dusty	0.12		
43:							
Milok, steep	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	1.00	Dusty	0.24		

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43:							
Strych	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.69	Depth to water	1.00
		Slope	1.00	Dusty	0.23		
				Large stones	0.01		
44:							
Mivida	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
45:							
Mivida	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.15	Depth to water	1.00
		Slope	0.08				
Gish	15	Somewhat limited		Very limited		Very limited	
		Seepage	0.12	Salinity	1.00	Depth to water	1.00
				Piping	1.00		
				Dusty	0.48		
Cannonville	15	Very limited		Very limited		Very limited	
		Slope	1.00	Hard to pack	1.00	Depth to water	1.00
		Depth to bedrock	0.11	Thin layer	0.85		
				Dusty	0.50		
46:							
Moab	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.39	Depth to water	1.00
		Slope	1.00	Large stones	0.36		
				Dusty	0.08		
Abra family	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Depth to bedrock	0.22	Thin layer	0.22		
				Dusty	0.21		
47:							
Moclom, warm	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00				
Rock outcrop, Summerville Formation sandstone and conglomerate	30	Not rated		Not rated		Not rated	
48:							
Moenkopie, warm	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.10		
Rock outcrop, Carmel Formation sandstone	20	Not rated		Not rated		Not rated	
49:							
Moenkopie	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.08		
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
50:							
Molen family	50	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.83	Thin layer	0.83	Depth to water	1.00
		Seepage	0.70	Piping	0.50		
				Dusty	0.17		
Lazear	18	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.68	Piping	0.50		
				Dusty	0.26		
Gerst	15	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.74	Dusty	0.31		
51:							
Monue	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.53	Depth to water	1.00
				Dusty	0.13		
Fruitland	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.02	Depth to water	1.00
52:							
Monue, saline-sodic	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Salinity	1.00	Depth to water	1.00
				Piping	0.53		
				Dusty	0.01		
Myton, saline-sodic	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
				Dusty	0.04		
Uzona, saline-sodic	20	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Salinity	1.00	Depth to water	1.00
				Dusty	0.39		
53:							
Monue	60	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Dusty	0.15		
Sheppard	25	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.29		
54:							
Mulford	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Dusty	0.42	Depth to water	1.00
55:							
Mussentuchit	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.92		
		Depth to bedrock	0.50	Dusty	0.50		
Goblin	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Piping	1.00		
				Dusty	0.50		

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55:							
Swell family	20	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Salinity	0.28		
				Dusty	0.01		
56:							
Nepalto	95	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				
57:							
Nizhoni	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.05		
Rock outcrop, Kayenta and Navajo Formations sandstone	20	Not rated		Not rated		Not rated	
58:							
Nizhoni	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.04		
Rock outcrop, Kayenta Formation sandstone	30	Not rated		Not rated		Not rated	
59:							
Nizhoni	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00				
Rock outcrop, Kayenta and Wingate Formations sandstone	35	Not rated		Not rated		Not rated	
Pinepoint, dry	20	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.61		
60:							
Notom	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
Begay, moist	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.03	Depth to water	1.00
Bowington	10	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Unstable excavation walls	1.00
				Seepage	0.18		
61:							
Notom	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Large stones	1.00		
				Seepage	0.01		

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61:							
Aquic Torrifluvents	20	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Unstable excavation walls	1.00
		Slope	1.00	Depth to saturated zone	0.97	Depth to saturated zone	0.01
62:							
Parkwash	70	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00				
Rock outcrop, Navajo Sandstone	15	Not rated		Not rated		Not rated	
63:							
Pherson family	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Large stones	0.14		
Sandyranch	25	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.68				
Riverwash	20	Not rated		Not rated		Not rated	
64:							
Polychrome	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Large stones	1.00	Depth to water	1.00
		Slope	1.00	Seepage	1.00		
		Depth to bedrock	0.08	Thin layer	0.82		
Badland, Chinle Formation	20	Not rated		Not rated		Not rated	
Cerropelon family	15	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.80	Depth to water	1.00
		Depth to bedrock	0.07	Piping	0.50		
		Seepage	0.03	Dusty	0.27		
65:							
Querencia, saline-sodic	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Salinity	1.00	Depth to water	1.00
				Piping	1.00		
				Dusty	0.20		
				Thin layer	0.02		
Lybrook, saline-sodic	30	Very limited		Very limited		Very limited	
		Slope	1.00	Salinity	1.00	Depth to water	1.00
		Depth to bedrock	0.01	Hard to pack	1.00		
				Dusty	0.50		
				Thin layer	0.50		
66:							
Radnik	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.01	Depth to water	1.00
Kwakina	25	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66:							
Pherson family	15	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
67:							
Radnik	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Dusty	0.01	Depth to water	1.00
		Slope	0.08				
Notom	25	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
				Piping	0.50		
Oxyaquic Torrifluvents	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.97	Unstable excavation walls	1.00
		Slope	1.00	Piping	0.50		
						Depth to saturated zone	0.94
68:							
Razito	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
				Piping	1.00		
Riverwash	40	Not rated		Not rated		Not rated	
69:							
Reef	60	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Thin layer	1.00		
		Seepage	0.54	Dusty	0.18		
Retsabal	15	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Gypsum content	1.00	Piping	0.50		
		Depth to bedrock	0.97	Dusty	0.50		
Rock outcrop, Carmel Formation	10	Not rated		Not rated		Not rated	
70:							
Reef	70	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Large stones	1.00		
		Seepage	0.54	Dusty	0.15		
Rock outcrop, Moenkopi Formation sandstone	15	Not rated		Not rated		Not rated	
71:							
Reef	75	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.60		
		Seepage	0.54	Large stones	0.10		
				Dusty	0.10		
Rock outcrop, Carmel Formation sandstone	10	Not rated		Not rated		Not rated	

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
72:							
Reef	65	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.24		
				Large stones	0.08		
Rock outcrop	30	Not rated		Not rated		Not rated	
73:							
Reef	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00				
Rock outcrop, Kayenta Formation	40	Not rated		Not rated		Not rated	
74:							
Reef, warm	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.03		
Rock outcrop, Carmel Formation sandstone	25	Not rated		Not rated		Not rated	
Lemrac	15	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.82		
		Depth to bedrock	0.08	Dusty	0.19		
75:							
Reef	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.21		
				Large stones	0.21		
Rizno	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Dusty	0.15		
Rock outcrop, Moenkopi Formation sandstone	10	Not rated		Not rated		Not rated	
76:							
Remorris	85	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.55	Thin layer	1.00	Depth to water	1.00
		Slope	0.08	Dusty	0.10		
77:							
Remorris, strongly alkaline	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.93	Piping	0.40		
				Dusty	0.36		
Rock outcrop, Curtis, Summerville, and Entrada Formations	30	Not rated		Not rated		Not rated	

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
78:							
Remorris	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.98	Dusty	0.26		
		Seepage	0.04				
Milok, extremely stony	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	1.00	Thin layer	0.27		
		Depth to bedrock	0.01	Dusty	0.15		
Rock outcrop, Entrada and Summerville Formations	15	Not rated		Not rated		Not rated	
79:							
Remorris	50	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.62	Dusty	0.33		
Peachsprings, strongly saline	20	Very limited		Very limited		Very limited	
		Slope	1.00	Salinity	1.00	Depth to water	1.00
		Seepage	0.70	Dusty	0.25		
80:							
Retsabal	60	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Thin layer	1.00		
				Dusty	0.50		
Lemrac	20	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Hard to pack	1.00		
		Gypsum content	1.00	Thin layer	0.99		
		Depth to bedrock	0.99	Dusty	0.50		
81:							
Rizno	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.32				
Mido, warm	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.68	Piping	1.00		
Rock outcrop, Entrada Formation sandstone	20	Not rated		Not rated		Not rated	
82:							
Rizno	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.92	Thin layer	1.00		
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
83:							
Rizno, warm	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Piping	0.50		
				Dusty	0.04		
Rock outcrop, Dakota Formation sandstone	20	Not rated		Not rated		Not rated	
84:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Arches	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Piping	1.00	Depth to water	1.00
				Thin layer	1.00		
85:							
Rock outcrop, Kayenta and Navajo Formations sandstone	40	Not rated		Not rated		Not rated	
Arches	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.32	Thin layer	1.00		
				Seepage	0.10		
86:							
Rock outcrop, Morrison Formation, Salt Wash Member	35	Not rated		Not rated		Not rated	
Daklos	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00				
Moclom	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
87:							
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones	50	Not rated		Not rated		Not rated	
Myton	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.50	Depth to water	1.00
		Slope	1.00	Large stones	0.13		
				Dusty	0.01		
Somorent	25	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.75	Dusty	0.50		
88:							
Rock outcrop, Navajo Sandstone	60	Not rated		Not rated		Not rated	

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88:							
Nalcase	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
89:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Needle	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.92	Piping	1.00		
				Thin layer	1.00		
90:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Mezzo family, dry	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Piping	1.00		
Strell family	15	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00				
91:							
Rock outcrop, Navajo Sandstone	50	Not rated		Not rated		Not rated	
Santrick	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.96	Thin layer	0.96		
		Slope	0.08				
Nalcase	15	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
		Seepage	0.54				
92:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Typic Torriorthents	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.58	Dusty	0.05		
93:							
Rosced family	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.88		
				Dusty	0.05		
Quezcan, sodic	25	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Depth to bedrock	0.34	Dusty	0.18		
94:							
Saemo	95	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Dusty	0.14	Depth to water	1.00
		Seepage	1.00				

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
95:							
Sandyranch	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.08	Piping	1.00		
Aquic Torrifluvents	15	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Unstable excavation walls	1.00
		Slope	1.00	Piping	1.00	Depth to hard bedrock	0.99
		Depth to bedrock	0.46	Thin layer	0.46		
				Seepage	0.16		
				Dusty	0.05		
Water	15	Not rated		Not rated		Not rated	
96:							
Sandyranch	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.32				
Mido	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.68	Piping	1.00		
Mident	15	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.99	Seepage	0.20		
		Seepage	0.54				
97:							
Sandyranch	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.32				
Radnik	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Dusty	0.05		
Riverwash	15	Not rated		Not rated		Not rated	
98:							
Seeg	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				
Moffat	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	1.00				
Needle	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
		Seepage	0.04	Seepage	0.50		
99:							
Simel, saline	40	Very limited		Very limited		Very limited	
		Slope	1.00	Salinity	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Thin layer	1.00		
				Dusty	0.50		

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
99:							
Catahoula, saline---	25	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Large stones	0.03		
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations	20	Not rated		Not rated		Not rated	
100:							
Simel---	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.65	Dusty	0.45		
Rock outcrop, Moenkopi and Chinle Formations---	35	Not rated		Not rated		Not rated	
101:							
Simel---	50	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.50		
		Seepage	0.54				
Simel, steep---	25	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Dusty	0.50		
		Seepage	0.54				
Rock outcrop, Moenkopi Formation sandstone---	15	Not rated		Not rated		Not rated	
102:							
Skos---	60	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Thin layer	1.00		
				Dusty	0.50		
Badland, Moenkopi Formation---	35	Not rated		Not rated		Not rated	
103:							
Strych---	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones	0.83	Depth to water	1.00
		Slope	1.00	Seepage	0.66		
104:							
Sulphurcreek---	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Dusty	0.30		
105:							
Tesihim---	50	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.84	Dusty	0.02		
		Seepage	0.04				

Table 18.—Ponds and Embankments—Continued

Map unit symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
105:							
Rizno, steep	18	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00				
Rock outcrop, Jurassic or Cretaceous sandstones	18	Not rated		Not rated		Not rated	
Badland	10	Not rated		Not rated		Not rated	
106:							
Tineoyler	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Dusty	0.20		
107:							
Ustic Torriorthents	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.99	Depth to water	1.00
		Slope	1.00	Large stones	0.98		
		Depth to bedrock	0.99	Dusty	0.04		
Rock outcrop	30	Not rated		Not rated		Not rated	
Badland	25	Not rated		Not rated		Not rated	
108:							
Water	100	Not rated		Not rated		Not rated	

Table 19.—Engineering Properties

(Absence of an entry indicates that data were not estimated)

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
1:												
Abra, moist-----	0-8	Loam, sandy loam	SC	A-4	0	0	76-100	75-100	57-89	36-61	22-39	7-17
	8-24	Sandy loam, loam	CL	A-6	0	0	77-100	76-100	61-94	39-64	22-37	7-17
	24-43	Loam, gravelly clay loam, gravelly sandy clay loam, sandy loam	GC	A-6	0	8-49	53-92	51-91	42-91	25-63	26-47	10-25
	43-200	Sandy loam, gravelly clay loam, loam, gravelly sandy clay loam	CL	A-6	0	0-49	52-91	50-91	39-89	26-65	26-47	10-25
Sazi, moist-----	0-9	Loam, sandy loam	SC-SM	A-4	0	0	71-92	70-92	53-77	33-50	20-33	6-12
	9-32	Loam, sandy loam	SC-SM	A-4	0	0	71-100	70-100	53-84	34-56	20-31	6-12
	32-75	Loam, sandy loam	SC	A-4	0	0	71-100	70-100	51-81	32-54	20-31	6-12
	75-110	Sandy loam, fine sandy loam, very fine sandy loam	CL	A-6	0	0	100	100	90-100	51-61	20-32	6-13
	110-135	Bedrock	---	---	---	---	---	---	---	---	---	---
Strych, moist---	0-10	Gravelly fine sandy loam, sandy loam	SC	A-4	0	0-49	53-92	51-91	36-72	21-44	20-33	6-12
	10-35	Gravelly fine sandy loam, stony sandy loam	SC	A-6	0-42	0-42	41-86	39-86	27-67	16-43	20-31	6-12
	35-200	Very gravelly fine sandy loam, extremely cobbly sandy loam, very stony coarse sandy loam	GC	A-2-4	0-40	0-40	36-70	33-69	19-46	13-32	20-31	6-12
2:												
Aquima----------	0-7	Very fine sandy loam, sandy loam, fine sandy loam	SC	A-6	0	0	86-100	86-100	76-94	35-47	22-33	7-12
	7-20	Loam, fine sandy loam	SC	A-6	0	0	86-100	86-100	76-97	41-57	29-40	12-19
	20-50	Sandy clay loam, loam	SC	A-6	0	0	86-100	85-100	71-92	39-54	29-40	12-19
	50-85	Sandy clay loam, loam	SC	A-6	0	0	86-100	85-100	71-92	39-55	29-40	12-19
	85-160	Sandy clay loam, loam	SC	A-6	0	0	86-100	85-100	70-91	39-54	29-40	12-19
	160-190	Sandy clay loam, loam	SC	A-6	0	0	86-100	85-100	68-88	38-53	29-39	12-19

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
3:												
Arches	0-8	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	93-97	15-19	0-23	NP-3
	8-24	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	92-96	15-19	0-20	NP-3
	24-49	Bedrock	---	---	---	---	---	---	---	---	---	---
Mido	0-9	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	94-98	14-18	0-23	NP-3
	9-49	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	94-98	14-18	0-20	NP-3
	49-185	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	92-96	14-18	0-20	NP-3
4:												
Emco family	0-5	Clay loam, clay	CH	A-7-6	0	0	76-100	75-100	64-95	47-72	45-58	25-33
	5-19	Clay	CH	A-7-6	0	0	100	100	89-99	70-80	49-61	29-37
	19-37	Parachannery clay, clay	CH	A-7-6	0	0	100	100	90-100	69-79	49-61	29-37
	37-62	Bedrock	---	---	---	---	---	---	---	---	---	---
5:												
Barx	0-13	Fine sandy loam	SC, SC-SM	A-6, A-2-4, A-4	0	0	84-100	83-100	74-99	29-45	21-33	4-12
	13-30	Sandy clay loam	CL, SC	A-6	0	0	83-100	82-100	70-92	38-53	31-40	13-19
	30-79	Sandy loam	SC-SM, SC	A-6, A-4, A-2-4	0	0	84-100	83-100	59-81	28-43	18-29	4-12
	79-122	Sandy loam	SC-SM, SC	A-2-4, A-4, A-6	0	0	84-100	83-100	59-81	28-43	18-29	4-12
	122-152	Sandy loam	SC-SM, SC	A-4, A-2-4, A-6	0	0	84-100	83-100	59-81	28-43	18-29	4-12
Remorris	0-8	Silty clay loam	CL	A-7-6, A-6	0	0-10	71-91	70-91	67-91	60-85	39-49	19-25
	8-25	Silty clay loam	CL	A-7-6, A-6	0	0	83-100	82-100	79-100	70-94	38-47	19-25
	25-38	Silty clay loam	CL	A-6, A-7-6	0	0	83-100	82-100	79-100	70-94	37-47	19-25
	38-63	Bedrock	---	---	---	---	---	---	---	---	---	---
6:												
Beclabito	0-10	Cobbly clay loam, cobbly loam	CL	A-6	0	15-35	53-91	51-90	45-89	31-64	35-49	17-25
	10-39	Silty clay loam, clay	CH	A-7-6	0	0-16	76-91	75-91	65-88	52-72	45-58	25-33
	39-75	Cobbly clay loam, silty clay loam	CL	A-7-6	0	0-29	65-91	64-91	56-85	47-72	41-49	21-25
	75-100	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
6:												
Lybrook, saline-sodic---	0-10	Silty clay loam, silty clay	CH	A-7-6	0	0	77-100	76-100	66-100	60-94	41-60	21-33
	10-23	Silty clay	CH	A-7-6	0	0	92-100	91-100	88-100	81-94	49-58	29-33
	23-73	Silty clay	CH	A-7-6	0	0	100	100	89-99	86-96	49-61	29-37
	73-95	Extremely paragravelly silty clay	CH	A-7-6	0	0	100	100	96-100	89-99	49-61	29-37
	95-120	Bedrock	---	---	---	---	---	---	---	---	---	---
7:												
Begay, moist----	0-9	Fine sandy loam, very fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	84-95	35-42	18-28	4-7
	9-48	Fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	84-95	38-46	20-28	6-10
	48-196	Fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	83-94	36-43	18-26	4-7
8:												
Begay----------	0-14	Fine sandy loam, sandy loam	SC	A-4	0	0	93-100	93-100	67-80	35-46	20-33	6-12
	14-80	Fine sandy loam, sandy loam	SC	A-6	0	0	93-100	93-100	75-89	38-49	20-31	6-12
	80-197	Fine sandy loam, sandy loam	SC	A-6	0	0	93-100	93-100	64-77	36-47	20-30	6-12
9:												
Begay, moist----	0-6	Loamy fine sand, fine sandy loam, very fine sandy loam	CL-ML	A-4	0	0	93-100	93-100	87-100	46-56	18-31	4-10
	6-28	Silt loam, loam, very fine sandy loam, fine sandy loam	CL	A-4	0	0	80-100	79-100	74-100	45-66	20-31	6-12
	28-85	Loam, fine sandy loam, very fine sandy loam	CL	A-4	0	0	80-100	79-100	75-100	40-58	20-31	6-12
	85-130	Loamy fine sand, fine sandy loam, very fine sandy loam	CL	A-4	0	0	80-100	79-100	73-100	39-59	18-30	4-12
	130-170	Fine sandy loam, very fine sandy loam, loamy fine sand	SC-SM	A-2-4	0	0	81-100	80-100	78-100	28-45	18-30	4-12
	170-185	Loamy fine sand, very fine sandy loam, fine sandy loam	SC	A-4	0	0	80-100	79-100	73-100	30-48	18-30	4-12

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
10:												
Begay, saline---	0-9	Sandy loam, fine sandy loam	SC-SM	A-4	0	0	92-100	92-100	81-95	35-46	18-31	4-10
	9-28	Sandy loam, fine sandy loam	SC	A-4	0	0	92-100	92-100	76-91	40-52	20-31	6-12
	28-68	Sandy loam, fine sandy loam	SC	A-4	0	0	92-100	92-100	81-96	37-49	20-31	6-12
	68-121	Sandy loam, fine sandy loam	SC-SM	A-4	0	0	92-100	92-100	81-95	30-40	18-27	4-10
	121-185	Sandy loam, fine sandy loam	SC-SM	A-2-4	0	0	92-100	92-100	81-95	30-40	18-27	4-10
Querencia, saline-sodic---	0-6	Loam, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	84-98	37-48	20-33	6-12
	6-16	Loam	CL	A-6	0	0	93-100	93-100	80-95	56-69	27-39	12-19
	16-43	Loam	CL-ML	A-4	0	0	93-100	93-100	79-100	53-74	20-39	6-19
	43-70	Loam	CL	A-6	0	0	93-100	93-100	79-95	53-66	27-39	12-19
	70-100	Loam	CL	A-6	0	0	93-100	93-100	81-97	58-71	27-39	12-19
	100-180	Fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	84-98	37-48	20-30	6-12
11:												
Begay, saline-sodic---	0-12	Loam, fine sandy loam, very fine sandy loam	CL	A-4	0	0	92-100	91-100	86-100	50-63	20-33	6-12
	12-26	Loam, fine sandy loam, very fine sandy loam	CL	A-4	0	0	92-100	91-100	90-100	55-63	24-31	9-12
	26-95	Loam, fine sandy loam, very fine sandy loam	CL	A-6	0	0	92-100	91-100	87-98	54-62	24-31	9-12
	95-155	Fine sandy loam, very fine sandy loam, loam	CL	A-6	0	0	92-100	91-100	82-100	56-73	26-40	10-19
	155-180	Fine sandy loam, loam	CL	A-6	0	0	92-100	91-100	73-91	47-63	26-40	10-19
Begay, moist----	0-10	Loam, very fine sandy loam	CL	A-6	0	0	92-100	91-100	87-99	53-61	24-33	9-12
	10-35	Fine sandy loam	SC	A-4	0	0	84-100	83-100	77-100	37-59	24-33	9-13
	35-82	Fine sandy loam	SC	A-4	0	0	84-100	83-100	77-100	37-60	24-33	9-13
	82-140	Loam, very fine sandy loam, fine sandy loam	CL	A-6	0	0	92-100	92-100	80-99	44-60	24-39	9-19
	140-180	Loam, very fine sandy loam, fine sandy loam	CL	A-6	0	0	92-100	92-100	80-99	44-60	24-39	9-19
Elias-----------	0-14	Very fine sandy loam	CL	A-6	0	0	100	100	96-99	59-62	24-33	9-12
	14-33	Clay loam	CL	A-7-6	0	0	100	100	86-93	68-75	37-47	19-25
	33-85	Loam	CL	A-6	0	0	100	100	84-91	62-69	31-40	13-19
	85-150	Clay, clay loam	CL	A-6	0	0	100	100	89-100	68-86	37-56	19-32
	150-180	Clay loam, clay	CH	A-7-6	0	0	100	100	79-97	62-80	38-58	19-33

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
12:												
Begay----------	0-9	Loamy fine sand, fine sandy loam, very fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	87-99	42-50	16-26	2-6
	9-24	Loam, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	87-100	36-47	18-28	3-10
	24-51	Loam, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	88-100	37-47	18-28	3-10
	51-130	Loamy fine sand, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	87-100	35-45	16-25	2-7
	130-192	Loamy fine sand, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	87-100	36-45	16-25	2-7
Ignacio---------	0-7	Fine sandy loam, loam, sandy loam, very fine sandy loam	SC-SM	A-4	0	0	78-100	77-100	58-85	28-47	18-33	4-12
	7-31	Fine sandy loam, paragravelly loam, very paragravelly sandy loam, very fine sandy loam	SC-SM	A-4	0	0	100	100	75-88	38-51	18-33	3-13
	31-53	Paragravelly fine sandy loam, paragravelly loam, very paragravelly sandy loam, very fine sandy loam	SC	A-4	0	0	100	100	70-83	40-53	18-33	3-13
	53-68	Paragravelly fine sandy loam, loamy sand, paragravelly very fine sandy loam, very paragravelly loam, very paragravelly sandy loam	CL	A-6	0	0	100	100	73-86	43-56	16-30	2-12
	68-93	Bedrock	---	---	---	---	---	---	---	---	---	---
Retsabal--------	0-6	Gypsiferous loamy sand, gypsiferous sandy loam, gypsiferous fine sandy loam	SC-SM	A-4	0	0	80-100	79-100	62-87	32-49	0-28	NP-7
	6-17	Very cobbly gypsiferous loamy sand, gravelly gypsiferous loamy fine sand, extremely gravelly gypsiferous sandy loam, gypsiferous fine sandy loam	GC-GM	A-2-4	0	0-17	29-100	26-100	18-77	8-41	0-25	NP-7
	17-42	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
13:												
Begay, moist----	0-6	Very fine sandy loam, fine sandy loam, loamy fine sand	SC-SM	A-4	0	0-6	81-100	81-100	71-96	31-47	18-31	3-10
	6-26	Loam, very fine sandy loam, fine sandy loam	CL	A-4	0	0	80-100	79-100	76-100	42-61	20-31	6-12
	26-41	Sandy loam, loamy fine sand, fine sandy loam, very fine sandy loam	SC-SM	A-4	0	0	80-100	79-100	70-100	35-55	18-30	3-12
	41-73	Very fine sandy loam, fine sandy loam, loamy fine sand	SC-SM	A-2-4	0	0	81-100	80-100	70-95	29-44	18-31	3-10
	73-183	Very fine sandy loam, sandy loam, loamy fine sand, fine sandy loam	SC-SM	A-4	0	0	80-100	79-100	58-84	27-45	18-30	3-12
Rizno, moist----	0-6	Fine sandy loam, sandy loam	SC	A-4	0	0-10	73-100	72-100	66-97	31-50	22-33	7-12
	6-18	Fine sandy loam, sandy loam	SC	A-4	0	0-10	73-100	72-100	65-96	31-50	22-31	7-12
	18-39	Channery fine sandy loam, sandy loam	SC	A-4	0	0-10	73-100	72-100	61-91	33-52	22-30	7-12
	39-64	Bedrock	---	---	---	---	---	---	---	---	---	---
14:												
Begay----------	0-10	Fine sandy loam, very fine sandy loam	CL	A-4	0	0	92-100	91-100	83-98	41-52	18-31	4-10
	10-24	Fine sandy loam, very fine sandy loam	CL	A-4	0	0	92-100	91-100	84-100	43-55	20-31	6-12
	24-115	Fine sandy loam, very fine sandy loam	CL	A-4	0	0	92-100	91-100	84-100	43-55	20-31	6-12
	115-180	Very cobbly fine sandy loam, very fine sandy loam	GC	A-2-6	0-19	0-6	58-100	56-100	50-98	19-43	18-31	4-12
Strych----------	0-15	Fine sandy loam	SC-SM	A-4	0-16	0-16	84-95	84-95	77-94	39-51	18-31	4-10
	15-39	Extremely gravelly fine sandy loam, very cobbly sandy loam, very stony loam	SC	A-4	0-80	0-80	23-83	19-82	16-73	10-50	20-31	6-12
	39-180	Very gravelly fine sandy loam, very cobbly sandy loam, extremely gravelly coarse sandy loam	GP-GC	A-2-4	0-87	0-87	16-65	13-63	8-43	5-28	20-31	6-12

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
15:												
Bullpen---------	0-9	Channery loam, parachannery clay loam, very channery sandy clay loam	GC	A-2-6	0	0-30	33-100	30-100	24-88	13-52	29-42	12-19
	9-19	Channery loam, parachannery clay loam, very channery sandy clay loam	GC	A-2-6	0	0-30	33-100	30-100	25-91	13-52	29-40	12-19
	19-43	Channery loam, parachannery clay loam, very channery sandy clay loam	GC	A-2-6	0	0-30	33-100	30-100	25-94	13-55	32-47	15-25
	43-112	Gravelly loam, parachannery sandy clay loam, paragravelly clay loam	CL	A-7-6	0	0-30	32-100	30-100	22-89	15-63	32-47	15-25
	112-137	Bedrock	---	---	---	---	---	---	---	---	---	---
Daklos----------	0-9	Sandy loam, fine sandy loam	SC	A-4	0	0-29	33-96	31-96	26-87	14-49	22-33	7-12
	9-26	Very channery loam, extremely gravelly fine sandy loam, extremely channery sandy loam	GC	A-2-4	0	0-38	18-72	15-72	11-62	7-40	24-40	9-19
	26-39	Very channery loam, extremely gravelly fine sandy loam, extremely channery sandy loam	GC	A-2-6	0	0-39	18-71	15-71	11-62	7-42	24-40	9-19
	39-45	Bedrock	---	---	---	---	---	---	---	---	---	---
	45-70	Bedrock	---	---	---	---	---	---	---	---	---	---
Puertecito------	0-10	Fine sandy loam, sandy loam	SC	A-4	0	0	34-86	31-86	24-78	16-54	24-42	9-19
	10-25	Very channery loam, very flaggy sandy clay loam	CL	A-6	11-37	9-28	28-97	25-96	20-91	12-60	29-45	12-23
	25-50	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
16:												
Calladito, saline-sodic---	0-7	Fine sand	SM	A-2-4	0	0	100	100	94-97	15-18	0-22	NP-2
	7-24	Loamy fine sand, fine sand	SM	A-2-4	0	0	93-100	93-100	87-100	14-23	0-24	NP-6
	24-54	Fine sand, loamy fine sand	SM	A-2-4	0	0	93-100	93-100	84-98	25-35	0-24	NP-6
	54-180	Loamy fine sand, fine sand	SM	A-2-4	0	0	54-100	52-100	48-100	7-23	0-23	NP-6
Yarts, saline-sodic---	0-16	Fine sandy loam	SM	A-4	0	0	100	100	86-99	35-48	16-33	2-12
	16-49	Fine sandy loam	SC-SM	A-4	0	0	100	100	88-100	36-49	16-31	2-12
	49-120	Very fine sandy loam, loamy fine sand, fine sandy loam	SM	A-4	0	0	81-100	80-100	76-100	29-49	16-30	2-12
	120-180	Very fine sandy loam, loamy fine sand, fine sandy loam	SC-SM	A-4	0	0	80-100	79-100	67-100	26-50	0-32	NP-13
17:												
Catahoula-------	0-7	Gravelly fine sandy loam, gravelly loamy fine sand	SC	A-2-4	0-6	2-6	59-89	58-88	47-81	15-31	16-31	2-10
	7-18	Gravelly fine sandy loam, stony sandy clay loam, very cobbly sandy loam	SC	A-2-4	0	2-38	39-82	37-82	33-82	13-44	24-45	9-25
	18-34	Gravelly fine sandy loam, stony sandy clay loam, very cobbly sandy loam	SC	A-7-6	6-22	6-16	39-92	36-92	26-84	15-57	26-47	10-25
	34-80	Gravelly fine sandy loam, stony sandy clay loam, very stony sandy loam	SC	A-2-4	6-22	6-22	43-92	40-92	30-87	13-48	24-45	9-25
	80-103	Very stony sandy loam, very stony fine sandy loam	SC	A-2-4	12-33	12-22	52-76	50-75	35-57	13-26	20-30	6-12
	103-128	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
18:												
Chilton---------	0-11	Very gravelly fine sandy loam, gravelly sandy loam, cobbly loam	CL	A-6	0-18	0-18	42-98	40-98	32-87	21-60	22-35	7-13
	11-49	Very gravelly fine sandy loam, gravelly loam, very stony sandy loam	SC	A-6	0-40	0-40	38-92	35-92	27-79	17-52	24-39	9-17
	49-81	Very gravelly fine sandy loam, gravelly sandy loam, very gravelly loam	GC	A-6	0-40	0-40	37-83	34-83	27-73	18-51	24-39	9-17
	81-180	Extremely stony fine sandy loam, very gravelly loam, very gravelly sandy loam	GC	A-2-6	0-38	0-38	32-65	29-64	21-52	13-34	22-32	7-13
Begay-----------	0-11	Very fine sandy loam, fine sandy loam, sandy loam	SC	A-4	0	0	93-100	93-100	67-78	40-48	20-31	6-10
	11-43	Very fine sandy loam, fine sandy loam, sandy loam	SC	A-4	0	0	93-100	93-100	65-78	37-48	20-31	6-12
	43-150	Sandy loam, fine sandy loam	SC	A-4	0	0	80-100	79-100	67-92	36-53	20-30	6-12
19:												
Chinchin--------	0-10	Gravelly loam	CL	A-6	0-10	0-10	80-87	70-80	65-75	50-60	22-42	4-19
	10-26	Clay loam	CL	A-7-6	0	0	100	100	90-100	70-80	38-47	19-25
	26-51	Bedrock	---	---	---	---	---	---	---	---	---	---
20:												
Chipeta, saline-sodic---	0-4	Silty clay loam	CL	A-6	0	0	100	100	90-100	85-100	31-47	13-25
	4-17	Parachannery silty clay loam	CL	A-7-6	0	0	100	100	89-100	85-99	35-50	17-28
	17-28	Parachannery silty clay loam	CL	A-7-6	0	0	100	100	86-100	83-97	37-51	18-28
	28-53	Bedrock	---	---	---	---	---	---	---	---	---	---
Stent family----	0-9	Gravelly sandy loam	SC-SM	A-2-4	0	0	52-86	50-86	38-71	19-38	18-28	4-10
	9-62	Very stony sandy loam	SC-SM	A-2-4	7-49	0	52-93	50-92	37-74	22-46	18-28	4-10
	62-87	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
21:												
Daklos----------	0-2	Gravelly loamy fine sand, extremely gravelly loamy fine sand	SC-SM	A-1-b	10-20	20-30	60-70	55-65	30-40	10-20	18-28	2-7
	2-10	Very gravelly fine sandy loam	GC-GM	A-2-4	0	0	45-55	40-50	25-35	10-20	17-31	2-12
	10-31	Very gravelly fine sandy loam, extremely gravelly fine sandy loam	GC	A-2-4	0	25-35	35-45	30-40	15-30	10-15	16-30	2-12
	31-37	Bedrock	---	---	---	---	---	---	---	---	---	---
	37-62	Bedrock	---	---	---	---	---	---	---	---	---	---
Lazear, dry-----	0-11	Very gravelly loam	GC	A-7-6, A-2-6	0-4	0-13	44-59	42-58	36-55	26-41	31-42	12-19
	11-28	Parachannery loam	GC, CL	A-6	0	0	64-100	62-100	51-91	38-69	29-40	12-19
	28-53	Bedrock	---	---	---	---	---	---	---	---	---	---
22:												
Daklos----------	0-10	Very channery fine sandy loam, very channery sandy loam, extremely channery fine sandy loam	GC	A-2-4	0	23-38	40-69	39-68	28-55	13-29	20-30	6-12
	10-35	Bedrock	---	---	---	---	---	---	---	---	---	---
Reef------------	0-14	Channery sandy loam, channery fine sandy loam, very channery loam	GC	A-6	0	24-38	39-68	38-68	32-65	24-49	18-30	4-12
	14-49	Channery sandy loam, channery fine sandy loam, very channery loam	GC	A-6	0	24-38	39-68	38-68	33-65	24-50	18-30	4-12
	49-74	Bedrock	---	---	---	---	---	---	---	---	---	---
23:												
Daklos----------	0-10	Very channery fine sandy loam, gravelly sandy loam, gravelly very fine sandy loam	SC	A-4	0	0-29	31-78	29-77	28-77	17-48	22-33	7-12
	10-20	Very channery fine sandy loam, gravelly sandy loam, very channery loam	GC	A-2-4	0-34	0-30	31-67	28-66	23-58	15-40	22-31	7-12
	20-45	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
23:												
Rizno	0-10	Channery fine sandy loam, gravelly sandy loam	SC	A-2-4	0	0-22	45-100	43-100	33-83	18-48	22-33	7-12
	10-35	Bedrock	---	---	---	---	---	---	---	---	---	---
24:												
Earlweed	0-3	Loamy fine sand	SM	A-2-4	0	0	100	100	70-80	20-45	10-30	1-5
	3-33	Loamy fine sand, fine sand	SC-SM	A-2-4	0	0	100	100	70-80	20-45	10-30	1-5
	33-76	Loamy fine sand, fine sand	SC-SM	A-2-4	0	0	100	100	70-80	20-45	10-30	1-5
	76-112	Loamy fine sand, fine sand	SC-SM	A-2-4	0	0	100	100	70-80	20-45	10-30	1-5
	112-152	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	70-80	20-45	10-30	1-5
Anasazi	0-3	Fine sandy loam	CL-ML	A-4	0	0	95-100	90-100	75-85	50	20-30	5-10
	3-20	Loamy fine sand, fine sandy loam	SC-SM	A-4	0	0	95-100	90-100	55-85	20-50	20-30	5-10
	20-43	Loamy fine sand, fine sandy loam	SC-SM	A-4	0	0	80-100	75-100	50-85	20-50	20-30	5-10
	43-74	Gravelly sandy loam, gravelly fine sandy loam	SC-SM	A-2-4	0	0	55-100	50-100	35-70	20-40	20-30	5-10
	74-99	Bedrock	---	---	---	---	---	---	---	---	---	---
25:												
Eslendo, saline	0-11	Silty clay loam, clay loam, silt loam	CL	A-4	0	0-10	88-100	88-100	83-100	70-100	24-46	9-25
	11-47	Silty clay loam, clay loam, parachannery silt loam	CL	A-6	0	0-21	100	100	89-100	75-95	26-46	10-25
	47-72	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
25:												
Happle, saline-sodic---	0-9	Very gravelly sandy loam, gravelly fine sandy loam	SC	A-2-4	0-5	6-11	51-73	49-72	44-70	16-29	20-31	6-12
	9-30	Very gravelly sandy loam, very gravelly fine sandy loam	GC	A-2-4	0-5	6-11	40-61	38-59	33-57	11-23	20-31	6-12
	30-51	Very cobbly sandy loam, cobbly fine sandy loam	SC	A-2-4	0-5	6-11	40-86	38-85	33-82	12-34	20-30	6-12
	51-72	Very cobbly fine sandy loam, gravelly very fine sandy loam	SC	A-6	0-5	6-11	39-85	37-85	34-85	20-53	20-30	6-12
	72-115	Very stony fine sandy loam, very stony loamy fine sand	SM	A-2-4	0-28	6-22	66-86	65-86	61-86	20-31	15-23	1-6
	115-200	Very gravelly fine sandy loam, gravelly fine sandy loam	SC	A-2-4	0-5	2-11	40-82	38-82	31-74	16-42	20-30	6-12
26:												
Foy family------	0-6	Clay loam, stony fine sandy loam, loam, gravelly sandy loam	SC	A-2-4	0-21	0-21	53-98	51-98	45-98	18-55	22-47	6-21
	6-33	Very gravelly clay loam, very stony fine sandy loam, extremely gravelly sandy loam, very gravelly loam	SC	A-2-4	0-40	8-40	25-79	22-78	20-78	9-46	24-45	9-21
	33-54	Very gravelly clay loam, very cobbly sandy loam, very gravelly sandy loam, extremely gravelly loam	SC	A-2-4	0-40	7-40	25-72	22-71	17-66	8-38	24-45	9-21
	54-150	Extremely gravelly loam, very gravelly sandy loam, very stony fine sandy loam	GC	A-2-4	0-40	7-40	25-69	22-67	20-67	9-40	24-45	9-21

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
26:												
Whitesage family	0-7	Loam, gravelly fine sandy loam	SC	A-2-6	0	0	64-98	63-98	55-98	30-60	28-45	10-20
	7-28	Loam, gravelly sandy clay loam	SC	A-6	0	0	64-98	63-98	52-98	30-63	29-49	12-25
	28-43	Silt loam, silty clay loam, gravelly clay loam, loam, gravelly sandy clay loam	CL	A-6	0	0	64-98	63-98	53-98	40-79	29-49	12-25
	43-90	Silt loam, silty clay loam, gravelly clay loam, loam, gravelly sandy clay loam	CL	A-6	0	0	64-98	63-98	53-98	40-80	29-49	12-25
	90-153	Gravelly clay loam, silt loam, gravelly sandy clay loam, gravelly silty clay loam, loam	CL	A-7-6	0	0	64-98	63-98	54-98	47-90	29-47	12-25
27:												
Gladel	0-10	Fine sandy loam, sandy loam	SC-SM	A-4	0	0-9	68-100	67-100	48-82	28-52	20-35	3-12
	10-27	Sandy loam	SC-SM	A-4	0	0-29	67-100	65-100	50-87	25-50	18-33	3-12
	27-52	Bedrock	---	---	---	---	---	---	---	---	---	---
Plumasano	0-9	Sandy loam, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	83-99	41-54	21-35	4-12
	9-28	Sandy loam, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	83-100	41-55	18-33	4-12
	28-105	Sandy loam, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	84-100	41-54	18-33	4-12
	105-197	Sandy loam, fine sandy loam	SC-SM	A-4	0	0	93-100	93-100	84-100	37-52	17-33	3-12
28:												
Goblin	0-6	Very fine sandy loam, sandy loam, fine sandy loam	SC-SM	A-4	0	0	100	100	91-96	38-43	20-28	6-10
	6-22	Fine sandy loam, sandy loam	SC-SM	A-4	0	0	100	100	76-81	36-41	20-27	6-10
	22-40	Bedrock	---	---	---	---	---	---	---	---	---	---
	40-65	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
29:												
Goblin----------	0-8	Gypsiferous silt loam, very parachannery gypsiferous silty clay loam	CL	A-7-6, A-6, A-4	0	0-30	74-100	73-100	63-100	56-91	27-42	10-22
	8-38	Gypsiferous silt loam, extremely parachannery gypsiferous silty clay loam	CL	A-7-6, A-6, A-4	0	0-7	94-100	94-100	80-99	70-88	26-42	10-22
	38-63	Bedrock	---	---	---	---	---	---	---	---	---	---
Clapper---------	0-5	Very cobbly fine sandy loam	SC, SC-SM, GC, GM, GC-GM	A-4, A-2-4	0-6	46-54	61-92	59-92	53-92	23-50	17-28	2-9
	5-60	Very cobbly fine sandy loam	GC-GM, GC, GM	A-4, A-2-4, A-1-b	4-8	28-45	54-75	52-74	48-74	22-41	16-28	2-10
	60-82	Gravelly fine sandy loam, sandy loam	SC, SM, SC-SM	A-2-4, A-4	0	0-12	71-80	70-80	61-80	24-42	16-28	2-10
	82-112	Gravelly fine sandy loam, sandy loam	SC, SM, SC-SM	A-4, A-2-4	0	0-4	72-87	71-86	61-86	22-40	16-28	2-10
	112-137	Bedrock	---	---	---	---	---	---	---	---	---	---
30:												
Goblin----------	0-19	Sandy loam, fine sandy loam	SC-SM	A-4	0	0	78-100	77-100	66-90	36-52	20-27	6-10
	19-44	Bedrock	---	---	---	---	---	---	---	---	---	---
Ivanpatch-------	0-13	Sandy loam, loamy fine sand	SC-SM	A-2-4	0	0	80-100	79-100	73-100	22-38	16-28	2-10
	13-43	Fine sandy loam, loamy fine sand	SM	A-2-4	0	0-10	89-100	88-100	83-100	26-39	16-28	2-10
	43-177	Fine sandy loam, loamy fine sand	SC-SM	A-2-4	0	0-11	72-100	71-100	65-100	19-37	16-27	2-10
31:												
Hanksville, saline-sodic---	0-7	Loam, silt loam	CL	A-6	0	0-4	88-100	88-100	80-100	74-94	29-40	12-19
	7-28	Silty clay loam, silt loam	CL	A-6	0	0-11	69-100	68-100	67-100	63-100	35-47	17-25
	28-95	Silt loam, silty clay loam	CL	A-7-6	0	0-11	69-100	68-100	62-100	58-95	35-47	17-25
	95-112	Silt loam, silty clay loam	CL	A-7-6	0	0-11	69-100	68-100	61-99	56-91	35-46	17-25
	112-137	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
31:												
Chipeta, saline-	0-10	Silt loam	CL	A-6	0	0-8	77-100	77-100	69-99	63-91	29-40	12-19
	10-39	Parachannery silty clay loam, silty clay loam	CL	A-7-6	0	0	100	100	92-100	87-97	41-52	21-29
	39-64	Bedrock	---	---	---	---	---	---	---	---	---	---
32:												
Hanksville, saline-sodic---	0-4	Silt loam	CL	A-6	0	0-4	96-100	96-100	93-100	87-98	31-40	13-19
	4-15	Silty clay loam	CL	A-6	0	0	100	100	96-100	90-98	37-47	19-25
	15-44	Parachannery silty clay loam	CL	A-7-6	0	0	100	100	95-100	88-96	37-47	19-25
	44-63	Extremely parachannery silt loam	CL	A-6	0	0	100	100	97-100	88-95	31-39	13-19
	63-88	Bedrock	---	---	---	---	---	---	---	---	---	---
Notal, saline-sodic---	0-8	Fine sandy loam	SC-SM	A-4	0	0	92-100	92-100	83-96	37-46	20-28	6-10
	8-26	Fine sandy loam	SC-SM	A-4	0	0	92-100	92-100	85-99	36-46	22-31	7-12
	26-121	Silt loam	CL	A-6	0	0	100	100	92-99	80-87	31-40	13-19
	121-152	Very parachannery silt loam	CL	A-6	0	0	100	100	91-98	80-87	31-39	13-19
	152-177	Bedrock	---	---	---	---	---	---	---	---	---	---
33:												
Kydestea--------	0-10	Very cobbly loam, very gravelly sandy loam, gravelly sandy clay loam	SC	A-2-6	0-9	0-38	38-68	35-66	28-60	15-35	27-41	9-17
	10-20	Very cobbly loam, extremely flaggy sandy loam	GC, SC	A-4	8-49	6-78	42-100	40-100	30-86	15-49	24-36	9-17
	20-45	Bedrock	---	---	---	---	---	---	---	---	---	---
Vessilla--------	0-13	Gravelly loam, channery sandy loam	SC	A-4	0-3	7-28	56-89	54-88	40-79	25-54	22-41	6-17
	13-30	Gravelly loam, parachannery sandy loam	CL-ML	A-4	0-3	0-15	71-100	70-100	54-91	34-63	20-37	6-17
	30-55	Bedrock	---	---	---	---	---	---	---	---	---	---
34:												
Kydestea--------	0-10	Very gravelly loam, cobbly sandy loam, very gravelly fine sandy loam	GC	A-2-6	0	0-18	42-59	40-57	34-55	19-34	27-41	9-17
	10-35	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
34:												
Vessilla--------	0-7	Loam, sandy loam, fine sandy loam	SC	A-4	14-20	0	100	100	88-94	49-55	26-37	9-13
	7-32	Bedrock	---	---	---	---	---	---	---	---	---	---
35:												
Lavodnas--------	0-3	Gypsiferous silt loam	CL	A-6	0	0	100	100	94-99	87-92	24-32	9-13
	3-17	Gypsiferous silt loam	CL	A-6	0	0	100	100	96-100	90-95	31-38	13-18
	17-26	Bedrock	---	---	---	---	---	---	---	---	---	---
	26-51	Bedrock	---	---	---	---	---	---	---	---	---	---
Retsabal--------	0-2	Silt loam	CL	A-4	0	0	100	100	96-100	86-91	24-32	9-13
	2-12	Fine gypsum material	CL	A-6	0	0	---	---	---	---	22-30	7-12
	12-37	Bedrock	---	---	---	---	---	---	---	---	---	---
36:												
Mathis, cool----	0-15	Very stony loamy fine sand, fine sandy loam	SC-SM	A-2-4	0-62	0-43	56-97	54-97	46-90	17-38	0-26	NP-6
	15-36	Extremely stony fine sand, very stony loamy fine sand	SM	A-2-4	6-54	6-38	40-82	37-81	34-80	12-32	0-23	NP-6
	36-180	Very bouldery fine sand, extremely cobbly loamy fine sand	GM	A-1-b	6-54	6-38	40-75	37-74	35-74	12-29	0-23	NP-6
	180-205	Bedrock	---	---	---	---	---	---	---	---	---	---
37:												
Metuck----------	0-25	Cobbly sandy loam, very gravelly fine sandy loam	GC	A-2-4	0	10-24	34-79	31-78	26-72	15-44	22-35	6-12
	25-37	Very gravelly loam, very cobbly sandy loam, very cobbly fine sandy loam	SC	A-6	0	15-42	34-79	31-79	26-73	15-45	20-35	6-13
	37-62	Bedrock	---	---	---	---	---	---	---	---	---	---
Vessilla--------	0-12	Loam, gravelly fine sandy loam, gravelly sandy loam	SC	A-2-6	0	0	54-100	52-100	36-79	19-47	22-37	6-13
	12-20	Loam, fine sandy loam, sandy loam	SC-SM	A-4	0	0	54-100	52-100	41-88	26-60	20-35	6-13
	20-45	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
38:												
Mezzo family----	0-10	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	92-97	27-32	0-26	NP-4
	10-51	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	92-99	27-34	0-23	NP-5
	51-200	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	94-100	17-24	0-23	NP-5
	200-225	Bedrock	---	---	---	---	---	---	---	---	---	---
39:												
Mido----------	0-11	Fine sand, loamy fine sand	SC-SM	A-2-4	0	0	100	100	91-96	27-32	0-25	NP-4
	11-38	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	92-97	29-34	0-22	NP-4
	38-115	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	91-96	27-32	0-21	NP-4
	115-155	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	92-97	30-35	0-21	NP-4
	155-163	Bedrock	---	---	---	---	---	---	---	---	---	---
	163-188	Bedrock	---	---	---	---	---	---	---	---	---	---
40:												
Mido----------	0-4	Fine sand	SM	A-2-4	0	0	85-100	85-100	79-97	12-18	0-22	NP-2
	4-24	Very fine sand, fine sand	SM	A-2-4	0	0	85-100	85-100	80-98	12-18	0-19	NP-2
	24-105	Fine sand, very fine sand	SM	A-4	0	0	85-100	85-100	84-100	36-46	0-19	NP-2
	105-120	Very fine sand, fine sand	SM	A-2-4	0	0	85-100	85-100	79-97	12-19	0-19	NP-2
	120-180	Very fine sand, fine sand	SM	A-2-4	0	0	85-100	85-100	79-97	12-18	0-19	NP-2
Strych----------	0-9	Very cobbly fine sandy loam, extremely cobbly fine sandy loam, cobbly fine sandy loam, very gravelly sandy loam	SC-SM	A-2-4	0-87	0-87	16-85	13-84	11-80	5-34	20-31	6-10
	9-45	Very cobbly fine sandy loam, cobbly fine sandy loam, very gravelly sandy loam	GC-GM	A-1-b	0-63	0-63	39-58	37-56	28-46	12-23	20-31	6-12
	45-180	Very gravelly coarse sandy loam, extremely gravelly coarse sandy loam	GW-GC	A-1-a	0-76	0-76	27-60	24-59	14-38	7-20	20-27	6-10

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
40:												
Reef	0-10	Very stony fine sandy loam, extremely cobbly very fine sandy loam	SC-SM	A-2-4	0-90	0-90	13-70	9-68	8-68	4-32	20-30	6-12
	10-35	Bedrock	---	---	---	---	---	---	---	---	---	---
41:												
Mikim	0-3	Very fine sandy loam	CL-ML	A-4	0	0	100	100	95-100	55-62	18-31	4-10
	3-19	Very fine sandy loam	CL	A-4	0	0	100	100	96-100	57-62	20-27	6-10
	19-107	Loam	CL	A-6	0	0	100	100	86-93	60-67	29-38	12-18
	107-132	Bedrock	---	---	---	---	---	---	---	---	---	---
Mivida, moist	0-6	Loamy fine sand, fine sandy loam, very fine sandy loam	SC	A-4	0	0	77-100	76-100	68-97	31-47	18-31	4-10
	6-89	Very fine sandy loam	CL	A-6	0	0	92-100	91-100	82-98	48-60	20-31	6-12
	89-180	Fine sandy loam, sandy clay loam, very fine sandy loam	CL	A-6	0	0	84-100	84-100	73-100	44-68	19-37	5-17
42:												
Milok, cool	0-18	Very fine sandy loam, gravelly fine sandy loam, sandy loam	SC-SM	A-4	0	0-49	53-100	51-100	39-86	20-50	18-33	4-12
	18-37	Gravelly fine sandy loam, cobbly sandy loam	SC	A-6	0	0-48	54-100	52-100	37-79	22-51	20-31	6-12
	37-57	Fine sandy loam, sandy loam	SC	A-4	0	0-48	54-100	52-100	38-81	23-53	20-31	6-12
	57-200	Fine sandy loam, sandy loam	SC	A-6	0	0-48	54-100	52-100	36-79	22-50	20-31	6-12
Clapper	0-9	Very fine sandy loam, loam, fine sandy loam, sandy loam	SC	A-6	0	0-48	54-100	52-100	42-90	23-53	20-33	6-12
	9-36	Sandy loam, fine sandy loam	SC	A-4	0-18	0-42	42-92	40-92	33-84	18-48	20-31	6-12
	36-58	Very cobbly sandy clay loam, very gravelly fine sandy loam, very gravelly sandy loam	GC	A-2-6	0-42	0-42	34-56	32-55	22-44	13-28	20-33	6-13
	58-180	Very gravelly fine sandy loam, very gravelly sandy loam, very gravelly sandy clay loam	GC	A-2-6	0-42	0-42	41-60	39-58	30-53	16-33	20-39	6-17

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
43:												
Milok, steep----	0-12	Fine sandy loam, very fine sandy loam, loam, gravelly sandy loam	SC	A-4	0	0	53-100	51-100	41-89	27-61	20-33	6-12
	12-40	Fine sandy loam, gravelly sandy loam, gravelly loam	CL	A-4	0	0-49	53-100	51-100	42-90	29-64	20-31	6-12
	40-180	Fine sandy loam, gravelly sandy loam, loam	CL	A-6	0	0-49	53-100	51-100	41-89	28-63	20-31	6-12
Strych----------	0-13	Very fine sandy loam, gravelly loam, sandy loam, cobbly fine sandy loam	SC	A-4	0	0-49	53-100	51-100	38-82	24-55	20-33	6-12
	13-35	Extremely stony fine sandy loam, very cobbly sandy loam, very gravelly loam	GC	A-4	0-40	0-40	28-62	25-60	20-54	14-39	20-31	6-12
	35-150	Extremely stony fine sandy loam, very cobbly sandy loam, extremely cobbly loam	GC	A-2-6	0-40	0-40	28-66	25-64	20-57	14-41	20-31	6-12
44:												
Mivida----------	0-16	Loamy fine sand	SC-SM, SM	A-4, A-2-4	0	0	94-100	93-100	86-100	26-37	0-26	NP-7
	16-56	Loamy fine sand	SC-SM, SM	A-4, A-2-4	0	0	94-100	93-100	83-99	26-37	0-26	NP-7
	56-96	Very fine sandy loam, fine sandy loam	CL, SC-SM, SC	A-4	0	0	87-100	86-100	75-100	43-65	18-29	4-10
	96-109	Gravelly fine sandy loam, fine sandy loam	SC-SM, SC	A-4, A-2-4	0	0	69-93	67-93	59-90	26-45	18-29	4-10
	109-162	Loamy sand, sandy loam	SC, SM	A-4, A-2-4	0	0	80-100	80-100	62-89	23-40	15-27	1-8
	162-184	Gravelly fine sandy loam	SC, SM, SC-SM	A-4, A-2-4	0	0-12	65-80	63-80	54-78	22-39	16-28	2-10
45:												
Mivida----------	0-10	Fine sandy loam, very fine sandy loam	CL	A-4	0	0	93-100	93-100	88-100	58-68	20-31	6-10
	10-56	Fine sandy loam, very fine sandy loam	CL	A-4	0	0	93-100	93-100	89-100	59-70	22-31	7-12
	56-85	Fine sandy loam, very fine sandy loam	CL	A-6	0	0	93-100	93-100	88-100	58-69	22-31	7-12
	85-120	Sandy loam, fine sandy loam, very fine sandy loam	SC	A-6	0	0	93-100	93-100	78-90	41-50	22-31	7-12
	120-150	Sandy loam, fine sandy loam, very fine sandy loam	SC	A-4	0	0	93-100	93-100	85-97	39-48	22-31	7-12

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
45:												
Gish	0-9	Loam	CL	A-6	0	0	93-100	93-100	81-94	65-77	31-42	13-19
	9-23	Loam	CL	A-6	0	0	93-100	93-100	82-95	66-78	31-40	13-19
	23-61	Silty clay, silty clay loam	CL	A-7-6	0	0	93-100	93-100	84-100	76-97	39-58	21-33
	61-115	Silty clay, silty clay loam	CH	A-7-6	0	0	93-100	92-100	80-100	72-93	39-58	21-33
	115-141	Silty clay, silty clay loam	CL	A-7-6	0	0	93-100	93-100	92-100	83-100	39-58	21-33
	141-160	Silty clay loam, silty clay, loam, clay loam	CH	A-7-6	0	0	93-100	92-100	71-100	63-93	31-57	13-33
	160-180	Silty clay, silty clay loam, silt loam	CL	A-6	0	0	93-100	93-100	85-100	77-100	31-57	13-33
Cannonville	0-10	Clay loam	CL	A-7-6	0	3-10	88-96	88-96	75-90	56-69	37-49	19-25
	10-34	Clay	CH	A-7-6	0	0	100	100	86-96	80-90	49-62	29-36
	34-77	Clay	CH	A-7-6	0	0	100	100	94-100	82-92	49-61	29-37
	77-102	Bedrock	---	---	---	---	---	---	---	---	---	---
46:												
Moab	0-9	Gravelly sandy loam	SC	A-2-4	0-48	0-48	54-100	52-100	38-82	20-46	20-33	6-12
	9-21	Very gravelly fine sandy loam, very stony sandy loam	GC	A-2-4	0-57	0-57	23-100	20-100	14-82	7-47	20-33	6-13
	21-43	Very stony loam, extremely stony sandy loam	GC	A-2-6	0-57	0-57	29-100	26-100	18-81	9-47	20-33	6-13
	43-180	Extremely stony loam, very stony sandy loam	GC	A-2-6	0-57	0-57	29-100	26-100	18-79	10-47	20-33	6-13
Abra family	0-9	Sandy loam, loam	CL	A-6	0	0	77-100	76-100	61-89	40-60	24-37	7-14
	9-33	Sandy loam, loam	CL	A-6	0	0	77-100	76-100	64-94	42-65	26-39	10-17
	33-92	Sandy loam, loam	CL	A-6	0	0-23	77-100	76-100	59-91	39-64	26-41	10-20
	92-117	Loam, sandy loam	SC	A-4	0	0-58	44-100	42-100	31-81	19-51	22-31	7-12
	117-142	Bedrock	---	---	---	---	---	---	---	---	---	---
47:												
Moclom, warm	0-5	Sandy loam, gravelly loamy sand	SC-SM	A-2-4	0	0	78-92	77-92	61-81	17-29	16-31	2-10
	5-22	Sandy loam, gravelly loamy sand	SC-SM	A-2-4	0	0	78-92	78-92	60-80	17-29	16-27	2-10
	22-47	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
48:												
Moenkopie, warm-	0-4	Very gravelly fine sandy loam	GC-GM	A-2-4	0	0	52-100	50-100	41-87	22-49	20-28	6-10
	4-17	Very gravelly fine sandy loam, very fine sandy loam	CL	A-4	0	0	38-86	35-85	31-83	20-55	20-30	6-12
	17-42	Bedrock	---	---	---	---	---	---	---	---	---	---
49:												
Moenkopie-------	0-5	Loamy fine sand	SC-SM	A-2-4	0	0	85-100	80-100	75-100	20-30	15-25	1-5
	5-13	Fine sandy loam, loam	CL	A-6	0	0	80-100	75-100	60-90	45-65	25-30	5-15
	13-20	Gravelly sandy loam, sandy loam	SC-SM	A-2-4	0	0	65-95	50-90	35-70	20-40	20-25	5-10
	20-45	Bedrock	---	---	---	---	---	---	---	---	---	---
50:												
Molen family----	0-8	Loam, fine sandy loam	SC, SM, SC-SM	A-2-4, A-4	0	0	87-100	86-100	78-100	33-50	18-29	3-10
	8-19	Loam, fine sandy loam	CL-ML, CL, SC, SC-SM	A-6, A-4	0	0	87-100	86-100	76-100	41-60	19-32	4-12
	19-31	Loam, fine sandy loam	SC, CL-ML, SC-SM, CL	A-4, A-6	0	0	87-100	86-100	79-99	44-60	22-31	7-11
	31-43	Loam	CL	A-4, A-6	0	0	79-100	78-100	70-99	50-73	25-36	9-15
	43-54	Fine sandy loam, loam	SC, CL	A-6, A-4	0	0	76-100	74-100	67-99	46-71	25-36	9-15
	54-79	Parachannery sandy clay loam, channery sandy clay loam, channery loam	CL, SC	A-6	0	7-13	71-86	70-85	59-82	36-54	27-39	11-19
	79-104	Bedrock	---	---	---	---	---	---	---	---	---	---
Lazear----------	0-8	Gravelly loam	SC, CL, GC	A-2-4, A-6	0	0-15	51-81	49-80	40-73	26-51	25-37	8-17
	8-18	Fine sandy loam, gravelly loam	GC, CL	A-6, A-4	0	0-10	55-83	53-83	44-76	31-56	27-39	10-19
	18-36	Loam, gravelly loam	GC, CL	A-6, A-4	0	0-10	55-100	53-100	46-96	33-72	27-39	10-19
	36-61	Bedrock	---	---	---	---	---	---	---	---	---	---
Gerst----------	0-8	Loam, gravelly loam	GC, SC	A-4, A-6	0	5-19	58-84	56-83	45-78	30-55	25-39	8-19
	8-28	Silt loam, loam, clay loam	CL	A-6	0-2	0-8	57-100	56-100	46-94	34-73	27-41	10-21
	28-33	Channery clay loam	CL	A-7-6	0	0-23	70-100	70-100	59-93	46-73	36-46	17-25
	33-58	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
51:												
Monue	0-5	Loamy fine sand, very fine sandy loam, silt loam, fine sandy loam, sandy loam	SC-SM	A-4	0	0-3	88-100	88-100	71-94	38-56	16-33	2-12
	5-15	Loamy fine sand, very fine sandy loam, silt loam, fine sandy loam, sandy loam	CL-ML	A-4	0	0	92-100	91-100	74-94	40-56	16-33	2-12
	15-72	Loamy fine sand, very fine sandy loam, fine sandy loam, sandy loam	CL	A-4	0	0	92-100	92-100	73-93	40-56	16-31	2-12
	72-190	Loamy fine sand, very fine sandy loam, fine sandy loam, sandy loam	CL	A-4	0	0	92-100	92-100	74-93	40-56	16-31	2-12
Fruitland	0-10	Gravelly sandy loam, very fine sandy loam, channery fine sandy loam	SC-SM	A-2-4	0	0-23	44-100	42-100	37-99	15-46	18-33	4-12
	10-29	Very gravelly sandy loam, very cobbly fine sandy loam	SC-SM	A-2-4	0-12	0-39	67-100	66-100	58-98	25-48	18-30	4-12
	29-60	Sandy loam, fine sandy loam	SC	A-4	0	0-11	70-100	69-100	59-95	25-46	18-31	4-12
	60-125	Sandy loam, fine sandy loam	SC-SM	A-4	0	0-11	70-100	69-100	61-98	26-48	18-30	4-12
	125-180	Sandy loam, fine sandy loam	SC-SM	A-4	0	0-11	70-100	69-100	63-100	28-51	18-30	4-12
52:												
Monue, saline-sodic	0-11	Fine sandy loam, very fine sandy loam	CL	A-4	0	0	92-100	92-100	86-99	47-57	20-31	6-10
	11-32	Very fine sandy loam, fine sandy loam	SC	A-4	0	0	92-100	92-100	81-95	32-41	20-29	6-10
	32-85	Very fine sandy loam, fine sandy loam	SC	A-4	0	0	92-100	92-100	81-95	32-41	20-29	6-10
	85-180	Very fine sandy loam	CL	A-6	0	0	92-100	92-100	82-98	49-61	20-30	6-12

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
52:												
Myton, saline-sodic---	0-10	Gravelly fine sandy loam, gravelly sandy loam	SC	A-2-4	0	0	59-78	58-77	43-61	23-35	20-28	6-10
	10-36	Gravelly fine sandy loam, very gravelly sandy loam	GC	A-2-4	0	0	31-92	28-92	21-73	11-42	20-27	6-10
	36-95	Gravelly fine sandy loam, very gravelly sandy loam	GC-GM	A-1-b	0	0	31-92	28-92	21-72	8-32	20-27	6-10
	95-180	Fine sandy loam, very gravelly fine sandy loam, gravelly sandy loam	SC-SM	A-4	0	0	31-92	28-92	25-88	11-41	20-27	6-10
Uzona, saline-sodic---	0-9	Very fine sandy loam	CL	A-4	0	0	100	100	97-100	57-60	22-31	7-10
	9-19	Very fine sandy loam	CL	A-4	0	0	100	100	96-99	56-59	22-28	7-10
	19-41	Silty clay loam	CL	A-7-6	0	0	100	100	94-100	89-97	37-47	19-25
	41-80	Silt loam, silty clay loam	CL	A-6	0	0	100	100	94-100	83-100	29-47	12-25
	80-125	Silty clay	CH	A-7-6	0	0	100	100	93-100	90-100	45-57	25-33
	125-180	Silty clay	CH	A-7-6	0	0	100	100	89-99	86-96	45-57	25-33
53:												
Monue-----------	0-9	Fine sandy loam	SC-SM	A-4	0	0	88-100	87-100	80-100	37-53	16-28	2-10
	9-32	Fine sandy loam, loam	CL	A-4	0	0	66-100	64-100	60-99	40-67	20-28	6-10
	32-115	Fine sandy loam	CL-ML	A-4	0	0	100	100	96-100	48-53	20-28	6-10
	115-192	Fine sand, sand, loamy fine sand, loamy sand, fine sandy loam	SM	A-2-4	0	0	60-100	58-100	45-82	16-33	0-21	NP-4
Sheppard--------	0-12	Loamy fine sand, loamy sand	SM	A-2-4	0	0	100	100	74-78	22-26	0-20	NP-2
	12-80	Fine sand, sand, loamy sand, loamy coarse sand	SM	A-2-4	0	0	100	100	74-78	22-26	0-19	NP-2
	80-150	Coarse sand, sandy loam, loamy sand	SM	A-2-4	0	0	100	100	75-80	25-30	0-20	NP-3

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
54:												
Mulford---------	0-6	Sandy clay loam, clay loam, silt loam, silty clay loam, loam	CL	A-7-6	0	0	77-100	76-100	69-100	60-89	31-45	13-21
	6-43	Silt loam, clay loam, loam, sandy clay loam	CL	A-6	0	0	70-100	69-100	58-95	47-79	31-43	13-21
	43-68	Sandy clay loam, clay loam, silt loam, loam	CL	A-6	0	0	70-100	69-100	58-94	44-74	31-43	13-21
	68-96	Silt loam, clay loam, gravelly loam, sandy clay loam	GC	A-6	0	0-36	45-100	43-100	36-95	27-72	31-43	13-21
	96-159	Silty clay loam, silty clay, gravelly loam, silt loam, very fine sandy loam	GC	A-6	0	0-43	59-100	57-100	44-100	30-82	22-50	6-29
55:												
Mussentuchit----	0-11	Very fine sandy loam, fine sandy loam	SC-SM, SM	A-4	0	0-8	83-100	83-100	75-100	38-56	0-28	NP-9
	11-31	Fine sandy loam	SM, SC-SM, SC	A-4, A-2-4	0	0	83-100	83-100	67-94	23-40	15-29	1-11
	31-70	Fine sandy loam	SC-SM, SM, SC	A-4	0	0	100	100	82-94	28-40	15-29	1-11
	70-100	Bedrock	---	---	---	---	---	---	---	---	---	---
	100-125	Bedrock	---	---	---	---	---	---	---	---	---	---
Goblin----------	0-7	Gypsiferous loam, gypsiferous fine sandy loam	CL-ML, ML, CL	A-6, A-4	0	0	100	100	77-90	54-67	0-31	NP-12
	7-20	Parachannery gypsiferous loam, gypsiferous fine sandy loam	CL-ML, ML, CL	A-6	0	0	100	100	76-89	53-66	16-30	1-12
	20-28	Bedrock	---	---	---	---	---	---	---	---	---	---
	28-53	Bedrock	---	---	---	---	---	---	---	---	---	---
Swell family----	0-8	Very fine sandy loam, loamy very fine sand	SM, ML, CL-ML	A-4	0	0	82-100	81-100	69-95	39-59	0-26	NP-7
	8-20	Fine sandy loam, very fine sandy loam	ML, CL, CL-ML	A-4	0	0	87-100	86-100	80-100	53-71	18-28	3-9
	20-69	Fine sandy loam, very fine sandy loam	CL, SC-SM, CL-ML	A-4	0	0	77-100	76-100	69-98	44-65	19-27	4-8
	69-165	Very fine sandy loam, fine sandy loam	SC-SM, CL	A-4	0	0	79-100	78-100	66-92	37-55	18-26	4-8
	165-218	Fine sandy loam	SC-SM, CL, SC	A-4, A-6	0	0	79-100	78-100	64-93	36-60	20-31	6-12
	218-243	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
56:												
Nepalto---------	0-5	Very gravelly sandy loam	GC-GM	A-2-4	0-12	6-12	36-56	33-54	22-43	8-20	10-30	1-15
	5-18	Very gravelly sandy loam, gravelly sandy loam	SC-SM	A-1-b	0-15	0-15	40-80	35-75	25-50	15-30	10-30	1-15
	18-76	Extremely gravelly loamy sand, very gravelly loamy coarse sand	GW-GC	A-1-a	0-15	10-15	30-55	25-50	15-35	5-15	10-30	1-15
	76-119	Extremely gravelly loamy sand, very gravelly loamy coarse sand	SP-SM	A-1-b	0-15	10-15	30-55	25-50	15-35	5-15	10-30	1-15
	119-152	Very gravelly loam, gravelly sandy loam	GC	A-2-4	0-15	0-15	40-80	35-75	25-65	15-55	10-30	1-15
	152-163	Very gravelly loamy coarse sand, very stony sandy loam	GC-GM	A-2-4	0-25	10-15	40-60	35-55	25-40	5-25	10-30	1-15
57:												
Nizhoni---------	0-5	Loamy fine sand, fine sandy loam	SC	A-4	0	0	86-100	86-100	72-94	27-42	18-33	2-10
	5-20	Fine sandy loam, gravelly fine sandy loam	SC	A-4	0	0	74-100	73-100	63-95	30-49	18-29	4-10
	20-45	Bedrock	---	---	---	---	---	---	---	---	---	---
58:												
Nizhoni---------	0-6	Loam, sandy clay loam, fine sandy loam	SC-SM	A-4	0	0	80-100	79-100	72-100	35-56	20-35	6-15
	6-31	Bedrock	---	---	---	---	---	---	---	---	---	---
59:												
Nizhoni---------	0-8	Fine sandy loam, loamy fine sand	SM	A-2-4	0	0-6	81-100	81-100	76-98	23-33	17-27	1-4
	8-25	Fine sandy loam, loamy fine sand	SM	A-2-4	0	0-6	81-100	81-100	75-96	23-32	15-22	1-4
	25-37	Loamy fine sand, fine sandy loam	SC-SM	A-4	0	0-7	81-100	80-100	69-90	26-36	15-22	1-4
	37-62	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
59:												
Pinepoint, dry--	0-10	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	93-96	29-32	0-21	NP-3
	10-42	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	91-95	27-31	0-21	NP-3
	42-120	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	95-99	17-21	0-21	NP-3
	120-165	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	100	91-95	27-31	0-21	NP-3
	165-190	Bedrock	---	---	---	---	---	---	---	---	---	---
60:												
Notom-----------	0-20	Fine sand	SM	A-2-4	0-22	0-22	24-100	21-100	19-99	3-21	0-22	NP-4
	20-57	Extremely gravelly sand	GP	A-1-a	0-22	0-22	24-100	21-100	16-83	2-17	0-21	NP-4
	57-200	Extremely gravelly fine sand	GP	A-1-a	0-22	0-22	24-100	21-100	19-99	3-21	0-21	NP-4
Begay, moist----	0-10	Fine sandy loam	SC	A-4	0	0	92-100	92-100	82-94	32-40	20-31	6-10
	10-31	Fine sandy loam	SC	A-4	0	0	92-100	92-100	84-95	38-44	24-31	9-12
	31-75	Fine sandy loam	SC	A-4	0	0	92-100	92-100	85-96	40-47	24-31	9-12
	75-110	Very fine sandy loam	CL	A-6	0	0	92-100	92-100	88-99	54-62	24-31	9-12
	110-200	Fine sandy loam	SC	A-4	0-7	3-14	83-95	82-95	73-92	29-41	20-30	6-12
Bowington-------	0-12	Fine sand	SM	A-2-4	0	0	93-100	92-100	85-96	13-18	0-19	NP-2
	12-40	Fine sand, loamy fine sand	SC-SM	A-2-4	0	0	79-100	78-100	69-95	19-31	0-21	NP-4
	40-200	Fine sand, loamy fine sand	SC-SM	A-2-4	0	0	56-100	54-100	47-95	13-31	0-21	NP-4
61:												
Notom-----------	0-12	Loamy fine sand	SM	A-2-4	0-47	0-47	54-100	52-100	49-99	15-35	0-25	NP-4
	12-35	Stony loamy fine sand	SM	A-2-4	0-47	0-47	54-100	52-100	49-99	15-35	0-21	NP-4
	35-38	Loamy fine sand	SM	A-2-4	0	0-22	78-100	77-100	72-98	22-35	0-25	NP-4
	38-150	Extremely stony fine sand, very stony loamy coarse sand, extremely stony loamy sand	SM	A-2-4	27-46	20-46	43-100	41-100	39-99	12-35	0-21	NP-4

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
61: Aquic Torrifluvents--	0-10	Loamy very fine sand, fine sand, loamy fine sand	SM	A-2-4	0	0	78-100	77-100	71-97	19-29	0-23	NP-3
	10-30	Loamy very fine sand, fine sand, loamy fine sand	SM	A-2-4	0	0	78-100	77-100	71-97	19-29	0-20	NP-3
	30-44	Fine sand, loamy fine sand, loamy very fine sand	SM	A-4	0	0	78-100	77-100	73-100	32-46	0-20	NP-3
	44-70	Very gravelly fine sand, gravelly loamy very fine sand, gravelly loamy coarse sand, gravelly loamy fine sand	SP-SM	A-1-b	0	0	41-79	38-78	20-45	6-15	0-20	NP-3
	70-150	Very gravelly fine sand, gravelly loamy very fine sand, very gravelly loamy coarse sand, loamy fine sand	GP-GM	A-1-a	0	0	41-79	38-78	20-44	6-17	0-20	NP-3
62: Parkwash--------	0-3	Loamy fine sand, fine sand	SM	A-2-4	0	0	88-100	85-100	80-100	11-23	0-26	NP-7
	3-14	Loamy fine sand, fine sand	SM	A-2-4	0	0	88-100	85-100	79-100	11-23	0-26	NP-7
	14-39	Bedrock	---	---	---	---	---	---	---	---	---	---
63: Pherson family--	0-20	Very channery loamy fine sand, sandy loam, fine sandy loam	SC-SM	A-4	0-20	0-37	59-100	58-100	50-92	20-40	16-26	2-6
	20-80	Very channery loamy fine sand, very stony sandy loam, very channery sandy loam	SC-SM	A-2-4	0-39	0-68	22-77	19-77	17-71	7-30	16-23	2-6
	80-150	Very gravelly fine sandy loam, very stony sandy loam, extremely cobbly loamy fine sand	GW-GM	A-1-a	0-38	0-66	20-72	17-71	16-71	6-29	16-25	2-7

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
63:												
Sandyranch------	0-5	Loamy sand, sandy loam, loamy fine sand, fine sand	SM	A-2-4	0	0	93-100	93-100	86-97	26-33	0-26	NP-6
	5-31	Fine sand, loamy fine sand	SM	A-2-4	0	0	81-100	80-100	74-97	23-33	0-23	NP-6
	31-65	Fine sand, loamy fine sand	SC-SM	A-2-4	0	0	81-100	80-100	72-96	22-33	0-23	NP-6
	65-180	Fine sand, loamy fine sand	SM	A-2-4	0	0	81-100	80-100	73-97	23-34	0-23	NP-6
64:												
Polychrome------	0-45	Extremely stony very fine sand	SM	A-1-b	45-55	20-30	70-80	65-75	45-55	15-25	0-25	NP-4
	45-80	Extremely cobbly fine sandy loam	GP-GC	A-2-6	0-10	50-60	10-20	5-15	0-10	0-10	28-39	12-19
	80-105	Bedrock	---	---	---	---	---	---	---	---	---	---
Cerropelon family---------	0-2	Extremely stony loam, extremely bouldery loam	GC-GM	A-2-4	65-75	20-30	30-40	25-35	20-30	15-25	21-33	4-12
	2-45	Very gravelly loam	GC	A-2-4	0	5-15	40-50	35-45	30-40	20-30	20-31	4-12
	45-82	Clay loam	CL	A-6	0	0	80-90	75-85	70-80	55-65	29-45	12-25
	82-107	Bedrock	---	---	---	---	---	---	---	---	---	---
65:												
Querencia, saline-sodic---	0-7	Silty clay loam, loam, silt loam	CL	A-6	0	0	80-100	79-100	69-100	51-82	29-49	12-25
	7-30	Silty clay loam, loam, silt loam	CL	A-6	0	0-11	69-100	68-100	57-100	44-81	29-47	12-25
	30-75	Silty clay loam, sandy loam, silt loam, loam	SC	A-2-6	0	0-11	69-100	68-100	51-92	24-52	29-46	12-25
	75-140	Very parachannery silty clay loam, loam, silt loam	CL	A-7-6	0	0-10	65-100	64-100	53-100	49-93	29-46	12-25
	140-165	Bedrock	---	---	---	---	---	---	---	---	---	---
Lybrook, saline-sodic---	0-6	Silty clay loam, silt loam	CL	A-7-6	0	0-7	65-100	63-100	53-100	50-96	29-49	12-25
	6-49	Silty clay, silty clay loam	CH	A-7-6	0	0	100	100	84-99	79-94	41-58	21-33
	49-100	Very paragravelly silty clay loam, silty clay, silty clay loam	CL	A-7-6	0	0	100	100	96-100	92-100	45-61	25-37
	100-125	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
66:												
Radnik----------	0-20	Fine sandy loam, gravelly loamy fine sand, very fine sandy loam, sandy loam	CL	A-4	0	0-48	53-100	51-100	47-100	24-55	17-31	3-10
	20-95	Gravelly loamy fine sand, loamy sand, sandy loam, fine sandy loam, very fine sandy loam	SC-SM	A-4	0	0-47	54-100	52-100	45-93	19-43	16-25	2-7
	95-150	Gravelly loamy fine sand, loamy sand, sandy loam, fine sandy loam, very fine sandy loam	SC-SM	A-4	0	0-47	54-100	52-100	46-95	18-41	16-25	2-7
	150-165	Gravelly loamy coarse sand, very gravelly loamy sand	SM	A-1-b	0	0-43	41-100	38-100	20-59	7-26	0-21	NP-4
Kwakina---------	0-10	Loamy fine sand, fine sand, fine sandy loam, very fine sandy loam, sandy loam	CL-ML	A-4	0	0-23	77-100	76-100	68-98	37-57	0-26	NP-6
	10-32	Loamy fine sand, fine sand, sandy loam, fine sandy loam, very fine sandy loam	SC-SM	A-4	0	0-22	79-100	78-100	71-99	27-42	0-23	NP-6
	32-95	Sandy loam, loamy fine sand, fine sandy loam, loamy sand, loamy very fine sand	SM	A-2-4	0	0-22	78-100	77-100	60-83	24-36	0-21	NP-4
	95-135	Fine sandy loam, loamy fine sand, loamy very fine sand, sandy loam, loamy sand	SC-SM	A-4	0	0-23	78-100	77-100	55-76	25-37	0-21	NP-4
	135-150	Very gravelly loamy sand, gravelly loamy coarse sand	SM	A-1-b	0	0-61	41-100	38-100	20-57	7-24	0-21	NP-4

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
66:												
Pherson family--	0-27	Gravelly fine sandy loam, fine sandy loam, very fine sandy loam	ML	A-4	0	0-48	53-100	51-100	49-100	25-54	16-26	2-6
	27-80	Very cobbly fine sandy loam, very cobbly sandy loam, extremely gravelly coarse sandy loam	GP	A-1-a	0	0-93	10-100	6-100	4-62	2-33	16-23	2-6
	80-117	Fine sandy loam	SM	A-2-4	0	0-6	72-100	71-100	61-91	26-42	16-23	2-6
	117-150	Very gravelly sandy loam, very gravelly fine sandy loam	GM	A-1-b	0	0	10-53	6-51	4-40	2-19	16-23	2-6
67:												
Radnik----------	0-13	Loamy sand, loamy fine sand, fine sandy loam	SC-SM	A-4	0	0-23	78-100	77-100	67-98	28-48	15-31	1-10
	13-24	Loamy sand, loamy fine sand, fine sandy loam	SC-SM	A-4	0	0-23	78-100	77-100	65-95	27-46	15-31	1-10
	24-73	Loamy sand, coarse sandy loam, fine sandy loam, loamy fine sand	SC-SM	A-4	0	0-23	78-100	77-100	65-94	27-45	15-26	1-8
	73-148	Loamy sand, coarse sandy loam, fine sandy loam, loamy fine sand	SC-SM	A-4	0	0-23	78-100	77-100	65-93	26-43	15-26	1-8
	148-185	Loamy sand, coarse sandy loam, fine sandy loam, loamy fine sand	SC	A-4	0	0-47	54-100	52-100	44-93	17-41	15-26	1-8
Notom----------	0-2	Fine sand	SM	A-2-4	0	0	100	100	95-100	25-31	0-21	NP-4
	2-15	Gravelly loamy fine sand	SM	A-2-4	0	0-10	18-100	15-100	14-100	5-38	0-21	NP-4
	15-180	Very cobbly loamy fine sand	GM	A-2-4	0	13-36	12-69	8-68	7-68	3-26	0-21	NP-4
Oxyaquic Torrifluvents--	0-39	Loamy fine sand	SM	A-2-4	0	0	92-100	92-100	86-98	27-34	0-21	NP-3
	39-67	Fine sandy loam, fine sand, loamy fine sand	SM	A-2-4	0	0-75	28-100	25-100	23-97	8-36	0-20	NP-3
	67-135	Fine sandy loam, fine sand, extremely cobbly loamy fine sand	GM	A-1-b	0	0-75	28-100	25-100	22-95	8-36	0-20	NP-3
	135-150	Fine sandy loam, fine sand, extremely cobbly loamy fine sand	GM	A-1-b	0	0-75	28-100	25-100	22-95	8-36	0-20	NP-3

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
68:												
Razito----------	0-3	Sand	SM	A-2-4	0	0	85-100	80-100	60-85	10-20	0-25	NP-5
	3-13	Fine sand, gravelly sand, sand	SM	A-2-4	0	0	70-100	65-100	50-85	10-20	0-20	NP-5
	13-18	Fine sand, gravelly sand, sand	SM	A-2-4	0	0	70-100	65-100	60-100	10-25	0-20	NP-5
	18-91	Sand, fine sand, gravelly sand	SM	A-2-4	0	0	70-100	65-100	60-100	10-25	0-20	NP-5
	91-102	Sand, gravelly sand, fine sand	SM	A-2-4	0	0	70-100	65-100	60-100	10-25	0-20	NP-5
	102-152	Gravelly sand, fine sand, sand	SM	A-2-4	0	0	70-100	65-100	50-85	10-20	0-20	NP-5
69:												
Reef------------	0-9	Very channery fine sandy loam, channery sandy loam	SC	A-4	0	0-33	28-90	25-90	18-72	10-45	18-33	4-12
	9-43	Very channery fine sandy loam, channery sandy loam, extremely gravelly loam	GC	A-2-4	0	9-32	20-65	17-64	13-57	9-39	18-31	4-12
	43-68	Bedrock	---	---	---	---	---	---	---	---	---	---
Retsabal--------	0-10	Gypsiferous fine sandy loam, gypsiferous sandy loam, gypsiferous loamy sand	SM	A-2-4	0	0	76-100	75-100	58-90	21-41	0-31	NP-10
	10-35	Bedrock	---	---	---	---	---	---	---	---	---	---
70:												
Reef------------	0-10	Extremely channery loam, gravelly sandy loam, very channery fine sandy loam	GC	A-2-4	3-15	8-34	38-93	36-93	31-87	19-54	22-33	7-12
	10-25	Very channery loam, gravelly sandy loam, extremely flaggy fine sandy loam	GC	A-2-6	3-46	2-67	18-86	15-86	13-78	7-47	22-31	7-12
	25-50	Bedrock	---	---	---	---	---	---	---	---	---	---
71:												
Reef------------	0-5	Very channery fine sandy loam, very channery sandy loam	SC	A-2-4	0	22-38	38-72	37-72	25-57	14-35	18-30	3-12
	5-29	Very channery sandy loam	GC	A-2-4	0	22-38	38-72	37-72	25-57	14-35	18-30	3-12
	29-54	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
72:												
Reef	0-10	Extremely channery fine sandy loam, very channery fine sandy loam, very channery loam	GC	A-4	0	20-40	30-70	30-70	25-65	20-50	20-35	5-15
	10-33	Bedrock	---	---	---	---	---	---	---	---	---	---
	33-58	Bedrock	---	---	---	---	---	---	---	---	---	---
73:												
Reef	0-10	Very gravelly fine sandy loam, very gravelly sandy loam	GC-GM	A-1-b	0	0	22-57	18-56	13-44	5-20	18-27	4-10
	10-35	Bedrock	---	---	---	---	---	---	---	---	---	---
74:												
Reef, warm	0-10	Very gravelly sandy loam, extremely gravelly fine sandy loam	GP-GC	A-2-4	0	0-29	17-57	14-56	12-54	5-26	18-30	4-12
	10-35	Bedrock	---	---	---	---	---	---	---	---	---	---
Lemrac	0-9	Sandy loam, fine sandy loam, very fine sandy loam	CL-ML	A-4	0	0-7	77-100	76-100	71-100	38-63	16-33	2-12
	9-30	Very paragravelly sandy loam, fine sandy loam, paragravelly very fine sandy loam	CL-ML	A-4	0	0	57-100	55-100	52-100	28-64	16-31	2-12
	30-52	Very paragravelly sandy loam, paragravelly very fine sandy loam, paragravelly fine sandy loam	CL-ML	A-4	0	0	57-100	55-100	51-100	29-65	16-31	2-12
	52-80	Paragravelly very fine sandy loam, paragravelly fine sandy loam, very parachannery sandy loam	CL-ML	A-4	0	0	56-100	54-100	50-100	29-66	16-30	2-12
	80-105	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
75:												
Reef	0-8	Very channery fine sandy loam, very channery sandy loam, gravelly very fine sandy loam, very channery loam	GC-GM	A-4	0	0-33	27-82	25-81	23-81	17-67	22-39	7-19
	8-20	Very channery sandy loam, very channery loam, very flaggy very fine sandy loam, very gravelly fine sandy loam	CL	A-6	0-37	0-62	27-94	25-94	22-94	15-72	22-38	7-19
	20-45	Bedrock	---	---	---	---	---	---	---	---	---	---
Rizno	0-10	Loam, channery sandy loam, gravelly fine sandy loam	SC	A-4	0	0-21	50-94	48-93	41-93	23-62	20-39	6-19
	10-35	Bedrock	---	---	---	---	---	---	---	---	---	---
76:												
Remorris	0-7	Loam, sandy loam	SC	A-4	0	0-7	92-100	92-100	71-90	39-56	22-39	7-17
	7-20	Sandy loam	SC	A-4	0	0	100	100	76-86	46-56	24-37	9-17
	20-45	Very parachannery silt loam, paragravelly loam, sandy loam	SC	A-4	0	0	100	100	75-85	45-55	24-36	9-17
	45-70	Bedrock	---	---	---	---	---	---	---	---	---	---
77:												
Remorris, strongly alkaline	0-5	Very fine sandy loam, fine sandy loam, very channery loam, channery silty clay loam	GC	A-6	0	0-25	67-100	66-100	53-100	36-75	26-49	10-25
	5-17	Fine sandy loam, extremely parachannery sandy loam, very parachannery silty clay loam, parachannery clay loam, very paragravelly loam	CL	A-6	0	0	100	100	80-97	63-80	29-46	12-25
	17-42	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
78:												
Remorris--------	0-9	Very gravelly fine sandy loam, very gravelly sandy loam, channery loam	CL	A-6	0	0-30	33-100	30-100	23-89	15-64	24-42	9-19
	9-27	Very parachannery fine sandy loam, very paragravelly loam, extremely paragravelly clay loam, very paragravelly sandy loam	CL	A-6	0	0-19	29-100	27-100	19-90	13-65	22-42	7-21
	27-49	Very paragravelly sandy loam, very parachannery fine sandy loam, extremely paragravelly loam, extremely paragravelly clay loam	CL	A-6	0	0-19	30-100	27-100	20-92	13-67	22-42	7-21
	49-60	Bedrock	---	---	---	---	---	---	---	---	---	---
	60-85	Bedrock	---	---	---	---	---	---	---	---	---	---
Milok, extremely stony	0-11	Loam, fine sandy loam, sandy loam	SC	A-4	0	0-16	77-100	76-100	65-97	29-51	18-35	4-13
	11-38	Very fine sandy loam, loam, gravelly loam, gravelly sandy loam	CL	A-6	0	0-14	75-100	74-100	58-91	37-62	20-34	6-15
	38-92	Very fine sandy loam, gravelly sandy loam, gravelly loam	CL	A-4	0	0	48-100	46-100	43-100	25-66	20-34	6-15
	92-113	Very gravelly very fine sandy loam, loam, sandy loam, fine sandy loam	SC	A-4	0	0	43-100	40-100	36-100	17-56	20-36	6-17
	113-138	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
79:												
Remorris	0-7	Parachannery clay loam, channery sandy loam, gravelly loam	GC	A-6	0	0-22	47-100	45-100	38-98	26-72	29-47	12-23
	7-23	Parachannery silty clay loam, very paragravelly loam, very paragravelly clay loam	CL	A-6	0	0	100	100	79-93	59-73	29-44	12-23
	23-41	Parachannery silty clay loam, very paragravelly loam, very parachannery clay loam	CL	A-6	0	0	100	100	80-94	59-73	29-44	12-23
	41-66	Bedrock	---	---	---	---	---	---	---	---	---	---
Peachsprings, strongly saline	0-9	Loam, very fine sandy loam, fine sandy loam	SC-SM	A-4	0	0	78-100	77-100	67-93	37-55	22-33	7-12
	9-30	Sandy clay loam, loam, sandy loam	SC	A-4	0	0	78-100	77-100	61-89	40-62	24-39	9-17
	30-115	Sandy clay loam, very fine sandy loam, loam	CL	A-6	0	0	77-100	76-100	65-94	52-77	29-39	12-19
	115-185	Sandy clay loam, very fine sandy loam, loam	CL	A-6	0	0	77-100	76-100	65-94	48-72	29-39	12-19
80:												
Retsabal	0-3	Loam	CL	A-4	0	0	100	100	75-90	53-68	0-29	NP-11
	3-15	Fine gypsum material	CL-ML	A-4	0	0	---	---	---	---	0-29	NP-11
	15-40	Bedrock	---	---	---	---	---	---	---	---	---	---
Lemrac	0-10	Fine gypsum material	SM	A-2-4	0	0	100	100	92-100	31-43	0-26	NP-8
	10-37	Error	SC-SM	A-2-4	0	0	---	---	---	---	15-25	1-7
	37-56	Error	SC-SM	A-2-4	0	0	---	---	---	---	15-25	1-7
	56-81	Bedrock	---	---	---	---	---	---	---	---	---	---
81:												
Rizno	0-9	Fine sand	SM	A-2-4	0	0	100	100	95-98	18-21	15-24	1-4
	9-20	Fine sand	SM	A-2-4	0	0	100	100	94-97	17-20	15-20	1-4
	20-40	Fine sandy loam	SC-SM	A-4	0	0	100	100	89-95	35-41	20-28	6-10
	40-65	Bedrock	---	---	---	---	---	---	---	---	---	---
Mido, warm	0-13	Fine sand	SM	A-2-4	0	0	100	100	94-99	13-18	0-24	NP-4
	13-53	Fine sand	SM	A-2-4	0	0	100	100	94-100	13-19	0-21	NP-4
	53-180	Fine sand	SM	A-2-4	0	0	100	100	94-99	16-21	0-21	NP-4

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
82:												
Rizno	0-5	Gravelly sandy loam	SC-SM	A-1-b	0	0	60-80	55-75	40-60	15-30	20-30	5-10
	5-10	Sandy loam, channery sandy loam	SC	A-2-4	0	0	65-90	60-90	45-70	20-35	20-30	5-15
	10-14	Bedrock	---	---	---	---	---	---	---	---	---	---
	14-39	Bedrock	---	---	---	---	---	---	---	---	---	---
83:												
Rizno, warm	0-6	Gravelly sandy loam, gravelly fine sandy loam	SC-SM	A-2-4	0	0	57-93	56-93	49-88	19-38	18-31	3-10
	6-26	Very fine sandy loam	CL	A-6	0	0	57-93	55-93	51-93	33-63	20-30	6-12
	26-51	Bedrock	---	---	---	---	---	---	---	---	---	---
84:												
Arches	0-3	Fine sand	SM	A-2-4	0	0	95-100	90-100	70-80	30-35	0-20	NP-5
	3-28	Sand, loamy fine sand, fine sand	SM	A-2-4	0	0	95-100	90-100	45-80	5-35	0-20	NP-5
	28-53	Bedrock	---	---	---	---	---	---	---	---	---	---
85:												
Arches	0-10	Fine sand, loamy fine sand	SM	A-2-4	0	0	81-100	80-100	72-94	20-29	0-23	NP-3
	10-30	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	91-97	26-32	0-21	NP-4
	30-55	Bedrock	---	---	---	---	---	---	---	---	---	---
86:												
Daklos	0-10	Very gravelly fine sandy loam, very gravelly sandy loam	GC-GM	A-1-a	0	0-29	31-100	29-100	22-84	11-45	20-33	6-12
	10-22	Very gravelly fine sandy loam, extremely gravelly fine sandy loam, gravelly sandy loam	GC-GM	A-2-4	0	0-40	15-100	12-100	9-84	4-44	20-31	6-12
	22-47	Bedrock	---	---	---	---	---	---	---	---	---	---
Moclom	0-4	Gravelly loamy fine sand, fine sand, gravelly sand	SP-SM	A-1-b	0	0	41-100	38-100	29-82	3-15	0-25	NP-4
	4-11	Fine sand, gravelly loamy fine sand, gravelly sand, gravelly loamy sand	SP-SM	A-3	0	0	41-100	38-100	29-82	2-12	0-22	NP-4
	11-36	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
87:												
Myton	0-12	Very gravelly fine sandy loam	GC-GM	A-2-4	1-17	1-17	43-80	40-79	36-76	14-34	18-28	4-10
	12-60	Very stony fine sandy loam	SC	A-2-4	12-45	12-45	34-80	31-79	27-75	11-34	18-28	4-10
	60-180	Very stony fine sandy loam	SC	A-2-4	12-45	12-45	34-80	31-79	27-75	11-34	18-28	4-10
Somorent	0-5	Silt loam	CL	A-6	0	0	77-100	76-100	72-100	60-89	31-45	13-21
	5-15	Silty clay loam	CL	A-7-6	0	0	92-100	91-100	85-100	76-93	35-47	17-25
	15-32	Silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	35-47	17-25
	32-57	Bedrock	---	---	---	---	---	---	---	---	---	---
88:												
Nalcase	0-3	Loamy fine sand, fine sand	SP-SM	A-2-4	0	0	87-100	87-100	81-100	9-20	0-26	NP-6
	3-23	Loamy fine sand, fine sand	SP-SM	A-2-4	0	0-25	80-100	79-100	74-100	8-20	0-23	NP-6
	23-48	Bedrock	---	---	---	---	---	---	---	---	---	---
89:												
Needle	0-3	Sand	SP-SM	A-2-4	0	0	100	95-100	50-70	5-15	0-30	NP-5
	3-28	Sand, fine sand	SM	A-2-4	0	0	100	95-100	50-80	5-35	0-20	NP-5
	28-53	Bedrock	---	---	---	---	---	---	---	---	---	---
90:												
Mezzo family, dry	0-4	Loamy fine sand	SM	A-2-4	0	0	100	100	91-96	26-31	0-26	NP-4
	4-16	Loamy fine sand	SC-SM	A-2-4	0	0	100	100	89-94	23-28	0-24	NP-4
	16-58	Fine sand	SM	A-2-4	0	0	100	100	94-97	13-16	0-20	NP-2
	58-150	Fine sand	SM	A-2-4	0	0	100	100	94-97	13-16	0-20	NP-2
Strell family	0-9	Loamy fine sand	SM	A-2-4	0	0	100	100	93-96	27-30	0-24	NP-2
	9-20	Loamy fine sand	SM	A-2-4	0	0	100	100	93-95	28-30	0-20	NP-2
	20-45	Bedrock	---	---	---	---	---	---	---	---	---	---
91:												
Santrick	0-13	Loamy sand, fine sand, loamy fine sand	SM	A-2-4	0	0	93-100	93-100	84-98	28-37	0-21	NP-4
	13-51	Loamy sand, fine sand, loamy fine sand	SM	A-2-4	0	0	93-100	93-100	85-99	29-38	0-21	NP-4
	51-64	Loamy fine sand, fine sand, loamy sand	SM	A-2-4	0	0-13	87-100	87-100	79-98	20-31	0-21	NP-4
	64-89	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
91:												
Nalcase---	0-5	Loamy sand, fine sand, loamy fine sand	SM	A-2-4	0	0-13	87-100	86-100	78-98	26-37	0-21	NP-4
	5-18	Loamy sand, fine sand, loamy fine sand	SM	A-2-4	0	0-13	93-100	93-100	85-99	29-38	0-21	NP-4
	18-29	Fine sand, loamy fine sand, loamy sand	SM	A-2-4	0	0-13	87-100	87-100	65-82	22-33	0-21	NP-4
	29-54	Bedrock	---	---	---	---	---	---	---	---	---	---
92:												
Typic Torriorthents--	0-5	Channery loam	GC	A-6	0	0	60-80	55-75	50-75	40-55	20-40	10-15
	5-25	Very flaggy coarse sandy loam	GC-GM	A-1	0	30-45	55-85	50-80	35-55	15-25	20-30	5-10
	25-43	Extremely parachannery coarse sandy loam	SC-SM	A-2	0	0	100	100	55-65	25-35	20-30	5-10
	43-68	Bedrock	---	---	---	---	---	---	---	---	---	---
93:												
Rosced family---	0-7	Very gravelly fine sandy loam, sandy loam	SM	A-4	0-18	0-45	44-96	41-96	31-82	15-45	18-33	2-10
	7-26	Very cobbly fine sandy loam, very flaggy sandy loam	SC-SM	A-2-4	0-32	0-39	36-97	34-97	25-82	12-45	16-31	2-10
	26-60	Very cobbly loamy fine sand, extremely stony fine sandy loam, extremely stony sandy loam	SC	A-2-4	0-65	0-39	36-84	34-83	22-63	12-38	16-31	2-10
	60-180	Extremely bouldery sandy loam	GC-GM	A-1-b	0-54	0-54	35-87	33-86	24-67	11-33	16-24	2-6
Quezcan, sodic--	0-19	Silty clay, clay, sandy clay, sandy clay loam, clay loam, silty clay loam	CL	A-7-6	0	0	93-100	93-100	80-100	50-69	41-58	21-33
	19-58	Silty clay loam, silty clay, clay, sandy clay, sandy clay loam, clay loam	CL	A-7-6	0	0	92-100	92-100	75-96	48-68	41-58	21-33
	58-83	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
94:												
Saemo----------	0-12	Clay loam, extremely stony sandy clay loam, stony fine sandy loam, gravelly loam	SC-SM	A-4	0-16	0-16	32-90	29-90	25-90	14-60	22-45	7-21
	12-32	Extremely stony sandy clay loam, gravelly fine sandy loam, cobbly clay loam, stony very fine sandy loam, gravelly loam	CL	A-6	6-39	6-39	31-85	28-84	27-84	17-66	26-45	10-23
	32-85	Very gravelly clay loam, extremely stony sandy clay loam, very stony loam, very stony fine sandy loam, stony very fine sandy loam	SC	A-4	6-38	6-38	32-85	29-84	26-84	15-57	24-45	9-23
	85-150	Very gravelly sandy clay loam, very stony loam, very stony fine sandy loam	SC-SM	A-2-4	6-38	6-38	32-76	29-75	26-75	13-46	20-40	6-20
95:												
Sandyranch------	0-9	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	90-97	26-33	0-25	NP-4
	9-125	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	93-98	14-19	0-20	NP-3
	125-140	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	90-95	26-31	0-20	NP-3
	140-192	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	100	93-98	15-20	0-20	NP-3
Aquic Torrifluvents--	0-15	Fine sandy loam, loam	CL	A-4	0	0	93-100	93-100	75-91	53-68	18-33	4-12
	15-45	Loamy fine sand, fine sandy loam, sandy loam	SC-SM	A-4	0	0	93-100	93-100	78-92	30-39	16-25	2-7
	45-73	Loamy fine sand, loamy sand, fine sand	SM	A-2-4	0	0	93-100	93-100	68-78	20-26	0-20	NP-3
	73-102	Loamy fine sand, loamy sand, fine sand	SM	A-2-4	0	0	93-100	93-100	69-79	20-26	0-20	NP-3
	102-127	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
96:												
Sandyranch------	0-5	Fine sand	SM	A-2-4	0	0	93-100	93-100	88-100	16-27	0-28	NP-7
	5-23	Fine sand	SM	A-2-4	0	0	75-100	74-100	69-100	12-26	0-23	NP-6
	23-85	Sand	SP-SM	A-2-4	0	0	75-100	74-100	58-87	10-22	0-23	NP-6
	85-110	Fine sand	SM	A-2-4	0	0	75-100	74-100	69-100	12-26	0-23	NP-6
	110-150	Gravelly sand	SW-SM	A-3	0	0	75-100	74-100	58-87	10-22	0-23	NP-6
Mido------------	0-6	Fine sand	SM	A-2-4	0	0	93-100	93-100	84-98	13-21	0-25	NP-4
	6-23	Fine sand	SM	A-2-4	0	0	93-100	93-100	84-98	13-21	0-22	NP-4
	23-90	Fine sand	SM	A-2-4	0	0	93-100	93-100	85-99	14-22	0-22	NP-4
	90-200	Fine sand	SM	A-2-4	0	0-3	90-100	90-100	83-100	14-23	0-21	NP-4
Mident----------	0-2	Loamy fine sand	SC-SM	A-2-4	0	0	93-100	93-100	83-94	22-28	16-26	2-6
	2-28	Loamy fine sand	SC-SM	A-2-4	0	0	93-100	93-100	85-96	24-30	16-23	2-6
	28-53	Bedrock	---	---	---	---	---	---	---	---	---	---
	53-78	Bedrock	---	---	---	---	---	---	---	---	---	---
97:												
Sandyranch------	0-6	Loamy fine sand, fine sand	SP-SM	A-2-4	0	0	93-100	93-100	88-100	11-19	0-22	NP-4
	6-14	Loamy fine sand, fine sand	SM	A-2-4	0	0	93-100	93-100	83-96	24-32	0-22	NP-4
	14-41	Loamy fine sand, fine sand	SP-SM	A-2-4	0	0	93-100	93-100	88-100	11-19	0-22	NP-4
	41-180	Loamy fine sand, fine sand	SP-SM	A-2-4	0	0	93-100	93-100	88-100	11-19	0-22	NP-4
Radnik----------	0-5	Loamy fine sand, fine sandy loam, silt loam	CL	A-4	0	0	93-100	93-100	79-96	70-85	16-31	2-10
	5-22	Loamy fine sand, fine sandy loam	SC-SM	A-4	0	0	68-100	67-100	57-95	25-47	16-27	2-10
	22-36	Gravelly loamy fine sand, fine sandy loam	SM	A-2-4	0	0	69-100	68-100	64-100	22-43	16-27	2-10
	36-80	Loamy fine sand, fine sandy loam	SC	A-4	0	0	68-100	67-100	56-94	24-46	16-27	2-10
	80-153	Gravelly loamy fine sand, fine sandy loam	SM	A-2-4	0	0	69-100	68-100	63-100	22-43	16-27	2-10
98:												
Seeg------------	0-7	Fine sandy loam, sandy loam, loamy sand	SM	A-2-4	0	0-62	40-85	38-84	29-74	9-29	15-28	1-10
	7-20	Gravelly sandy loam	SC-SM	A-2-4	0	0-53	49-78	47-77	34-60	15-28	20-28	6-10
	20-31	Sandy loam, fine sandy loam	SC	A-4	0	0-71	31-92	28-92	24-87	10-39	20-31	6-12
	31-180	Very gravelly sandy loam	GP-GC	A-2-4	0	0-63	39-54	37-52	27-41	12-19	20-27	6-10

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
98:												
Moffat----------	0-13	Loamy fine sand, fine sand	SM	A-2-4	0	0	79-100	78-100	74-100	13-23	15-24	1-6
	13-22	Loamy fine sand	SC-SM	A-2-4	0	0	78-100	77-100	74-100	24-36	16-24	2-6
	22-40	Fine sandy loam	SC-SM	A-2-4	0	0-23	78-100	77-100	71-100	28-45	20-31	6-12
	40-75	Fine sandy loam	SC-SM	A-2-4	0	0-23	78-100	77-100	71-100	28-45	22-31	7-12
	75-180	Gravelly fine sandy loam	SC-SM	A-2-4	0	0-29	71-100	70-100	65-100	26-45	22-31	7-12
Needle----------	0-6	Fine sand	SM	A-2-4	0	0	81-100	80-100	70-90	19-26	0-20	NP-2
	6-30	Paraflaggy fine sand, loamy fine sand	SM	A-2-4	0	0	81-100	80-100	70-90	19-26	0-19	NP-2
	30-55	Bedrock	---	---	---	---	---	---	---	---	---	---
99:												
Simel, saline---	0-6	Very fine sandy loam, silty clay loam, silt loam	CL	A-6	0	0	62-100	60-100	54-100	49-99	29-46	12-25
	6-20	Very fine sandy loam, silt loam, silty clay loam	CL	A-6	0	0	62-100	60-100	53-100	49-98	29-46	12-25
	20-30	Gravelly fine sandy loam, sandy clay loam, parachannery silty clay loam	CL	A-6	0	0	73-100	72-100	63-100	59-98	29-46	12-25
	30-45	Bedrock	---	---	---	---	---	---	---	---	---	---
	45-70	Bedrock	---	---	---	---	---	---	---	---	---	---
Catahoula, saline---------	0-10	Gravelly sandy loam	SC	A-2-4	0	20-44	90-98	90-98	61-75	23-33	20-29	6-12
	10-44	Very gravelly sandy loam	SC	A-2-4	0	43-68	75-98	74-98	52-76	20-35	20-29	6-12
	44-54	Gravelly sandy loam	SC-SM	A-2-4	0	13-48	82-93	81-92	60-76	25-36	20-29	6-12
	54-200	Very channery sandy loam, very channery fine sandy loam, very gravelly loamy sand	GP-GM	A-1-b	0	11-68	27-59	25-57	19-51	6-21	16-28	2-12
100:												
Simel----------	0-9	Silt loam	CL	A-6	0-11	0-19	88-92	88-92	74-84	65-74	31-40	13-19
	9-22	Extremely parachannery silt loam	CL	A-6	0	0	100	100	83-90	73-80	29-38	13-19
	22-39	Parachanners	CL	A-6	0	0	100	100	83-90	73-80	29-38	13-19
	39-64	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
101:												
Simel	0-7	Channery silt loam, very channery loam, very channery fine sandy loam	CL	A-6	0-13	10-40	58-89	58-88	47-80	41-72	27-39	12-19
	7-18	Channery silty clay loam, extremely parachannery silt loam	CL	A-6	0-14	0-23	80-100	80-100	70-100	65-97	31-46	13-25
	18-28	Extremely parachannery silt loam, channery silty clay loam, very flaggy silt loam, very channery silty clay loam	CL	A-6	0-14	0-23	80-100	80-100	72-100	67-100	31-46	13-25
	28-35	Bedrock	---	---	---	---	---	---	---	---	---	---
	35-60	Bedrock	---	---	---	---	---	---	---	---	---	---
Simel, steep	0-5	Very channery sandy loam, very channery loam, very channery fine sandy loam	GC	A-6	0-38	0-64	49-100	47-100	41-96	32-77	29-40	12-19
	5-28	Very parachannery silty clay loam, channery silt loam	CL	A-7-6	0-14	0-23	80-100	80-100	66-98	60-91	31-46	13-25
	28-39	Bedrock	---	---	---	---	---	---	---	---	---	---
	39-64	Bedrock	---	---	---	---	---	---	---	---	---	---
102:												
Skos	0-5	Very gravelly loam	SC	A-6	0	0	75-85	65-75	60-70	40-50	31-42	12-19
	5-17	Very cobbly silt loam, very gravelly silt loam	GC	A-2-6	0	0	45-55	40-50	35-45	25-35	30-40	12-19
	17-34	Very gravelly silt loam, extremely gravelly silt loam	GP-GC	A-2-6	0	0	15-25	10-20	10-20	5-15	26-39	9-19
	34-59	Bedrock	---	---	---	---	---	---	---	---	---	---
103:												
Strych	0-7	Gravelly very fine sandy loam	SC	A-4	0	0-46	49-100	47-100	44-100	21-52	20-33	6-12
	7-23	Very cobbly fine sandy loam	GC	A-2-4	0-40	0-40	36-85	33-84	28-80	10-32	20-31	6-12
	23-40	Very gravelly sandy loam	GC	A-2-4	0-39	0-39	32-63	29-62	20-48	8-22	20-33	6-13
	40-89	Extremely stony fine sandy loam	GC	A-2-6	0-39	0-39	32-81	29-80	23-76	13-48	20-33	6-13
	89-200	Extremely stony sandy loam	GC	A-2-6	0-38	0-38	28-76	25-75	18-64	10-41	20-33	6-13

Table 19.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	70-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
104:												
Sulphurcreek----	0-7	Silty clay loam, clay loam, loam, silt loam	CL	A-6	0	0	92-100	91-100	82-96	62-74	34-45	16-21
	7-30	Silty clay loam, clay loam	CL	A-7-6	0	0	100	100	88-100	64-76	37-53	19-29
	30-45	Loam	CL-ML	A-4	0	0	100	100	85-100	58-73	20-37	6-17
	45-68	Silty clay loam, fine sandy loam, silt loam	CL	A-7-6	0	0	100	100	77-100	64-93	17-44	3-25
	68-162	Fine sandy loam, loam, loamy fine sand	SM	A-4	0	0	66-100	64-100	56-100	24-52	16-32	2-13
105:												
Tesihim---------	0-6	Loamy fine sand, sandy loam, fine sandy loam	SC-SM	A-2-4	0	0	80-100	79-100	75-100	27-42	18-31	3-10
	6-14	Sandy loam, fine sandy loam	SC-SM	A-4	0	0	80-100	79-100	70-96	28-44	18-27	3-10
	14-25	Very paragravelly sandy loam, fine sandy loam	SC	A-6	0	0	80-100	79-100	69-95	31-47	20-30	6-12
	25-50	Bedrock	---	---	---	---	---	---	---	---	---	---
Rizno, steep----	0-9	Fine sandy loam	SC	A-4	0	0	86-100	86-100	76-97	32-45	20-33	6-12
	9-16	Fine sandy loam	SC-SM	A-4	0	0-7	81-100	80-100	72-98	28-43	20-30	6-12
	16-41	Bedrock	---	---	---	---	---	---	---	---	---	---
106:												
Tineoyler-------	0-12	Fine sandy loam, loam, sandy clay loam	CL	A-6	0	0	86-100	85-100	77-97	60-78	27-41	12-17
	12-32	Loam, sandy clay loam, fine sandy loam	CL	A-6	0	0-10	72-100	71-100	59-93	42-70	22-36	7-15
	32-83	Loam, fine sandy loam	SC-SM	A-4	0	0-10	73-100	72-100	65-99	29-48	18-28	3-10
	83-151	Fine sandy loam, loamy fine sand	SM	A-4	0	0-43	58-100	56-100	49-94	21-45	15-25	1-7
	151-173	Fine sandy loam, loamy fine sand	SM	A-2-4	0	0-43	58-100	56-100	53-100	17-38	15-25	1-7
107:												
Ustic Torriorthents--	0-3	Cobbly sandy loam	SC	A-2-4	0	0-30	75-95	60-90	45-70	20-35	20-30	5-10
	3-20	Cobbly sandy loam	SC-SM	A-2-4	0-15	10-30	75-95	60-90	45-75	20-40	20-30	5-10
	20-58	Very stony sandy loam	SC	A-2-4	25-55	10-30	70-95	50-90	35-70	15-35	20-30	5-15
	58-83	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 20.—Physical Soil Properties

(Absence of an entry indicates that data were not estimated)

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
1:									
Abra, moist-----	0-8	50-65	23-35	12-25	1.45-1.55	14.1-42.3	0.10-0.17	0.0-2.9	0.0-2.0
	8-24	45-55	25-35	12-25	1.45-1.55	14.1-42.3	0.10-0.17	0.0-2.9	0.0-1.0
	24-43	45-55	25-35	15-35	1.40-1.55	4.2-14.1	0.08-0.18	3.0-5.9	0.0-1.0
	43-200	40-55	25-35	15-35	1.40-1.55	1.4-4.2	0.11-0.18	3.0-5.9	0.0-1.0
Sazi, moist-----	0-9	50-65	25-35	10-18	1.45-1.60	14.1-42.3	0.10-0.15	0.0-2.9	0.0-2.0
	9-32	50-65	25-35	10-18	1.45-1.60	14.1-42.3	0.10-0.17	0.0-2.9	0.0-1.0
	32-75	50-65	25-35	10-18	1.45-1.60	14.1-42.3	0.10-0.17	0.0-2.9	0.0-1.0
	75-110	55-65	20-27	10-20	1.45-1.60	14.1-42.3	0.10-0.16	0.0-2.9	0.0-0.5
	110-135	---	---	---	---	0.0-1.4	---	---	---
Strych, moist---	0-10	55-65	20-32	10-18	1.50-1.60	14.1-42.3	0.09-0.13	0.0-2.9	0.0-2.0
	10-35	53-65	20-32	10-18	1.50-1.60	14.1-42.3	0.03-0.13	0.0-2.9	0.0-1.0
	35-200	55-65	20-32	10-18	1.50-1.70	14.1-42.3	0.03-0.09	0.0-2.9	0.0-1.0
2:									
Aquima----------	0-7	55-70	15-30	12-18	1.45-1.60	14.1-42.3	0.10-0.16	0.0-2.9	0.0-2.0
	7-20	50-70	12-32	18-27	1.45-1.60	14.1-42.3	0.10-0.14	3.0-5.9	0.0-1.0
	20-50	50-65	15-32	18-27	1.45-1.60	4.2-42.3	0.14-0.17	3.0-5.9	0.0-1.0
	50-85	50-65	15-32	18-27	1.45-1.60	4.2-42.3	0.14-0.17	3.0-5.9	0.0-1.0
	85-160	50-65	15-32	18-27	1.45-1.60	4.2-42.3	0.14-0.17	3.0-5.9	0.0-1.0
	160-190	50-65	15-32	18-27	1.45-1.60	4.2-42.3	0.12-0.17	3.0-5.9	0.0-0.5
3:									
Arches----------	0-8	80-96	2-15	2-6	1.55-1.70	141.1-705.0	0.07-0.09	0.0-2.9	0.0-2.0
	8-24	80-96	2-15	2-6	1.55-1.70	141.1-705.0	0.07-0.09	0.0-2.9	0.0-0.5
	24-49	---	---	---	---	1.4-14.1	---	---	---
Mido------------	0-9	80-96	2-15	2-6	1.55-1.70	141.1-705.0	0.07-0.09	0.0-2.9	0.0-2.0
	9-49	80-96	2-15	2-6	1.55-1.70	141.1-705.0	0.07-0.09	0.0-2.9	0.0-0.5
	49-185	80-96	2-15	2-6	1.55-1.70	141.1-705.0	0.07-0.09	0.0-2.9	0.0-0.5
4:									
Emco family-----	0-5	35-45	15-25	35-45	1.35-1.50	0.4-1.4	0.14-0.20	5.9-9.0	0.0-1.0
	5-19	25-35	20-30	40-50	1.35-1.45	0.4-1.4	0.11-0.12	5.9-9.0	0.0-0.5
	19-37	25-40	20-30	40-50	1.35-1.45	0.4-1.4	0.05-0.08	5.9-9.0	0.0-0.5
	37-62	---	---	---	---	0.0-1.4	---	---	---
5:									
Barx------------	0-13	65-75	15-20	8-18	1.35-1.50	14.0-42.0	0.11-0.13	0.0-2.9	1.0-2.0
	13-30	55-65	15-25	20-27	1.25-1.40	4.0-14.0	0.16-0.18	3.0-5.9	0.3-0.8
	30-79	60-75	15-25	8-18	1.35-1.50	14.0-42.0	0.10-0.12	0.0-2.9	0.0-0.3
	79-122	60-75	15-25	8-18	1.35-1.50	14.0-42.0	0.10-0.12	0.0-2.9	0.0-0.0
	122-152	60-75	15-25	8-18	1.35-1.50	14.0-42.0	0.10-0.12	0.0-2.9	0.0-0.0

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
5:									
Remorris--------	0-8	15-20	52-57	27-35	1.25-1.40	1.4-4.2	0.17-0.19	3.0-5.9	1.0-2.0
	8-25	15-20	52-57	27-35	1.25-1.40	1.4-4.2	0.16-0.18	3.0-5.9	0.5-1.0
	25-38	15-20	52-57	27-35	1.25-1.40	1.4-4.2	0.16-0.18	3.0-5.9	0.0-0.8
	38-63	---	---	---	---	0.4-1.4	---	---	---
6:									
Beclabito-------	0-10	45-65	20-30	25-35	1.35-1.55	1.4-14.1	0.09-0.17	3.0-5.9	0.0-2.0
	10-39	15-30	30-50	35-45	1.35-1.50	0.4-1.4	0.09-0.14	5.9-9.0	0.0-1.0
	39-75	15-30	40-55	30-35	1.40-1.55	1.4-4.2	0.13-0.20	5.9-9.0	0.0-1.0
	75-100	---	---	---	---	1.4-14.1	---	---	---
Lybrook, saline-sodic---	0-10	10-22	42-55	30-45	1.40-1.55	0.4-1.4	0.05-0.10	5.9-9.0	0.0-2.0
	10-23	5-15	40-55	40-45	1.40-1.50	0.4-1.4	0.07-0.09	5.9-9.0	0.0-1.0
	23-73	2-10	40-55	40-50	1.40-1.50	0.4-1.4	0.03-0.08	5.9-9.0	0.0-0.5
	73-95	10-17	40-50	40-50	1.40-1.50	0.4-1.4	0.03-0.08	5.9-9.0	0.0-0.5
	95-120	---	---	---	---	0.0-1.4	---	---	---
7:									
Begay, moist----	0-9	65-75	15-25	8-12	1.45-1.60	14.1-42.3	0.14-0.16	0.0-2.9	0.0-2.0
	9-48	65-75	15-25	10-15	1.50-1.60	14.1-42.3	0.14-0.15	0.0-2.9	0.0-1.0
	48-196	65-75	15-25	8-12	1.50-1.60	14.1-42.3	0.14-0.15	0.0-2.9	0.0-1.0
8:									
Begay-----------	0-14	55-70	15-27	10-18	1.50-1.60	14.1-42.3	0.12-0.14	0.0-2.9	0.0-2.0
	14-80	55-65	18-27	10-18	1.50-1.60	14.1-42.3	0.12-0.14	0.0-2.9	0.0-1.0
	80-197	55-65	20-27	10-18	1.50-1.60	14.1-42.3	0.12-0.14	0.0-2.9	0.0-0.5
9:									
Begay, moist----	0-6	65-80	10-25	8-15	1.45-1.65	14.1-141.1	0.08-0.16	0.0-2.9	0.0-2.0
	6-28	32-60	25-52	10-18	1.45-1.60	14.1-42.3	0.12-0.20	0.0-2.9	0.0-1.0
	28-85	50-70	15-35	10-18	1.45-1.60	14.1-42.3	0.12-0.20	0.0-2.9	0.0-1.0
	85-130	60-80	10-25	8-18	1.45-1.65	14.1-141.1	0.08-0.16	0.0-2.9	0.0-0.5
	130-170	75-85	10-17	8-18	1.45-1.65	14.1-141.1	0.08-0.16	0.0-2.9	0.0-0.5
	170-185	65-75	12-25	8-18	1.45-1.65	14.1-141.1	0.08-0.16	0.0-2.9	0.0-0.5
10:									
Begay, saline---	0-9	60-75	15-25	8-15	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-2.0
	9-28	55-65	20-30	10-18	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-1.0
	28-68	55-70	20-30	10-18	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-1.0
	68-121	60-75	12-25	8-15	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-0.5
	121-185	60-75	12-25	8-15	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-0.5
Querencia, saline-sodic---	0-6	50-75	15-35	10-18	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-2.0
	6-16	40-50	30-40	18-27	1.45-1.55	14.1-42.3	0.16-0.17	0.0-2.9	0.0-1.0
	16-43	40-52	30-40	10-27	1.45-1.55	14.1-42.3	0.16-0.17	0.0-2.9	0.0-1.0
	43-70	40-52	27-40	18-27	1.45-1.55	14.1-42.3	0.16-0.17	0.0-2.9	0.0-1.0
	70-100	40-52	30-40	18-27	1.45-1.55	14.1-42.3	0.16-0.17	0.0-2.9	0.0-1.0
	100-180	60-75	15-25	10-18	1.50-1.60	14.1-42.3	0.13-0.14	0.0-2.9	0.0-0.5

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
11:									
Begay, saline-sodic---	0-12	50-65	20-35	10-18	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-2.0
	12-26	50-65	20-35	15-18	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-1.0
	26-95	50-65	20-35	15-18	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.6	0.0-1.0
	95-155	40-55	25-35	15-27	1.45-1.60	4.2-14.1	0.07-0.09	3.0-5.9	0.0-1.0
	155-180	40-55	25-35	15-27	1.45-1.60	4.2-14.1	0.07-0.09	3.0-5.9	0.0-1.0
Begay, moist----	0-10	50-65	20-35	15-18	1.45-1.55	14.1-42.3	0.15-0.17	0.0-2.9	0.0-2.0
	10-35	60-75	10-25	15-20	1.40-1.50	14.1-42.3	0.13-0.20	0.0-2.9	0.0-1.0
	35-82	55-70	15-25	15-20	1.40-1.50	14.1-42.3	0.13-0.20	0.0-2.9	0.0-1.0
	82-140	50-65	20-35	15-27	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-1.0
	140-180	50-65	20-35	15-27	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-1.0
Elias----------	0-14	55-65	20-27	15-18	1.45-1.55	14.1-42.3	0.15-0.16	0.0-2.9	0.0-2.0
	14-33	25-40	30-40	28-35	1.40-1.50	1.4-4.2	0.19-0.21	3.0-5.9	0.0-1.0
	33-85	35-45	30-40	20-27	1.45-1.55	4.2-14.1	0.16-0.18	3.0-5.9	0.0-1.0
	85-150	35-45	28-38	27-45	1.40-1.50	1.4-4.2	0.19-0.21	3.0-5.9	0.0-1.0
	150-180	25-40	25-40	27-45	1.12-1.50	1.4-4.2	0.14-0.16	5.9-9.0	0.0-1.0
12:									
Begay----------	0-9	70-80	10-20	5-10	1.45-1.65	14.1-141.1	0.09-0.16	0.0-2.9	0.0-2.0
	9-24	50-75	15-35	7-15	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-1.0
	24-51	50-75	15-35	7-15	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-1.0
	51-130	70-80	10-20	5-12	1.50-1.65	14.1-141.1	0.09-0.14	0.0-2.9	0.0-0.5
	130-192	70-80	10-20	5-12	1.50-1.65	1.4-141.1	0.09-0.14	0.0-2.9	0.0-0.5
Ignacio---------	0-7	50-70	15-32	8-18	1.45-1.60	14.1-42.3	0.10-0.17	0.0-2.9	0.0-2.0
	7-31	50-70	20-35	7-20	1.45-1.60	14.1-42.3	0.07-0.17	0.0-2.9	0.0-1.0
	31-53	50-70	20-35	7-20	1.45-1.60	14.1-42.3	0.07-0.17	0.0-2.9	0.0-1.0
	53-68	50-80	10-35	5-18	1.45-1.60	14.1-141.1	0.04-0.15	0.0-2.9	0.0-0.5
	68-93	---	---	---	---	0.0-0.4	---	---	---
Retsabal--------	0-6	60-80	10-30	3-12	1.50-1.65	14.1-141.1	0.06-0.14	0.0-2.9	0.0-2.0
	6-17	60-80	10-30	3-12	1.50-1.65	14.1-141.1	0.03-0.14	0.0-2.9	0.0-0.5
	17-42	---	---	---	---	1.4-14.1	---	---	---
13:									
Begay, moist----	0-6	65-80	10-25	7-15	1.45-1.65	14.1-141.1	0.09-0.16	0.0-2.9	0.0-2.0
	6-26	50-70	20-35	10-18	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-1.0
	26-41	60-70	20-30	7-18	1.45-1.60	14.1-141.1	0.09-0.16	0.0-2.9	0.0-0.5
	41-73	65-75	15-25	7-15	1.45-1.60	14.1-141.1	0.09-0.16	0.0-2.9	0.0-2.0
	73-183	65-75	15-27	7-18	1.45-1.60	14.1-141.1	0.09-0.16	0.0-2.9	0.0-0.5
Rizno, moist----	0-6	60-70	15-25	12-18	1.50-1.60	14.1-42.3	0.10-0.14	0.0-2.9	0.0-2.0
	6-18	60-70	15-25	12-18	1.50-1.60	14.1-42.3	0.10-0.14	0.0-2.9	0.0-1.0
	18-39	57-70	15-30	12-18	1.50-1.60	14.1-42.3	0.10-0.14	0.0-2.9	0.0-0.5
	39-64	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
14:									
Begay----------	0-10	65-75	12-25	8-15	1.45-1.60	14.1-42.3	0.14-0.16	0.0-2.9	0.0-2.0
	10-24	65-75	12-25	10-18	1.45-1.60	14.1-42.3	0.14-0.16	0.0-2.9	0.0-1.0
	24-115	65-75	12-25	10-18	1.45-1.60	14.1-42.3	0.14-0.16	0.0-2.9	0.0-1.0
	115-180	65-75	10-20	8-18	1.45-1.60	14.1-42.3	0.07-0.16	0.0-2.9	0.0-1.0
Strych----------	0-15	60-75	17-30	8-15	1.50-1.60	14.1-42.3	0.13-0.14	0.0-2.9	0.0-2.0
	15-39	45-60	25-40	10-18	1.45-1.60	14.1-42.3	0.04-0.12	0.0-2.9	0.0-1.0
	39-180	60-70	20-27	10-18	1.50-1.60	14.1-42.3	0.02-0.08	0.0-2.9	0.0-1.0
15:									
Bullpen---------	0-9	45-60	15-35	18-27	1.40-1.55	1.4-14.1	0.08-0.20	3.0-5.9	0.0-2.0
	9-19	45-60	15-35	18-27	1.40-1.55	1.4-14.1	0.08-0.20	3.0-5.9	0.0-1.0
	19-43	45-60	12-32	22-35	1.40-1.55	1.4-14.1	0.08-0.20	3.0-5.9	0.0-1.0
	43-112	40-60	15-35	22-35	1.40-1.55	1.4-14.1	0.09-0.20	3.0-5.9	0.0-1.0
	112-137	---	---	---	---	0.0-1.4	---	---	---
Daklos----------	0-9	55-65	20-30	12-18	1.50-1.60	14.1-42.3	0.06-0.14	0.0-2.9	0.0-2.0
	9-26	50-65	20-35	15-27	1.45-1.60	14.1-42.3	0.03-0.12	0.0-5.9	0.0-1.0
	26-39	50-65	20-35	15-27	1.45-1.60	14.1-42.3	0.03-0.12	0.0-5.9	0.0-1.0
	39-45	---	---	---	---	1.4-4.2	---	---	---
	45-70	---	---	---	---	1.4-14.1	---	---	---
Puertecito------	0-10	53-65	20-32	15-20	1.50-1.60	14.1-42.3	0.05-0.13	0.0-2.9	0.0-2.0
	10-25	45-60	20-35	18-32	1.45-1.55	4.2-14.1	0.04-0.11	3.0-5.9	0.0-1.0
	25-50	---	---	---	---	1.4-14.1	---	---	---
16:									
Calladito, saline-sodic---	0-7	88-96	2-8	2-5	1.60-1.70	141.1-705.0	0.06-0.09	0.0-2.9	0.0-2.0
	7-24	80-96	2-15	2-10	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-1.0
	24-54	80-90	3-12	2-10	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-1.0
	54-180	80-96	2-15	1-10	1.55-1.70	42.3-705.0	0.01-0.04	0.0-2.9	0.0-0.5
Yarts, saline-sodic---	0-16	60-75	15-30	5-18	1.45-1.60	14.1-42.3	0.14-0.20	0.0-2.9	0.0-2.0
	16-49	60-75	15-30	5-18	1.45-1.60	14.1-42.3	0.14-0.20	0.0-2.9	0.0-1.0
	49-120	75-85	10-20	5-18	1.45-1.65	14.1-141.1	0.06-0.15	0.0-2.9	0.0-0.5
	120-180	60-80	10-25	3-20	1.45-1.65	14.1-141.1	0.06-0.15	0.0-2.9	0.0-0.5
17:									
Catahoula-------	0-7	70-88	5-15	5-15	1.50-1.65	14.1-141.1	0.03-0.13	0.0-2.9	0.0-2.0
	7-18	65-78	8-20	15-35	1.45-1.60	4.2-42.3	0.04-0.13	0.0-2.9	0.0-1.0
	18-34	46-60	15-25	15-35	1.45-1.60	4.2-42.3	0.04-0.13	3.0-5.9	0.0-1.0
	34-80	65-78	8-20	15-35	1.45-1.60	4.2-42.3	0.04-0.13	0.0-2.9	0.0-1.0
	80-103	65-78	8-20	10-18	1.50-1.60	14.1-42.3	0.04-0.08	0.0-2.9	0.0-0.5
	103-128	---	---	---	---	1.4-14.1	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
18:									
Chilton---------	0-11	45-60	20-35	12-20	1.45-1.60	14.1-42.3	0.06-0.16	0.0-2.9	0.0-2.0
	11-49	45-60	20-35	15-25	1.45-1.60	14.1-42.3	0.03-0.14	0.0-5.9	0.0-1.0
	49-81	45-60	20-35	15-25	1.45-1.60	14.1-42.3	0.03-0.14	0.0-5.9	0.0-1.0
	81-180	45-60	20-35	12-20	1.45-1.60	14.1-42.3	0.03-0.11	0.0-2.9	0.0-0.5
Begay-----------	0-11	55-65	20-30	10-15	1.45-1.60	14.1-42.3	0.12-0.16	0.0-2.9	0.0-2.0
	11-43	55-65	20-30	10-18	1.45-1.60	14.1-42.3	0.12-0.16	0.0-2.9	0.0-1.0
	43-150	55-70	20-30	10-18	1.50-1.60	14.1-42.3	0.10-0.14	0.0-2.9	0.0-0.5
19:									
Chinchin--------	0-10	35-45	30-40	18-27	1.25-1.40	4.0-14.0	0.13-0.17	3.0-5.9	1.0-2.0
	10-26	30-40	28-40	27-35	1.25-1.40	1.4-4.0	0.17-0.19	3.0-5.9	0.5-1.0
	26-51	---	---	---	---	0.0-0.4	---	---	---
20:									
Chipeta, saline-sodic---	0-4	5-20	55-65	20-35	1.45-1.55	1.4-4.2	0.19-0.21	3.0-5.9	0.0-1.0
	4-17	5-15	55-65	25-39	1.45-1.55	1.4-4.2	0.17-0.19	3.0-5.9	0.0-0.5
	17-28	5-15	55-65	25-39	1.45-1.55	0.4-1.4	0.16-0.18	5.9-9.0	0.0-0.5
	28-53	---	---	---	---	1.4-4.2	---	---	---
Stent family----	0-9	60-75	17-30	8-15	1.50-1.60	14.1-42.3	0.08-0.10	0.0-2.9	0.0-1.0
	9-62	55-65	20-30	8-15	1.50-1.60	14.1-42.3	0.07-0.09	0.0-2.9	0.0-1.0
	62-87	---	---	---	---	0.0-1.4	---	---	---
21:									
Daklos----------	0-2	78-88	7-15	5-12	1.35-1.50	14.0-42.0	0.10-0.12	0.0-2.9	1.0-2.0
	2-10	60-75	15-25	5-18	1.35-1.50	14.0-42.0	0.06-0.08	0.0-2.9	0.5-1.0
	10-31	60-75	15-25	5-18	1.35-1.50	14.0-42.0	0.05-0.07	0.0-2.9	0.0-0.8
	31-37	---	---	---	---	0.0-0.4	---	---	---
	37-62	---	---	---	---	0.0-0.4	---	---	---
Lazear, dry-----	0-11	36-45	35-42	18-27	1.40-1.50	4.2-14.1	0.10-0.14	3.0-5.9	1.0-2.0
	11-28	35-45	32-40	18-27	1.40-1.50	4.2-14.1	0.12-0.16	3.0-5.9	0.0-0.7
	28-53	---	---	---	---	0.0-0.4	---	---	---
22:									
Daklos----------	0-10	60-75	15-25	10-18	1.50-1.60	14.1-42.3	0.03-0.09	0.0-2.9	0.0-0.5
	10-35	---	---	---	---	0.0-4.2	---	---	---
Reef------------	0-14	40-60	30-45	8-18	1.45-1.60	14.1-42.3	0.04-0.11	0.0-2.9	0.0-0.5
	14-49	40-60	30-45	8-18	1.45-1.60	14.1-42.3	0.04-0.11	0.0-2.9	0.0-0.5
	49-74	---	---	---	---	0.0-4.2	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
23:									
Daklos----------	0-10	55-65	20-30	12-18	1.45-1.60	14.1-42.3	0.06-0.13	0.0-2.9	0.0-2.0
	10-20	47-65	20-35	12-18	1.45-1.60	14.1-42.3	0.06-0.10	0.0-2.9	0.0-1.0
	20-45	---	---	---	---	1.4-14.1	---	---	---
Rizno----------	0-10	55-65	20-30	12-18	1.50-1.60	14.1-42.3	0.10-0.14	0.0-2.9	0.0-2.0
	10-35	---	---	---	---	1.4-14.1	---	---	---
24:									
Earlweed--------	0-3	80-88	5-10	4-10	1.45-1.60	14.1-42.3	0.08-0.12	0.0-2.9	0.2-1.0
	3-33	80-90	3-10	4-10	1.45-1.60	14.1-42.3	0.08-0.12	0.0-2.9	0.0-0.5
	33-76	80-90	3-10	4-10	1.45-1.60	14.1-42.3	0.08-0.12	0.0-2.9	0.0-0.5
	76-112	80-90	3-10	4-10	1.45-1.60	14.1-42.3	0.08-0.12	0.0-2.9	0.0-0.5
	112-152	80-90	3-10	4-10	1.45-1.60	14.1-42.3	0.08-0.12	0.0-2.9	0.0-0.5
Anasazi---------	0-3	65-75	15-25	6-12	1.35-1.50	14.1-42.3	0.08-0.15	0.0-2.9	0.2-1.0
	3-20	75-85	8-18	6-12	1.35-1.55	14.1-42.3	0.08-0.12	0.0-2.9	0.0-0.5
	20-43	75-85	8-18	6-12	1.35-1.55	14.1-42.3	0.08-0.12	0.0-2.9	0.0-0.5
	43-74	65-75	15-25	10-14	1.35-1.50	14.1-42.3	0.06-0.10	0.0-2.9	0.0-0.5
	74-99	---	---	---	---	0.0-1.4	---	---	---
25:									
Eslendo, saline-	0-11	20-30	50-65	15-35	1.40-1.55	1.4-42.3	0.07-0.10	0.0-5.9	0.0-0.5
	11-47	20-30	45-65	15-35	1.40-1.55	1.4-14.1	0.07-0.10	3.0-5.9	0.0-0.5
	47-72	---	---	---	---	0.0-1.4	---	---	---
Happle, saline-sodic---	0-9	65-80	10-20	10-18	1.50-1.60	14.1-42.3	0.01-0.04	0.0-2.9	0.0-1.0
	9-30	65-80	10-20	10-18	1.50-1.60	14.1-42.3	0.01-0.04	0.0-2.9	0.0-1.0
	30-51	65-80	10-20	10-18	1.50-1.60	14.1-42.3	0.01-0.04	0.0-2.9	0.0-0.5
	51-72	65-75	10-20	10-18	1.45-1.60	14.1-42.3	0.01-0.04	0.0-2.9	0.0-0.5
	72-115	75-88	5-15	4-10	1.50-1.65	14.1-141.1	0.01-0.04	0.0-2.9	0.0-0.5
	115-200	55-65	20-30	10-18	1.50-1.60	14.1-42.3	0.01-0.04	0.0-2.9	0.0-0.5
26:									
Foy family------	0-6	45-70	15-35	10-30	1.40-1.60	1.4-42.3	0.08-0.20	0.0-5.9	1.0-3.0
	6-33	45-70	15-35	14-30	1.40-1.60	1.4-42.3	0.02-0.13	0.0-5.9	0.0-2.0
	33-54	45-70	15-35	14-30	1.40-1.60	1.4-42.3	0.02-0.13	0.0-5.9	0.0-2.0
	54-150	45-70	15-35	14-30	1.40-1.60	1.4-42.3	0.02-0.13	0.0-5.9	0.0-2.0
Whitesage family---------	0-7	45-65	20-35	15-28	1.45-1.60	4.2-42.3	0.08-0.17	3.0-5.9	1.0-3.0
	7-28	45-60	20-35	18-35	1.45-1.55	4.2-14.1	0.12-0.15	3.0-5.9	0.0-2.0
	28-43	20-50	25-50	18-35	1.40-1.55	1.4-14.1	0.12-0.20	3.0-5.9	0.0-2.0
	43-90	20-50	25-50	18-35	1.40-1.55	1.4-14.1	0.12-0.20	3.0-5.9	0.0-2.0
	90-153	15-47	25-55	18-35	1.40-1.55	1.4-14.1	0.12-0.20	3.0-5.9	0.0-1.0

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
27:									
Gladel----------	0-10	53-65	20-32	7-18	1.50-1.60	14.1-42.3	0.08-0.14	0.0-2.9	1.0-3.0
	10-27	60-70	20-30	7-18	1.50-1.60	14.1-42.3	0.08-0.14	0.0-2.9	0.0-2.0
	27-52	---	---	---	---	1.4-14.1	---	---	---
Plumasano-------	0-9	55-70	20-30	8-18	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	1.0-3.0
	9-28	60-70	20-30	8-18	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-2.0
	28-105	60-70	20-30	8-18	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-2.0
	105-197	65-75	15-25	6-18	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-2.0
28:									
Goblin----------	0-6	65-75	15-25	10-15	1.45-1.60	14.1-42.3	0.09-0.12	0.0-2.9	0.0-1.0
	6-22	65-75	15-25	10-15	1.50-1.60	14.1-42.3	0.09-0.11	0.0-2.9	0.0-0.5
	22-40	---	---	---	---	0.0-1.4	---	---	---
	40-65	---	---	---	---	0.0-0.4	---	---	---
29:									
Goblin----------	0-8	15-20	50-62	18-32	1.20-1.30	1.4-4.2	0.08-0.18	0.0-3.0	0.2-0.5
	8-38	15-20	48-62	18-32	1.05-1.25	1.4-4.2	0.06-0.16	0.0-3.0	0.0-0.5
	38-63	---	---	---	---	0.0-1.4	---	---	---
Clapper---------	0-5	55-70	20-30	5-18	1.35-1.45	14.0-42.0	0.04-0.10	0.0-3.0	0.5-0.8
	5-60	55-70	20-30	5-18	1.35-1.45	14.0-42.0	0.05-0.12	0.0-3.0	0.0-0.5
	60-82	65-75	15-25	5-18	1.35-1.45	14.0-42.0	0.07-0.14	0.0-3.0	0.0-0.5
	82-112	65-75	10-20	5-18	1.35-1.45	14.0-42.0	0.07-0.14	0.0-3.0	0.0-0.5
	112-137	---	---	---	---	0.0-1.4	---	---	---
30:									
Goblin----------	0-19	55-65	25-30	10-15	1.40-1.60	14.1-42.3	0.10-0.14	0.0-2.9	0.0-0.5
	19-44	---	---	---	---	0.0-1.4	---	---	---
Ivanpatch-------	0-13	75-85	5-15	5-15	1.40-1.60	14.1-141.1	0.08-0.12	0.0-2.9	0.0-1.0
	13-43	75-88	5-15	5-15	1.40-1.60	14.1-141.1	0.03-0.07	0.0-2.9	0.0-1.0
	43-177	75-85	5-15	5-15	1.40-1.60	14.1-141.1	0.03-0.07	0.0-2.9	0.0-0.5
31:									
Hanksville, saline-sodic---	0-7	10-30	45-65	18-27	1.45-1.55	4.2-14.1	0.14-0.15	3.0-5.9	0.0-1.0
	7-28	5-15	50-70	25-35	1.45-1.55	1.4-14.1	0.04-0.06	3.0-5.9	0.0-1.0
	28-95	5-15	50-70	25-35	1.45-1.55	1.4-14.1	0.04-0.06	3.0-5.9	0.0-1.0
	95-112	5-15	50-70	25-35	1.45-1.55	1.4-14.1	0.04-0.06	3.0-5.9	0.0-0.5
	112-137	---	---	---	---	0.0-1.4	---	---	---
Chipeta, saline	0-10	10-20	55-70	18-27	1.40-1.50	4.2-14.1	0.13-0.15	3.0-5.9	0.0-1.0
	10-39	5-15	45-65	30-40	1.45-1.55	0.4-1.4	0.05-0.10	5.9-9.0	0.0-0.5
	39-64	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
32:									
Hanksville, saline-sodic---	0-4	5-20	60-75	20-27	1.45-1.55	4.2-14.1	0.18-0.20	3.0-5.9	0.0-1.0
	4-15	2-20	53-70	27-35	1.45-1.55	1.4-4.2	0.02-0.05	3.0-5.9	0.0-1.0
	15-44	5-20	50-68	27-35	1.45-1.55	1.4-4.2	0.02-0.05	3.0-5.9	0.0-1.0
	44-63	10-20	55-70	20-27	1.45-1.55	4.2-14.1	0.02-0.05	3.0-5.9	0.0-0.5
	63-88	---	---	---	---	0.0-1.4	---	---	---
Notal, saline-sodic---	0-8	65-75	15-25	10-15	1.50-1.60	14.1-42.3	0.13-0.14	0.0-2.9	0.0-1.0
	8-26	65-75	13-23	12-18	1.50-1.60	14.1-42.3	0.13-0.14	0.0-2.9	0.0-1.0
	26-121	10-25	50-65	20-27	1.40-1.50	4.2-14.1	0.02-0.05	3.0-5.9	0.0-1.0
	121-152	10-25	50-65	20-27	1.40-1.50	4.2-14.1	0.02-0.05	3.0-5.9	0.0-0.5
	152-177	---	---	---	---	0.0-1.4	---	---	---
33:									
Kydestea--------	0-10	45-60	20-30	15-25	1.45-1.60	4.2-42.3	0.06-0.14	0.0-2.9	1.0-3.0
	10-20	50-70	15-30	15-25	1.45-1.60	4.2-42.3	0.06-0.14	0.0-2.9	0.0-0.5
	20-45	---	---	---	---	1.4-14.1	---	---	---
Vessilla--------	0-13	45-60	25-35	10-25	1.45-1.60	4.2-42.3	0.08-0.15	0.0-2.9	1.0-3.0
	13-30	45-60	25-35	10-25	1.45-1.60	14.2-42.3	0.08-0.15	0.0-2.9	0.0-1.0
	30-55	---	---	---	---	1.4-14.1	---	---	---
34:									
Kydestea--------	0-10	45-60	25-35	15-25	1.45-1.60	14.1-141.1	0.06-0.12	0.0-2.9	1.0-3.0
	10-35	---	---	---	---	1.4-14.1	---	---	---
Vessilla--------	0-7	50-65	20-30	14-20	1.45-1.60	14.1-42.3	0.08-0.15	0.0-2.9	1.0-3.0
	7-32	---	---	---	---	1.4-14.1	---	---	---
35:									
Lavodnas--------	0-3	10-20	65-75	15-20	1.45-1.55	4.2-14.1	0.19-0.21	0.0-2.9	0.0-0.5
	3-17	5-20	60-75	20-25	1.45-1.55	4.2-14.1	0.19-0.21	3.0-5.9	0.0-0.5
	17-26	---	---	---	---	1.4-4.2	---	---	---
	26-51	---	---	---	---	1.4-14.1	---	---	---
Retsabal--------	0-2	10-20	65-75	15-20	1.45-1.55	4.2-14.1	0.19-0.21	0.0-2.9	0.0-0.5
	2-12				1.45-1.55	4.2-14.1	0.19-0.21	0.0-2.9	0.0-0.0
	12-37	---	---	---	---	1.4-14.1	---	---	---
36:									
Mathis, cool----	0-15	70-80	10-20	3-10	1.50-1.65	14.1-141.1	0.05-0.14	0.0-2.9	0.0-2.0
	15-36	75-88	5-20	3-10	1.50-1.70	42.3-141.1	0.02-0.09	0.0-2.9	0.0-0.5
	36-180	75-88	5-20	3-10	1.50-1.70	42.3-705.0	0.02-0.09	0.0-2.9	0.0-0.5
	180-205	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
37:									
Metuck----------	0-25	53-65	25-35	10-18	1.50-1.60	14.1-42.3	0.05-0.10	0.0-2.9	1.0-3.0
	25-37	50-65	25-35	10-20	1.45-1.60	14.1-42.3	0.05-0.12	0.0-2.9	0.0-2.0
	37-62	---	---	---	---	0.0-4.2	---	---	---
Vessilla--------	0-12	50-65	20-30	10-20	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	1.0-3.0
	12-20	50-65	25-37	10-20	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	0.0-2.0
	20-45	---	---	---	---	0.0-4.2	---	---	---
38:									
Mezzo family----	0-10	80-90	5-15	2-7	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	1.0-3.0
	10-51	80-90	5-15	2-9	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-1.0
	51-200	80-96	2-12	2-9	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-1.0
	200-225	---	---	---	---	0.0-1.4	---	---	---
39:									
Mido------------	0-11	80-90	5-12	3-8	1.55-1.70	42.3-141.1	0.06-0.09	0.0-2.9	0.0-2.0
	11-38	80-90	5-12	3-8	1.55-1.70	42.3-141.1	0.06-0.09	0.0-2.9	0.0-1.0
	38-115	80-90	5-12	3-8	1.55-1.70	42.3-141.1	0.06-0.09	0.0-2.9	0.0-0.5
	115-155	80-90	5-12	3-8	1.55-1.70	42.3-141.1	0.06-0.09	0.0-2.9	0.0-0.5
	155-163	---	---	---	---	1.4-4.2	---	---	---
	163-188	---	---	---	---	0.0-1.4	---	---	---
40:									
Mido------------	0-4	88-97	2-7	1-5	1.60-1.70	141.1-705.0	0.05-0.06	0.0-2.9	0.0-2.0
	4-24	88-97	2-7	1-5	1.60-1.70	141.1-705.0	0.05-0.06	0.0-2.9	0.0-0.5
	24-105	88-97	2-7	1-5	1.60-1.70	141.1-705.0	0.05-0.06	0.0-2.9	0.0-0.5
	105-120	88-97	2-7	1-5	1.60-1.70	141.1-705.0	0.05-0.06	0.0-2.9	0.0-0.5
	120-180	88-97	2-7	1-5	1.60-1.70	141.1-705.0	0.05-0.06	0.0-2.9	0.0-0.5
Strych----------	0-9	65-78	10-20	10-15	1.50-1.60	14.1-42.3	0.02-0.12	0.0-2.9	0.0-2.0
	9-45	65-78	10-20	10-18	1.50-1.60	14.1-42.3	0.06-0.10	0.0-2.9	0.0-1.0
	45-180	65-78	10-20	10-15	1.55-1.60	14.1-42.3	0.04-0.10	0.0-2.9	0.0-0.5
Reef------------	0-10	60-75	15-25	10-18	1.45-1.60	14.1-42.3	0.03-0.12	0.0-2.9	0.0-0.5
	10-35	---	---	---	---	1.4-14.1	---	---	---
41:									
Mikim-----------	0-3	60-70	20-27	8-15	1.45-1.55	14.1-42.3	0.15-0.17	0.0-2.9	0.0-2.0
	3-19	60-70	20-27	10-15	1.45-1.55	14.1-42.3	0.15-0.17	0.0-2.9	0.0-0.5
	19-107	40-50	30-40	18-25	1.45-1.55	4.2-14.1	0.16-0.18	3.0-5.9	0.0-0.5
	107-132	---	---	---	---	1.4-4.2	---	---	---
Mivida, moist---	0-6	60-80	10-25	8-15	1.45-1.55	14.1-42.3	0.15-0.17	0.0-2.9	0.0-2.0
	6-89	55-65	20-27	10-18	1.45-1.55	14.1-42.3	0.15-0.17	0.0-2.9	0.0-1.0
	89-180	55-65	20-27	9-25	1.45-1.55	14.1-42.3	0.15-0.17	0.0-2.9	0.0-1.0

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
42:									
Milok, cool-----	0-18	60-70	20-30	8-18	1.45-1.60	14.1-42.3	0.08-0.16	0.0-2.9	0.0-2.0
	18-37	53-65	20-30	10-18	1.50-1.60	14.1-42.3	0.08-0.14	0.0-2.9	0.0-1.0
	37-57	53-65	25-32	10-18	1.50-1.60	14.1-42.3	0.08-0.14	0.0-2.9	0.0-1.0
	57-200	53-65	22-32	10-18	1.50-1.60	14.1-42.3	0.08-0.14	0.0-2.9	0.0-1.0
Clapper---------	0-9	50-65	20-35	10-18	1.50-1.60	14.1-42.3	0.07-0.14	0.0-2.9	0.0-2.0
	9-36	55-65	20-30	10-18	1.50-1.60	14.1-42.3	0.05-0.14	0.0-2.9	0.0-1.0
	36-58	50-65	20-30	10-20	1.50-1.60	14.1-42.3	0.03-0.10	0.0-2.9	0.0-1.0
	58-180	50-65	20-32	10-25	1.45-1.60	4.2-42.3	0.03-0.10	0.0-5.9	0.0-1.0
43:									
Milok, steep----	0-12	45-55	30-40	10-18	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	0.0-2.0
	12-40	42-58	28-42	10-18	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	0.0-1.0
	40-180	42-55	30-42	10-18	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	0.0-1.0
Strych----------	0-13	50-65	25-35	10-18	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	0.0-2.0
	13-35	42-60	25-42	10-18	1.45-1.60	14.1-42.3	0.03-0.12	0.0-2.9	0.0-1.0
	35-150	42-60	25-42	10-18	1.45-1.60	14.1-42.3	0.03-0.11	0.0-2.9	0.0-1.0
44:									
Mivida----------	0-16	80-88	5-15	3-12	1.30-1.50	42.0-141.0	0.07-0.12	0.0-3.0	0.5-1.3
	16-56	75-85	8-15	3-12	1.30-1.50	42.0-141.0	0.07-0.12	0.0-3.0	0.3-1.0
	56-96	55-65	20-30	8-18	1.30-1.50	14.0-42.0	0.12-0.16	0.0-3.0	0.0-0.8
	96-109	60-70	15-25	8-18	1.30-1.50	14.0-42.0	0.11-0.14	0.0-3.0	0.0-0.5
	109-162	75-88	10-20	4-15	1.35-1.50	42.0-141.0	0.05-0.10	0.0-3.0	0.0-0.5
	162-184	60-75	15-25	5-18	1.35-1.50	14.0-42.0	0.06-0.14	0.0-3.0	0.0-0.5
45:									
Mivida----------	0-10	55-65	25-30	10-15	1.45-1.60	14.1-42.3	0.13-0.16	0.0-2.9	0.0-2.0
	10-56	55-65	23-30	12-18	1.45-1.60	14.1-42.3	0.13-0.16	0.0-2.9	0.0-1.0
	56-85	55-65	23-30	12-18	1.45-1.60	14.1-42.3	0.13-0.16	0.0-2.9	0.0-1.0
	85-120	55-70	15-30	12-18	1.45-1.60	14.1-42.3	0.12-0.16	0.0-2.9	0.0-1.0
	120-150	60-70	15-28	12-18	1.45-1.60	14.1-42.3	0.12-0.16	0.0-2.9	0.0-1.0
Gish------------	0-9	30-40	40-49	20-27	1.45-1.55	4.2-14.1	0.16-0.17	3.0-5.9	0.0-2.0
	9-23	30-40	40-49	20-27	1.45-1.55	4.2-14.1	0.16-0.17	3.0-5.9	0.0-1.0
	23-61	10-20	45-60	25-45	1.40-1.55	0.4-1.4	0.15-0.20	3.0-9.0	0.0-1.0
	61-115	10-20	42-60	30-45	1.40-1.55	0.4-1.4	0.08-0.15	3.0-9.0	0.0-1.0
	115-141	10-20	50-60	30-45	1.40-1.55	0.4-1.4	0.08-0.15	3.0-9.0	0.0-1.0
	141-160	10-25	42-55	20-45	1.40-1.55	0.4-4.2	0.04-0.05	3.0-9.0	0.0-0.5
	160-180	10-20	50-65	20-45	1.40-1.55	0.4-4.2	0.04-0.05	3.0-9.0	0.0-0.5
Cannonville-----	0-10	30-45	25-35	27-35	1.40-1.50	4.2-14.1	0.17-0.19	3.0-5.9	0.0-2.0
	10-34	11-25	25-39	40-50	1.35-1.45	0.4-1.4	0.14-0.16	5.9-9.0	0.0-1.0
	34-77	11-25	25-39	40-50	1.35-1.45	0.4-1.4	0.06-0.08	5.9-9.0	0.0-0.5
	77-102	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
46:									
Moab----------	0-9	60-70	20-27	10-18	1.50-1.60	14.1-42.3	0.01-0.12	0.0-2.9	0.0-2.0
	9-21	45-65	20-35	10-20	1.50-1.60	14.1-42.3	0.04-0.10	0.0-2.9	0.0-1.0
	21-43	45-65	20-35	10-20	1.50-1.60	14.1-42.3	0.04-0.10	0.0-2.9	0.0-1.0
	43-180	45-65	20-35	10-20	1.50-1.60	14.1-42.3	0.04-0.10	0.0-2.9	0.0-1.0
Abra family-----	0-9	45-55	25-35	12-20	1.45-1.60	14.1-42.3	0.10-0.17	3.0-5.9	0.0-2.0
	9-33	45-55	25-35	15-25	1.45-1.60	14.1-42.3	0.10-0.17	3.0-5.9	0.0-1.0
	33-92	45-55	25-35	15-28	1.45-1.60	4.2-42.3	0.10-0.17	3.0-5.9	0.0-1.0
	92-117	50-65	22-35	12-18	1.45-1.60	14.1-42.3	0.07-0.17	0.0-2.9	0.0-1.0
	117-142	---	---	---	---	0.0-0.4	---	---	---
47:									
Moclom, warm----	0-5	75-88	5-15	5-15	1.55-1.65	42.3-141.1	0.05-0.07	0.0-2.9	0.0-2.0
	5-22	75-88	5-15	5-15	1.55-1.65	42.3-141.1	0.05-0.07	0.0-2.9	0.0-0.5
	22-47	---	---	---	---	0.0-1.4	---	---	---
48:									
Moenkopie, warm	0-4	70-80	10-20	10-15	1.50-1.60	14.1-42.3	0.08-0.14	0.0-2.9	0.0-1.0
	4-17	55-70	20-30	10-18	1.45-1.60	14.1-42.3	0.06-0.14	0.0-2.9	0.0-0.5
	17-42	---	---	---	---	1.4-14.1	---	---	---
49:									
Moenkopie-------	0-5	80-88	5-15	4-10	1.45-1.60	14.1-42.3	0.08-0.11	0.0-2.9	0.2-1.0
	5-13	37-55	30-45	12-18	1.25-1.40	4.2-14.1	0.12-0.17	0.0-2.9	0.0-0.5
	13-20	65-75	15-25	10-14	1.35-1.50	14.1-42.3	0.06-0.09	0.0-2.9	0.0-0.5
	20-45	---	---	---	---	0.0-1.4	---	---	---
50:									
Molen family----	0-8	50-75	19-35	6-18	1.30-1.45	14.0-42.0	0.07-0.15	0.0-3.0	0.5-1.0
	8-19	50-65	25-35	8-20	1.30-1.45	14.0-42.0	0.07-0.15	0.0-3.0	0.3-0.8
	19-31	50-65	23-35	12-20	1.30-1.45	14.0-42.0	0.07-0.15	0.0-3.0	0.3-0.8
	31-43	35-45	30-40	18-27	1.25-1.40	4.0-14.0	0.12-0.17	0.0-3.0	0.3-0.8
	43-54	35-55	25-40	18-27	1.25-1.40	4.0-14.0	0.12-0.17	0.0-3.0	0.3-0.8
	54-79	45-55	25-35	20-30	1.25-1.45	4.0-14.0	0.09-0.15	0.0-3.0	0.3-0.5
	79-104	---	---	---	---	0.0-1.4	---	---	---
Lazear----------	0-8	40-50	27-40	15-25	1.25-1.40	4.0-14.0	0.12-0.16	0.0-3.0	0.5-1.0
	8-18	40-55	27-40	18-27	1.25-1.40	4.0-14.0	0.12-0.16	0.0-3.0	0.5-1.0
	18-36	40-55	27-40	18-27	1.25-1.40	4.0-14.0	0.12-0.16	0.0-3.0	0.5-1.0
	36-61	---	---	---	---	0.0-1.4	---	---	---
Gerst-----------	0-8	40-50	30-40	15-27	1.20-1.30	4.0-14.0	0.09-0.15	0.5-3.0	0.5-1.0
	8-28	30-45	35-50	18-30	1.20-1.35	4.0-14.0	0.10-0.16	0.5-3.0	0.3-0.8
	28-33	30-40	30-42	27-35	1.20-1.30	1.0-4.0	0.14-0.18	3.0-5.9	0.0-0.5
	33-58	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
51:									
Monue	0-5	44-80	15-50	5-18	1.45-1.65	14.1-141.1	0.09-0.20	0.0-2.9	0.0-2.0
	5-15	44-80	15-50	5-18	1.45-1.65	14.1-141.1	0.09-0.16	0.0-2.9	0.0-2.0
	15-72	55-80	15-32	5-18	1.45-1.65	14.1-141.1	0.09-0.16	0.0-2.9	0.0-1.0
	72-190	55-80	15-32	5-18	1.45-1.65	14.1-141.1	0.09-0.16	0.0-2.9	0.0-1.0
Fruitland	0-10	65-75	15-25	8-18	1.45-1.60	14.1-42.3	0.08-0.20	0.0-2.9	0.0-2.0
	10-29	65-75	15-25	8-18	1.50-1.60	14.1-42.3	0.06-0.14	0.0-2.9	0.0-0.5
	29-60	60-75	15-25	8-18	1.50-1.60	14.1-42.3	0.06-0.14	0.0-2.9	0.0-1.0
	60-125	60-75	15-25	8-18	1.50-1.60	14.1-42.3	0.06-0.14	0.0-2.9	0.0-0.5
	125-180	60-75	15-25	8-18	1.50-1.60	14.1-42.3	0.06-0.14	0.0-2.9	0.0-0.5
52:									
Monue, saline-sodic	0-11	60-70	15-25	10-16	1.50-1.60	14.1-42.3	0.14-0.15	0.0-2.9	0.0-2.0
	11-32	65-80	10-20	10-16	1.50-1.60	14.1-42.3	0.14-0.16	0.0-2.9	0.0-1.0
	32-85	65-80	10-20	10-16	1.50-1.60	14.1-42.3	0.14-0.16	0.0-2.9	0.0-1.0
	85-180	55-70	20-27	10-18	1.50-1.60	14.1-42.3	0.04-0.06	0.0-2.9	0.0-0.5
Myton, saline-sodic	0-10	55-70	20-30	10-15	1.50-1.60	14.1-42.3	0.08-0.12	0.0-2.9	0.0-1.0
	10-36	55-70	20-30	10-15	1.50-1.60	14.1-42.3	0.01-0.11	0.0-2.9	0.0-0.5
	36-95	70-80	10-20	10-15	1.50-1.60	14.1-42.3	0.01-0.11	0.0-2.9	0.0-0.5
	95-180	65-75	15-25	10-15	1.50-1.60	14.1-42.3	0.01-0.11	0.0-2.9	0.0-0.5
Uzona, saline-sodic	0-9	55-70	18-30	12-15	1.45-1.55	14.1-42.3	0.14-0.16	0.0-2.9	0.0-2.0
	9-19	55-70	18-30	12-15	1.45-1.55	14.1-42.3	0.14-0.16	0.0-2.9	0.0-1.0
	19-41	5-15	50-65	27-35	1.45-1.55	1.4-4.2	0.18-0.20	3.0-5.9	0.0-1.0
	41-80	10-22	50-60	18-35	1.45-1.55	4.2-14.1	0.14-0.16	3.0-5.9	0.0-1.0
	80-125	2-10	45-58	40-45	1.40-1.50	0.4-1.4	0.03-0.05	5.9-9.0	0.0-0.5
	125-180	2-10	45-55	40-45	1.40-1.50	0.4-1.4	0.03-0.05	5.9-9.0	0.0-0.5
53:									
Monue	0-9	55-70	20-30	5-15	1.50-1.60	14.1-42.3	0.13-0.15	0.0-2.9	0.0-1.0
	9-32	45-65	25-40	10-15	1.45-1.55	14.1-42.3	0.14-0.17	0.0-2.9	0.0-1.0
	32-115	55-70	20-30	10-15	1.50-1.60	14.1-42.3	0.13-0.15	0.0-2.9	0.0-1.0
	115-192	75-92	5-20	2-7	1.55-1.65	42.3-141.1	0.06-0.08	0.0-2.9	0.0-0.5
Sheppard	0-12	80-88	10-15	1-5	1.55-1.65	42.3-141.1	0.06-0.08	0.0-2.9	0.0-1.0
	12-80	80-92	5-15	1-5	1.55-1.65	42.3-141.1	0.06-0.08	0.0-2.9	0.0-0.5
	80-150	75-92	5-20	1-6	1.55-1.65	42.3-141.1	0.06-0.08	0.0-2.9	0.0-0.5
54:									
Mulford	0-6	15-50	25-60	20-30	1.45-1.55	0.4-1.4	0.19-0.21	3.0-5.9	0.0-2.0
	6-43	25-50	25-50	20-30	1.40-1.50	0.4-1.4	0.19-0.21	3.0-5.9	0.0-1.0
	43-68	30-55	25-50	20-30	1.40-1.50	0.4-1.4	0.19-0.21	3.0-5.9	0.0-1.0
	68-96	30-55	25-50	20-30	1.45-1.55	4.2-14.1	0.11-0.18	3.0-5.9	0.0-1.0
	96-159	20-53	30-53	10-40	1.45-1.55	4.2-14.1	0.15-0.18	3.0-5.9	0.0-0.5

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
55:									
Mussentuchit----	0-11	60-75	15-25	5-15	1.35-1.50	14.0-42.0	0.08-0.14	0.0-3.0	0.3-1.0
	11-31	65-75	12-25	5-17	1.35-1.50	14.0-42.0	0.08-0.14	0.0-3.0	0.0-0.5
	31-70	60-75	12-25	5-17	1.35-1.50	14.0-42.0	0.08-0.14	0.0-3.0	0.0-0.5
	70-100	---	---	---	---	0.0-1.4	---	---	---
	100-125	---	---	---	---	0.0-0.4	---	---	---
Goblin----------	0-7	36-48	37-47	7-18	1.35-1.50	14.0-42.0	0.08-0.16	0.0-3.0	0.3-0.9
	7-20	36-48	37-47	7-18	1.35-1.50	14.0-42.0	0.08-0.16	0.0-3.0	0.1-0.5
	20-28	---	---	---	---	0.0-1.4	---	---	---
	28-53	---	---	---	---	0.0-1.4	---	---	---
Swell family----	0-8	55-72	20-30	6-15	1.45-1.55	14.0-42.0	0.08-0.14	0.0-3.0	0.5-1.3
	8-20	55-70	15-30	6-15	1.35-1.50	14.0-42.0	0.13-0.17	0.0-3.0	0.5-1.0
	20-69	55-75	15-30	8-15	1.20-1.40	14.0-42.0	0.13-0.17	0.0-3.0	0.5-1.0
	69-165	55-70	15-30	8-15	1.30-1.45	14.0-42.0	0.08-0.14	0.0-3.0	0.1-0.5
	165-218	53-70	10-30	10-20	1.35-1.50	14.0-42.0	0.08-0.14	0.0-3.0	0.1-0.5
	218-243	---	---	---	---	0.0-1.4	---	---	---
56:									
Nepalto---------	0-5	70-80	10-20	4-18	1.35-1.50	14.1-42.3	0.05-0.08	0.0-2.9	0.5-1.5
	5-18	70-80	10-20	4-18	1.35-1.50	14.1-42.3	0.06-0.10	0.0-2.9	0.2-1.0
	18-76	80-88	10-15	4-14	1.45-1.60	42.3-141.1	0.03-0.04	0.0-2.9	0.2-1.0
	76-119	80-88	8-15	4-18	1.45-1.60	42.3-141.1	0.03-0.04	0.0-2.9	0.2-1.0
	119-152	45-65	20-40	4-18	1.25-1.40	4.2-14.1	0.08-0.11	0.0-2.9	0.2-1.0
	152-163	70-88	8-25	4-18	1.35-1.50	14.1-42.3	0.05-0.09	0.0-2.9	0.2-1.0
57:									
Nizhoni---------	0-5	65-80	10-20	5-15	1.50-1.65	14.1-141.1	0.08-0.14	0.0-2.9	1.0-3.0
	5-20	60-70	15-25	8-16	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-1.0
	20-45	---	---	---	---	0.0-1.4	---	---	---
58:									
Nizhoni---------	0-6	50-70	20-35	10-22	1.45-1.60	4.2-42.3	0.12-0.17	0.0-5.9	0.0-0.5
	6-31	---	---	---	---	0.0-1.4	---	---	---
59:									
Nizhoni---------	0-8	75-88	5-15	4-15	1.50-1.65	14.1-141.1	0.08-0.14	0.0-2.9	1.0-3.0
	8-25	75-88	5-15	4-15	1.50-1.65	14.1-141.1	0.08-0.14	0.0-2.9	0.0-1.0
	25-37	50-75	15-35	4-15	1.50-1.65	14.1-141.1	0.08-0.14	0.0-2.9	0.0-1.0
	37-62	---	---	---	---	0.0-1.4	---	---	---
Pinepoint, dry--	0-10	80-90	5-15	3-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-1.0
	10-42	80-90	5-15	2-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-1.0
	42-120	80-96	2-15	2-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-1.0
	120-165	80-90	5-15	2-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-1.0
	165-190	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
60:									
Notom----------	0-20	88-97	2-7	2-8	1.60-1.70	141.1-705.0	0.03-0.06	0.0-2.9	0.0-0.5
	20-57	88-98	0-7	2-8	1.60-1.70	141.1-705.0	0.03-0.06	0.0-2.9	0.0-0.5
	57-200	88-98	0-7	2-8	1.60-1.70	141.1-705.0	0.03-0.06	0.0-2.9	0.0-0.5
Begay, moist----	0-10	65-75	12-25	10-15	1.50-1.60	14.1-42.3	0.13-0.15	0.0-2.9	0.0-2.0
	10-31	60-70	15-25	15-18	1.50-1.60	14.1-42.3	0.13-0.15	0.0-2.9	0.0-1.0
	31-75	60-70	15-25	15-18	1.50-1.60	14.1-42.3	0.13-0.15	0.0-2.9	0.0-1.0
	75-110	55-65	20-27	15-18	1.50-1.60	14.1-42.3	0.13-0.15	0.0-2.9	0.0-1.0
	110-200	65-75	15-25	10-18	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-0.5
Bowington-------	0-12	88-97	2-7	1-5	1.55-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-0.5
	12-40	80-90	5-12	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	40-200	80-90	5-12	1-8	1.55-1.70	42.3-705.0	0.04-0.09	0.0-2.9	0.0-0.5
61:									
Notom----------	0-12	80-88	10-15	2-8	1.55-1.65	42.3-141.1	0.02-0.09	0.0-2.9	0.0-2.0
	12-35	80-88	10-15	2-8	1.55-1.65	42.3-141.1	0.02-0.09	0.0-2.9	0.0-0.5
	35-38	80-88	10-15	2-8	1.55-1.65	42.3-141.1	0.08-0.10	0.0-2.9	0.5-2.0
	38-150	80-95	2-15	2-8	1.55-1.70	42.3-705.0	0.02-0.06	0.0-2.9	0.0-0.5
Aquic Torrifluvents--	0-10	80-90	5-15	1-6	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-2.0
	10-30	80-90	5-15	1-6	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	30-44	80-92	5-15	1-6	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	44-70	80-95	2-15	1-6	1.55-1.70	42.3-705.0	0.03-0.08	0.0-2.9	0.0-0.5
	70-150	80-95	2-15	1-6	1.55-1.70	42.3-705.0	0.03-0.08	0.0-2.9	0.0-0.5
62:									
Parkwash--------	0-3	80-97	2-12	2-12	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-1.0
	3-14	80-97	2-12	2-12	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-1.0
	14-39	---	---	---	---	0.0-1.4	---	---	---
63:									
Pherson family--	0-20	65-75	15-25	5-10	1.50-1.65	14.1-141.1	0.06-0.14	0.0-2.9	0.0-2.0
	20-80	70-80	10-20	5-10	1.50-1.65	14.1-141.1	0.03-0.09	0.0-2.9	0.0-0.5
	80-150	70-88	10-20	5-12	1.50-1.65	14.1-141.1	0.03-0.09	0.0-2.9	0.0-0.5
Sandyranch------	0-5	75-90	5-20	3-8	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-2.0
	5-31	80-90	3-12	3-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	31-65	80-90	5-15	3-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	65-180	80-90	5-15	3-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
64:									
Polychrome------	0-45	88-98	0-10	0-8	1.45-1.60	141.0-705.0	0.02-0.04	0.0-2.9	1.0-2.0
	45-80	65-75	10-20	10-20	1.35-1.50	42.0-141.0	0.02-0.04	0.0-2.9	0.5-1.0
	80-105	---	---	---	---	0.4-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
64:									
Cerropelon family---	0-2	40-50	35-45	8-18	1.25-1.40	4.0-14.0	0.06-0.08	0.0-2.9	1.0-2.0
	2-45	40-50	35-45	8-18	1.25-1.40	4.0-14.0	0.09-0.11	0.0-2.9	0.5-1.0
	45-82	30-40	33-43	27-35	1.25-1.40	1.4-4.0	0.16-0.18	3.0-5.9	0.0-0.0
	82-107	---	---	---	---	0.4-1.4	---	---	---
65:									
Querencia, saline-sodic---	0-7	20-45	37-55	18-35	1.45-1.55	1.4-42.3	0.11-0.15	3.0-5.9	0.0-2.0
	7-30	20-45	37-55	18-35	1.45-1.55	1.4-14.1	0.11-0.15	3.0-5.9	0.0-1.0
	30-75	20-70	11-50	18-35	1.45-1.55	1.4-42.3	0.03-0.05	3.0-5.9	0.0-0.5
	75-140	5-25	45-65	18-35	1.45-1.55	1.4-14.1	0.03-0.05	3.0-5.9	0.0-0.5
	140-165	---	---	---	---	0.0-1.4	---	---	---
Lybrook, saline-sodic---	0-6	5-20	55-70	18-35	1.45-1.55	1.4-14.1	0.13-0.15	3.0-5.9	0.0-2.0
	6-49	5-15	45-65	30-45	1.40-1.55	0.4-1.4	0.07-0.10	5.9-9.0	0.0-1.0
	49-100	5-15	45-60	35-50	1.40-1.55	0.4-1.4	0.04-0.05	5.9-9.0	0.0-0.5
	100-125	---	---	---	---	0.0-1.4	---	---	---
66:									
Radnik----------	0-20	65-80	10-25	6-15	1.45-1.65	14.1-141.1	0.06-0.16	0.0-2.9	0.0-2.0
	20-95	65-80	10-25	5-12	1.45-1.65	14.1-141.1	0.06-0.16	0.0-2.9	0.0-0.5
	95-150	70-80	10-25	5-12	1.45-1.65	14.1-141.1	0.06-0.16	0.0-2.9	0.0-0.5
	150-165	73-85	10-20	1-8	1.55-1.70	42.3-141.1	0.04-0.06	0.0-2.9	0.0-0.5
Kwakina---------	0-10	65-88	10-25	2-10	1.45-1.70	14.1-705.0	0.05-0.16	0.0-2.9	0.0-2.0
	10-32	75-90	5-20	2-10	1.45-1.70	14.1-705.0	0.05-0.16	0.0-2.9	0.0-0.5
	32-95	75-88	8-20	3-8	1.50-1.70	14.1-141.1	0.06-0.14	0.0-2.9	0.0-0.5
	95-135	68-80	15-25	3-8	1.50-1.70	14.1-141.1	0.06-0.14	0.0-2.9	0.0-0.5
	135-150	80-88	8-15	3-8	1.60-1.70	42.3-141.1	0.04-0.06	0.0-2.9	0.0-0.5
Pherson family--	0-27	65-75	15-25	5-10	1.45-1.60	14.1-42.3	0.08-0.16	0.0-2.9	0.0-2.0
	27-80	65-78	15-25	5-10	1.45-1.60	14.1-141.1	0.01-0.10	0.0-2.9	0.0-0.5
	80-117	65-75	15-25	5-10	1.45-1.60	14.1-42.3	0.07-0.14	0.0-2.9	0.0-0.5
	117-150	65-75	15-25	5-10	1.45-1.60	14.1-42.3	0.01-0.10	0.0-2.9	0.0-0.5
67:									
Radnik----------	0-13	65-80	10-25	4-15	1.50-1.65	14.1-141.1	0.08-0.14	0.0-2.9	0.0-2.0
	13-24	65-80	10-25	4-15	1.50-1.65	14.1-141.1	0.08-0.14	0.0-2.9	0.0-2.0
	24-73	65-80	10-25	4-13	1.50-1.65	14.1-141.1	0.06-0.14	0.0-2.9	0.0-0.5
	73-148	65-80	10-25	4-13	1.50-1.65	14.1-141.1	0.06-0.14	0.0-2.9	0.0-0.5
	148-185	65-80	10-25	4-13	1.50-1.65	14.1-141.1	0.04-0.14	0.0-2.9	0.0-0.5
Notom----------	0-2	85-95	3-11	2-8	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-0.5
	2-15	75-88	5-20	2-8	1.55-1.65	42.3-141.1	0.06-0.08	0.0-2.9	0.0-0.5
	15-180	75-88	5-20	2-8	1.55-1.65	42.3-141.1	0.02-0.06	0.0-2.9	0.0-0.5

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
67:									
Oxyaquic Torrifluvents--	0-39	80-88	10-15	1-6	1.55-1.65	42.3-141.1	0.08-0.09	0.0-2.9	0.0-1.0
	39-67	75-90	5-20	1-6	1.50-1.70	14.1-141.1	0.03-0.14	0.0-2.9	0.0-0.5
	67-135	75-90	5-20	1-6	1.50-1.70	14.1-141.1	0.03-0.14	0.0-2.9	0.0-0.5
	135-150	75-90	5-20	1-6	1.50-1.70	14.1-141.1	0.03-0.14	0.0-2.9	0.0-0.5
68:									
Razito----------	0-3	88-95	2-10	1-8	1.45-1.60	141.1-705.0	0.05-0.08	0.0-2.9	0.2-1.0
	3-13	88-95	2-10	1-8	1.45-1.60	141.1-705.0	0.05-0.08	0.0-2.9	0.0-0.5
	13-18	88-95	2-10	1-8	1.45-1.60	42.3-141.1	0.05-0.08	0.0-2.9	0.0-0.5
	18-91	88-95	2-10	1-8	1.45-1.60	42.3-141.1	0.05-0.08	0.0-2.9	0.0-0.5
	91-102	88-95	2-10	1-8	1.45-1.60	42.3-141.1	0.05-0.08	0.0-2.9	0.0-0.5
	102-152	88-95	2-10	1-8	1.45-1.60	141.1-705.0	0.05-0.08	0.0-2.9	0.0-0.5
69:									
Reef----------	0-9	55-65	20-30	8-18	1.50-1.60	14.1-42.3	0.05-0.12	0.0-2.9	0.0-2.0
	9-43	45-60	25-40	8-18	1.45-1.60	14.1-42.3	0.03-0.12	0.0-2.9	0.0-1.0
	43-68	---	---	---	---	1.4-14.1	---	---	---
Retsabal--------	0-10	75-88	10-20	3-15	1.00-1.40	14.1-141.1	0.06-0.11	0.0-2.9	0.0-2.0
	10-35	---	---	---	---	1.4-14.1	---	---	---
70:									
Reef----------	0-10	47-62	20-35	12-18	1.45-1.60	14.1-42.3	0.02-0.13	0.0-2.9	0.0-2.0
	10-25	47-62	20-35	12-18	1.45-1.60	14.1-42.3	0.03-0.13	0.0-2.9	0.0-1.0
	25-50	---	---	---	---	1.4-14.1	---	---	---
71:									
Reef----------	0-5	55-70	15-30	8-18	1.50-1.60	14.1-42.3	0.04-0.10	0.0-2.9	0.0-0.5
	5-29	55-70	15-30	8-18	1.50-1.60	14.1-42.3	0.04-0.08	0.0-2.9	0.0-0.5
	29-54	---	---	---	---	1.4-14.1	---	---	---
72:									
Reef----------	0-10	45-62	20-40	8-18	1.25-1.40	4.2-14.1	0.07-0.10	0.0-2.9	0.0-2.0
	10-33	---	---	---	---	1.4-14.0	---	---	---
	33-58	---	---	---	---	0.0-1.4	---	---	---
73:									
Reef----------	0-10	70-80	10-20	8-15	1.50-1.60	14.1-42.3	0.03-0.10	0.0-2.9	0.0-0.5
	10-35	---	---	---	---	0.0-1.4	---	---	---
74:									
Reef, warm------	0-10	65-75	15-25	8-18	1.50-1.60	14.1-42.3	0.03-0.10	0.0-2.9	0.0-0.5
	10-35	---	---	---	---	1.4-14.1	---	---	---
Lemrac----------	0-9	60-70	15-25	5-18	1.00-1.40	14.1-42.3	0.10-0.16	0.0-2.9	0.0-2.0
	9-30	65-75	15-25	5-18	1.00-1.40	14.1-42.3	0.06-0.16	0.0-2.9	0.0-1.0
	30-52	60-75	15-27	5-18	1.00-1.40	14.1-42.3	0.06-0.16	0.0-2.9	0.0-1.0
	52-80	55-70	20-30	5-18	1.00-1.40	14.1-42.3	0.06-0.16	0.0-2.9	0.0-0.5
	80-105	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
75:									
Reef----------	0-8	45-60	20-40	12-27	1.45-1.60	14.1-42.3	0.05-0.14	0.0-5.9	0.0-0.5
	8-20	45-60	20-35	12-27	1.45-1.60	14.1-42.3	0.05-0.14	0.0-2.9	0.0-0.5
	20-45	---	---	---	---	1.4-14.1	---	---	---
Rizno----------	0-10	50-60	20-35	10-27	1.45-1.60	14.1-42.3	0.10-0.16	0.0-5.9	0.0-0.5
	10-35	---	---	---	---	1.4-14.1	---	---	---
76:									
Remorris--------	0-7	50-65	20-35	12-25	1.45-1.55	4.2-42.3	0.11-0.17	0.0-2.9	0.0-2.0
	7-20	53-65	20-30	15-20	1.50-1.60	14.1-42.3	0.06-0.12	0.0-2.9	0.0-1.0
	20-45	35-65	20-50	15-25	1.45-1.55	4.2-42.3	0.02-0.18	0.0-2.9	0.0-0.5
	45-70	---	---	---	---	0.0-1.4	---	---	---
77:									
Remorris, strongly alkaline-------	0-5	20-55	25-55	15-35	1.40-1.60	1.4-42.3	0.08-0.20	3.0-5.9	0.0-2.0
	5-17	20-55	25-55	18-35	1.40-1.60	1.4-42.3	0.06-0.19	3.0-5.9	0.0-0.5
	17-42	---	---	---	---	0.0-1.4	---	---	---
78:									
Remorris--------	0-9	40-55	25-35	14-27	1.45-1.60	4.2-42.3	0.06-0.17	0.0-5.9	0.0-2.0
	9-27	40-55	25-35	12-30	1.40-1.60	4.2-42.3	0.02-0.14	0.0-5.9	0.0-0.5
	27-49	40-55	25-35	12-30	1.40-1.60	4.2-42.3	0.02-0.14	0.0-5.9	0.0-0.5
	49-60	---	---	---	---	1.4-4.2	---	---	---
	60-85	---	---	---	---	0.0-1.4	---	---	---
Milok, extremely stony----------	0-11	50-65	15-35	8-20	1.45-1.60	14.1-42.3	0.10-0.17	0.0-2.9	0.0-2.0
	11-38	45-55	30-40	10-22	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	0.0-1.0
	38-92	50-65	20-35	10-22	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	0.0-1.0
	92-113	50-70	15-35	10-25	1.45-1.60	14.1-42.3	0.06-0.17	0.0-2.9	0.0-0.5
	113-138	---	---	---	---	1.4-4.2	---	---	---
79:									
Remorris--------	0-7	40-55	25-35	18-32	1.40-1.60	4.2-42.3	0.08-0.20	3.0-5.9	0.0-2.0
	7-23	20-40	30-55	18-32	1.40-1.55	1.4-14.1	0.08-0.15	3.0-5.9	0.0-0.5
	23-41	20-40	30-55	18-32	1.40-1.55	1.4-14.1	0.08-0.15	3.0-5.9	0.0-0.5
	41-66	---	---	---	---	0.0-1.4	---	---	---
Peachsprings, strongly saline	0-9	50-65	20-35	12-18	1.45-1.60	14.1-42.3	0.12-0.17	0.0-2.9	0.0-2.0
	9-30	47-65	20-35	15-25	1.45-1.60	4.2-42.3	0.07-0.13	0.0-5.9	0.0-1.0
	30-115	30-55	25-45	18-27	1.45-1.55	4.2-42.3	0.06-0.09	3.0-5.9	0.0-0.5
	115-185	35-55	25-45	18-27	1.45-1.55	4.2-42.3	0.06-0.09	3.0-5.9	0.0-0.5

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
80:									
Retsabal--------	0-3	35-50	35-49	2-17	1.45-1.55	14.1-42.3	0.16-0.18	0.0-2.9	0.0-0.5
	3-15	---	---	---	1.00-1.40	14.1-42.3	0.13-0.15	0.0-2.9	0.0-0.5
	15-40	---	---	---	---	1.4-14.1	---	---	---
Lemrac----------	0-10	77-88	10-15	1-13	1.00-1.30	42.3-141.1	0.08-0.10	0.0-2.9	0.0-0.5
	10-37	---	---	---	1.00-1.30	14.1-42.3	0.13-0.15	0.0-2.9	0.0-0.5
	37-56	---	---	---	1.00-1.30	14.1-42.3	0.13-0.15	0.0-2.9	0.0-0.5
	56-81	---	---	---	---	1.4-4.2	---	---	---
81:									
Rizno----------	0-9	88-96	0-7	4-7	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-2.0
	9-20	88-96	0-7	4-7	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-0.5
	20-40	70-80	10-20	10-16	1.50-1.60	14.1-42.3	0.13-0.15	0.0-2.9	0.0-0.5
	40-65	---	---	---	---	0.0-0.0	---	---	---
Mido, warm------	0-13	90-98	0-7	2-7	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-2.0
	13-53	90-98	0-7	2-8	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-0.5
	53-180	90-98	0-7	3-8	1.40-1.50	141.1-705.0	0.05-0.07	0.0-2.9	0.0-0.5
82:									
Rizno----------	0-5	70-78	10-20	8-15	1.35-1.50	14.1-42.3	0.06-0.10	0.0-2.9	0.0-2.0
	5-10	65-75	10-20	10-18	1.35-1.50	14.1-42.3	0.07-0.11	0.0-2.9	0.0-1.0
	10-14	---	---	---	---	1.4-4.2	---	---	---
	14-39	---	---	---	---	0.0-1.4	---	---	---
83:									
Rizno, warm-----	0-6	67-80	10-20	7-15	1.50-1.60	14.1-42.3	0.08-0.14	0.0-2.9	0.0-2.0
	6-26	60-70	15-25	10-18	1.45-1.60	14.1-42.3	0.11-0.15	0.0-2.9	0.0-0.5
	26-51	---	---	---	---	0.0-1.4	---	---	---
84:									
Arches----------	0-3	88-97	0-7	3-6	1.45-1.60	42.0-141.0	0.05-0.08	0.0-2.9	0.2-1.0
	3-28	85-95	0-12	3-6	1.45-1.60	42.0-141.0	0.05-0.08	0.0-2.9	0.0-0.5
	28-53	---	---	---	---	0.0-1.4	---	---	---
85:									
Arches----------	0-10	80-90	5-15	2-6	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-2.0
	10-30	80-90	5-15	2-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	30-55	---	---	---	---	0.0-1.4	---	---	---
86:									
Daklos----------	0-10	65-75	10-25	10-18	1.50-1.60	14.1-42.3	0.07-0.12	0.0-2.9	0.0-2.0
	10-22	65-75	10-25	10-18	1.50-1.65	14.1-42.3	0.03-0.10	0.0-2.9	0.0-1.0
	22-47	---	---	---	---	0.0-1.4	---	---	---
Moclom----------	0-4	85-98	0-10	2-8	1.55-1.70	42.3-705.0	0.04-0.09	0.0-2.9	0.0-2.0
	4-11	85-99	0-10	1-7	1.55-1.70	42.3-705.0	0.04-0.09	0.0-2.9	0.0-1.0
	11-36	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
87:									
Myton	0-12	65-75	15-25	8-15	1.50-1.60	14.1-42.3	0.06-0.08	0.0-2.9	0.0-1.0
	12-60	65-75	15-25	8-15	1.50-1.60	14.1-42.3	0.01-0.08	0.0-2.9	0.0-1.0
	60-180	65-75	15-25	8-15	1.50-1.60	14.1-42.3	0.01-0.08	0.0-2.9	0.0-1.0
Somorent	0-5	20-30	50-60	20-30	1.45-1.55	4.2-14.1	0.15-0.17	3.0-5.9	0.0-2.0
	5-15	10-20	50-63	27-35	1.45-1.55	1.4-4.2	0.19-0.21	3.0-5.9	0.0-1.0
	15-32	10-20	50-63	27-35	1.45-1.55	1.4-4.2	0.19-0.21	3.0-5.9	0.0-1.0
	32-57	---	---	---	---	0.0-1.4	---	---	---
88:									
Nalcase	0-3	85-98	0-12	0-10	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-2.0
	3-23	85-98	0-12	0-10	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	23-48	---	---	---	---	0.0-1.4	---	---	---
89:									
Needle	0-3	88-95	2-7	2-7	1.45-1.60	141.1-705.0	0.05-0.08	0.0-2.9	0.2-1.0
	3-28	88-95	2-7	2-7	1.45-1.60	141.1-705.0	0.05-0.08	0.0-2.9	0.0-0.5
	28-53	---	---	---	---	0.0-1.4	---	---	---
90:									
Mezzo family, dry	0-4	80-88	5-15	2-7	1.55-1.65	42.3-141.1	0.08-0.10	0.0-2.9	1.0-3.0
	4-16	80-88	5-15	2-7	1.55-1.65	42.3-141.1	0.08-0.10	0.0-2.9	0.0-2.0
	16-58	88-97	0-7	2-5	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-1.0
	58-150	88-97	0-7	2-5	1.60-1.70	141.1-705.0	0.05-0.07	0.0-2.9	0.0-1.0
Strell family	0-9	80-88	8-15	2-5	1.55-1.65	42.3-141.1	0.08-0.10	0.0-2.9	1.0-3.0
	9-20	80-88	8-15	3-5	1.55-1.65	42.3-141.1	0.08-0.10	0.0-2.9	0.0-1.0
	20-45	---	---	---	---	0.0-1.4	---	---	---
91:									
Santrick	0-13	80-92	5-15	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	13-51	80-92	5-17	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	51-64	78-92	5-17	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	64-89	---	---	---	---	1.4-14.1	---	---	---
Nalcase	0-5	80-92	5-17	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	5-18	80-92	5-17	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	18-29	78-92	5-17	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	29-54	---	---	---	---	1.4-14.1	---	---	---
92:									
Typic Torriorthents	0-5	35-50	35-45	14-20	1.25-1.40	4.2-14.1	0.09-0.13	0.0-2.9	0.5-1.5
	5-25	65-75	15-25	8-12	1.30-1.50	14.1-42.3	0.04-0.07	0.0-2.9	0.2-1.0
	25-43	65-75	17-27	8-12	1.25-1.40	14.1-42.3	0.07-0.12	0.0-2.9	0.2-1.0
	43-68	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
93:									
Rosced family---	0-7	65-75	20-28	5-15	1.50-1.60	14.1-42.3	0.07-0.14	0.0-2.9	1.0-3.0
	7-26	65-75	20-28	5-15	1.50-1.60	14.1-42.3	0.04-0.09	0.0-2.9	0.0-2.0
	26-60	55-85	10-30	5-15	1.50-1.60	14.1-42.3	0.04-0.09	0.0-2.9	0.0-2.0
	60-180	65-75	15-25	5-10	1.50-1.65	14.1-141.1	0.03-0.09	0.0-2.9	0.0-1.0
Quezcan, sodic--	0-19	20-50	18-45	30-45	1.35-1.55	0.4-4.2	0.15-0.20	5.9-9.0	0.0-1.0
	19-58	20-50	18-45	30-45	1.35-1.55	0.4-4.2	0.15-0.20	5.9-9.0	0.0-1.0
	58-83	---	---	---	---	0.0-1.4	---	---	---
94:									
Saemo-----------	0-12	45-65	23-35	12-30	1.40-1.60	1.4-42.3	0.04-0.13	0.0-5.9	0.0-2.0
	12-32	45-65	20-35	15-32	1.40-1.60	1.4-42.3	0.03-0.13	3.0-5.9	0.0-1.0
	32-85	45-65	20-35	15-32	1.40-1.60	1.4-42.3	0.03-0.13	0.0-5.9	0.0-1.0
	85-150	45-70	20-35	10-28	1.45-1.60	1.4-42.3	0.03-0.10	0.0-5.9	0.0-0.5
95:									
Sandyranch------	0-9	80-90	5-12	1-8	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-2.0
	9-125	85-97	2-12	1-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-0.5
	125-140	85-90	5-12	1-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-0.5
	140-192	85-97	2-12	1-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-0.5
Aquic Torrifluvents--	0-15	40-55	30-45	8-18	1.45-1.60	14.1-42.3	0.14-0.17	0.0-2.9	0.0-2.0
	15-45	70-80	10-20	5-12	1.50-1.65	14.1-141.1	0.09-0.14	0.0-2.9	0.0-0.5
	45-73	80-90	5-15	1-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-0.5
	73-102	80-90	5-15	1-6	1.55-1.70	42.3-705.0	0.06-0.09	0.0-2.9	0.0-0.5
	102-127	---	---	---	---	0.0-1.4	---	---	---
96:									
Sandyranch------	0-5	88-97	2-8	3-10	1.45-1.70	14.1-705.0	0.05-0.16	0.0-2.9	0.0-2.0
	5-23	88-97	2-8	1-10	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	23-85	88-97	2-8	1-10	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	85-110	88-97	2-8	1-10	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
	110-150	88-97	0-10	1-10	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
Mido------------	0-6	88-97	2-8	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-2.0
	6-23	88-97	2-8	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-1.0
	23-90	88-97	2-8	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-1.0
	90-200	88-97	2-8	1-8	1.55-1.70	42.3-705.0	0.05-0.09	0.0-2.9	0.0-0.5
Mident----------	0-2	80-88	3-10	5-10	1.55-1.65	42.3-141.1	0.08-0.09	0.0-2.9	0.0-2.0
	2-28	80-88	5-10	5-10	1.55-1.65	42.3-141.1	0.08-0.09	0.0-2.9	0.0-0.5
	28-53	---	---	---	---	1.4-4.2	---	---	---
	53-78	---	---	---	---	1.4-14.1	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
97:									
Sandyranch------	0-6	85-97	2-12	1-8	1.55-1.70	42.3-141.1	0.06-0.09	0.0-2.9	0.0-1.0
	6-14	82-90	3-12	1-8	1.55-1.70	42.3-141.1	0.06-0.09	0.0-2.9	0.0-1.0
	14-41	85-97	2-12	1-8	1.55-1.70	42.3-141.1	0.06-0.09	0.0-2.9	0.0-1.0
	41-180	85-97	2-12	1-8	1.55-1.70	42.3-141.1	0.06-0.09	0.0-2.9	0.0-1.0
Radnik----------	0-5	15-76	19-70	5-15	1.45-1.65	14.1-141.1	0.08-0.20	0.0-2.9	0.0-2.0
	5-22	65-80	10-25	5-15	1.50-1.65	14.1-141.1	0.07-0.14	0.0-2.9	0.0-0.5
	22-36	70-88	5-20	5-15	1.50-1.65	14.1-141.1	0.07-0.14	0.0-2.9	0.0-0.5
	36-80	60-80	10-25	5-15	1.50-1.65	14.1-141.1	0.07-0.14	0.0-2.9	0.0-0.5
	80-153	70-88	10-20	5-15	1.50-1.65	14.1-141.1	0.07-0.14	0.0-2.9	0.0-0.5
98:									
Seeg----------	0-7	75-88	10-20	4-15	1.55-1.65	14.1-141.1	0.04-0.13	0.0-2.9	0.0-1.0
	7-20	65-75	12-20	10-15	1.50-1.60	28.0-42.3	0.07-0.10	0.0-2.9	0.0-1.0
	20-31	65-75	12-25	10-18	1.50-1.60	14.1-42.3	0.04-0.14	0.0-2.9	0.0-1.0
	31-180	65-78	10-20	10-15	1.50-1.60	14.1-42.3	0.06-0.08	0.0-2.9	0.0-0.5
Moffat----------	0-13	80-96	2-12	4-10	1.55-1.70	42.3-141.1	0.05-0.09	0.0-2.9	0.0-1.0
	13-22	80-88	5-15	5-10	1.55-1.65	42.3-141.1	0.08-0.09	0.0-2.9	0.0-1.0
	22-40	65-75	12-25	10-18	1.50-1.60	14.1-42.3	0.12-0.14	0.0-2.9	0.0-1.0
	40-75	65-75	12-25	10-18	1.50-1.60	14.1-42.3	0.12-0.14	0.0-2.9	0.0-1.0
	75-180	65-78	10-20	10-18	1.50-1.60	14.1-42.3	0.12-0.14	0.0-2.9	0.0-1.0
Needle----------	0-6	88-97	0-7	2-5	1.55-1.65	42.3-705.0	0.05-0.09	0.0-2.9	0.0-1.0
	6-30	82-98	0-15	2-5	1.55-1.65	42.3-705.0	0.04-0.09	0.0-2.9	0.0-0.5
	30-55	---	---	---	---	1.4-4.2	---	---	---
99:									
Simel, saline---	0-6	10-53	25-60	18-35	1.45-1.55	1.4-42.3	0.11-0.20	3.0-5.9	0.0-0.5
	6-20	10-53	25-60	18-35	1.45-1.55	1.4-42.3	0.11-0.20	3.0-5.9	0.0-0.5
	20-30	10-53	25-60	18-35	1.45-1.55	1.4-42.3	0.10-0.20	3.0-5.9	0.0-0.5
	30-45	---	---	---	---	0.0-1.4	---	---	---
	45-70	---	---	---	---	0.0-0.4	---	---	---
Catahoula, saline---------	0-10	70-80	7-20	10-18	1.50-1.65	14.1-42.3	0.07-0.10	0.0-0.0	0.0-1.0
	10-44	70-80	7-20	10-18	1.50-1.65	14.1-42.3	0.05-0.08	0.0-0.0	0.0-1.0
	44-54	70-78	10-20	10-18	1.50-1.65	14.1-42.3	0.07-0.10	0.0-0.0	0.0-1.0
	54-200	75-88	5-20	5-18	1.50-1.70	14.1-141.1	0.03-0.10	0.0-0.0	0.0-0.5
100:									
Simel----------	0-9	10-28	50-65	20-27	1.45-1.55	4.2-14.1	0.17-0.20	3.0-5.9	0.0-1.0
	9-22	10-28	50-65	20-27	1.45-1.55	4.2-14.1	0.06-0.10	0.0-2.9	0.0-0.5
	22-39	10-28	50-65	20-27	1.45-1.55	141.1-705.0	0.01-0.03	0.0-2.9	0.0-0.5
	39-64	---	---	---	---	0.0-1.4	---	---	---

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
101:									
Simel----------	0-7	20-53	27-55	18-27	1.45-1.60	14.1-42.3	0.08-0.17	0.0-2.9	0.0-1.0
	7-18	10-20	45-65	20-35	1.45-1.55	1.4-14.1	0.05-0.16	3.0-5.9	0.0-0.5
	18-28	10-20	45-65	20-35	1.45-1.55	1.4-14.1	0.05-0.16	3.0-5.9	0.0-0.5
	28-35	---	---	---	---	0.0-1.4	---	---	---
	35-60	---	---	---	---	1.4-14.1	---	---	---
Simel, steep----	0-5	30-55	25-50	18-27	1.45-1.60	14.1-42.3	0.06-0.17	3.0-5.9	0.0-1.0
	5-28	10-20	45-65	20-35	1.45-1.55	1.4-14.1	0.03-0.12	3.0-5.9	0.0-0.5
	28-39	---	---	---	---	0.0-1.4	---	---	---
	39-64	---	---	---	---	1.4-14.1	---	---	---
102:									
Skos----------	0-5	35-45	35-42	18-27	1.25-1.40	4.0-14.0	0.12-0.14	3.0-5.9	1.0-2.0
	5-17	10-20	55-70	18-27	1.25-1.40	4.0-14.0	0.09-0.11	3.0-5.9	0.5-1.0
	17-34	5-15	70-80	15-27	1.25-1.40	1.4-4.0	0.07-0.09	0.0-2.9	0.5-1.0
	34-59	---	---	---	---	0.0-0.4	---	---	---
103:									
Strych----------	0-7	65-78	10-20	10-18	1.45-1.60	14.1-42.3	0.07-0.16	0.0-2.9	0.0-2.0
	7-23	65-78	8-20	10-18	1.50-1.60	14.1-42.3	0.03-0.12	0.0-2.9	0.0-1.0
	23-40	65-78	8-20	10-20	1.50-1.60	14.1-42.3	0.03-0.10	0.0-2.9	0.0-1.0
	40-89	55-65	20-30	10-20	1.50-1.60	14.1-42.3	0.03-0.10	0.0-2.9	0.0-1.0
	89-200	55-65	20-30	10-20	1.50-1.60	14.1-42.3	0.03-0.10	0.0-2.9	0.0-1.0
104:									
Sulphurcreek----	0-7	20-40	35-50	24-30	1.40-1.55	4.2-14.1	0.17-0.20	3.0-5.9	0.0-2.0
	7-30	20-42	25-50	28-40	1.40-1.55	1.4-4.2	0.19-0.20	3.0-5.9	0.0-2.0
	30-45	40-50	35-45	10-25	1.45-1.55	14.1-42.3	0.16-0.17	0.0-2.9	0.0-1.0
	45-68	15-50	40-60	6-28	1.45-1.60	4.2-42.3	0.14-0.20	0.0-2.9	0.0-0.5
	68-162	50-80	10-35	5-20	1.45-1.65	14.1-141.1	0.07-0.17	0.0-2.9	0.0-0.5
105:									
Tesihim---------	0-6	75-88	10-18	7-15	1.50-1.65	14.1-141.1	0.11-0.14	0.0-2.9	0.0-2.0
	6-14	65-75	10-20	7-15	1.50-1.60	14.1-42.3	0.11-0.14	0.0-2.9	0.0-0.5
	14-25	60-75	15-25	10-18	1.50-1.60	14.1-42.3	0.07-0.14	0.0-2.9	0.0-0.5
	25-50	---	---	---	---	1.4-4.2	---	---	---
Rizno, steep----	0-9	65-75	15-25	10-18	1.50-1.60	14.1-42.3	0.11-0.12	0.0-2.9	0.0-2.0
	9-16	65-75	12-20	10-18	1.50-1.60	14.1-42.3	0.11-0.12	0.0-2.9	0.0-0.5
	16-41	---	---	---	---	0.0-1.4	---	---	---
106:									
Tineoyler-------	0-12	30-55	25-50	18-25	1.45-1.60	4.2-42.3	0.13-0.17	0.0-5.9	0.0-2.0
	12-32	40-55	25-45	12-22	1.45-1.60	4.2-42.3	0.12-0.17	0.0-5.9	0.0-1.0
	32-83	50-75	15-35	7-15	1.45-1.60	14.1-42.3	0.12-0.17	0.0-2.9	0.0-1.0
	83-151	65-80	10-25	4-12	1.50-1.65	14.1-141.1	0.06-0.14	0.0-2.9	0.0-0.5
	151-173	75-88	10-20	4-12	1.50-1.65	14.1-141.1	0.06-0.14	0.0-2.9	0.0-0.5

Table 20.—Physical Soil Properties—Continued

Map unit symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
107:									
Ustic Torriorthents--	0-3	65-75	15-25	10-16	1.35-1.50	14.1-42.3	0.06-0.10	0.0-2.9	0.5-1.5
	3-20	65-75	15-25	10-16	1.35-1.50	14.1-42.3	0.06-0.10	0.0-2.9	0.2-1.0
	20-58	60-75	15-25	12-25	1.35-1.50	14.1-42.3	0.04-0.07	0.0-2.9	0.2-1.0
	58-83	---	---	---	---	0.0-1.4	---	---	---

Table 21.—Erosion Properties

(Entries under "Erosion factors" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
1:						
Abra, moist	0-8	.32	.32	5	3	86
	8-24	.37	.37			
	24-43	.15	.32			
	43-200	.32	.32			
Sazi, moist	0-9	.32	.32	3	3	86
	9-32	.32	.32			
	32-75	.28	.28			
	75-110	.49	.49			
	110-135	---	---			
Strych, moist	0-10	.24	.24	5	3	86
	10-35	.10	.24			
	35-200	.05	.24			
2:						
Aquima	0-7	.28	.28	5	3	86
	7-20	.28	.28			
	20-50	.24	.24			
	50-85	.24	.24			
	85-160	.24	.24			
	160-190	.24	.24			
3:						
Arches	0-8	.10	.10	1	1	250
	8-24	.10	.10			
	24-49	---	---			
Mido	0-9	.15	.15	5	1	250
	9-49	.15	.15			
	49-185	.15	.15			
Rock outcrop, Kayenta and Wingate Formations sandstone.						
4:						
Badland, Morrison Formation, Brushy Basin Member.						
Emco family	0-5	.24	.24	2	4	86
	5-19	.24	.24			
	19-37	.24	.24			
	37-62	---	---			
5:						
Barx	0-13	.28	.28	5	3	86
	13-30	.24	.24			
	30-79	.24	.24			
	79-122	.24	.24			
	122-152	.24	.24			
Remorris	0-8	.32	.32	2	4L	86
	8-25	.43	.43			
	25-38	.49	.49			
	38-63	---	---			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
6:						
Beclabito	0-10	.17	.32	2	7	38
	10-39	.28	.28			
	39-75	.15	.32			
	75-100	---	---			
Lybrook, saline-sodic	0-10	.32	.32	3	4	86
	10-23	.32	.32			
	23-73	.28	.28			
	73-95	.32	.32			
	95-120	---	---			
7:						
Begay, moist	0-9	.28	.28	5	3	86
	9-48	.32	.32			
	48-196	.32	.32			
8:						
Begay	0-14	.24	.24	5	3	86
	14-80	.28	.28			
	80-197	.24	.24			
9:						
Begay, moist	0-6	.43	.43	4	3	86
	6-28	.49	.49			
	28-85	.43	.43			
	85-130	.43	.43			
	130-170	.32	.32			
	170-185	.32	.32			
10:						
Begay, saline	0-9	.28	.28	5	3	86
	9-28	.28	.28			
	28-68	.28	.28			
	68-121	.28	.28			
	121-185	.28	.28			
Querencia, saline-sodic	0-6	.28	.28	5	3	86
	6-16	.32	.32			
	16-43	.43	.43			
	43-70	.32	.32			
	70-100	.37	.37			
	100-180	.32	.32			
11:						
Begay, saline-sodic	0-12	.43	.43	5	3	86
	12-26	.43	.43			
	26-95	.43	.43			
	95-155	.43	.43			
	155-180	.32	.32			
Begay, moist	0-10	.43	.43	5	3	86
	10-35	.28	.28			
	35-82	.28	.28			
	82-140	.28	.28			
	140-180	.28	.28			
Elias	0-14	.43	.43	5	3	86
	14-33	.32	.32			
	33-85	.32	.32			
	85-150	.32	.32			
	150-180	.24	.24			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
12:						
Begay	0-9	.43	.43	5	3	86
	9-24	.32	.32			
	24-51	.37	.37			
	51-130	.37	.37			
	130-192	.37	.37			
Ignacio	0-7	.24	.24	3	3	86
	7-31	.28	.28			
	31-53	.37	.37			
	53-68	.43	.43			
	68-93	---	---			
Retsabal	0-6	.37	.37	1	3	86
	6-17	.05	.28			
	17-42	---	---			
13:						
Begay, moist	0-6	.24	.24	5	3	86
	6-26	.43	.43			
	26-41	.37	.37			
	41-73	.28	.28			
	73-183	.28	.28			
Rizno, moist	0-6	.28	.28	1	3	86
	6-18	.37	.37			
	18-39	.28	.37			
	39-64	---	---			
14:						
Begay	0-10	.37	.37	4	3	86
	10-24	.37	.37			
	24-115	.37	.37			
	115-180	.10	.28			
Strych	0-15	.37	.37	2	3	86
	15-39	.10	.37			
	39-180	.02	.24			
15:						
Bullpen	0-9	.05	.17	4	7	38
	9-19	.10	.24			
	19-43	.05	.20			
	43-112	.24	.24			
	112-137	---	---			
Daklos	0-9	.28	.28	1	3	86
	9-26	.05	.28			
	26-39	.05	.32			
	39-45	---	---			
	45-70	---	---			
Puertecito	0-10	.32	.32	1	3	86
	10-25	.05	.24			
	25-50	---	---			
16:						
Calladito, saline-sodic	0-7	.15	.15	5	1	250
	7-24	.15	.15			
	24-54	.28	.28			
	54-180	.15	.15			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
16:						
Yarts, saline-sodic	0-16	.32	.32	5	3	86
	16-49	.32	.32			
	49-120	.32	.32			
	120-180	.32	.32			
17:						
Catahoula	0-7	.10	.17	3	5	56
	7-18	.15	.24			
	18-34	.15	.20			
	34-80	.05	.17			
	80-103	.05	.20			
	103-128	---	---			
Rock outcrop, Wingate Sandstone.						
18:						
Chilton	0-11	.20	.32	5	5	56
	11-49	.10	.24			
	49-81	.10	.28			
	81-180	.10	.28			
Begay	0-11	.28	.28	5	3	86
	11-43	.24	.24			
	43-150	.32	.32			
19:						
Chinchin	0-10	.20	.32	1	5	56
	10-26	.32	.32			
	26-51	---	---			
Badland, Chinle Formation.						
20:						
Chipeta, saline-sodic	0-4	.43	.43	2	4L	86
	4-17	.43	.43			
	17-28	.43	.43			
	28-53	---	---			
Stent family	0-9	.10	.17	2	5	56
	9-62	.10	.20			
	62-87	---	---			
21:						
Daklos	0-2	.15	.28	1	2	134
	2-10	.10	.24			
	10-31	.10	.37			
	31-37	---	---			
	37-62	---	---			
Lazear, dry	0-11	.15	.37	1	6	48
	11-28	.43	.43			
	28-53	---	---			
Rock outcrop, Shinarump Member, Chinle Formation.						

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
22:						
Daklos	0-10	.10	.32	1	6	48
	10-35	---	---			
Reef	0-14	.24	.55	1	6	48
	14-49	.24	.64			
	49-74	---	---			
Rock outcrop, Carmel Formation sandy limestone.						
23:						
Daklos	0-10	.28	.49	1	5	56
	10-20	.10	.37			
	20-45	---	---			
Rizno	0-10	.15	.28	1	5	56
	10-35	---	---			
Rock outcrop, Kaibab Limestone.						
24:						
Earlweed	0-3	.24	.24	5	2	134
	3-33	.24	.24			
	33-76	.24	.24			
	76-112	.24	.24			
	112-152	.32	.32			
Anasazi	0-3	.32	.32	2	3	86
	3-20	.32	.32			
	20-43	.32	.32			
	43-74	.20	.32			
	74-99	---	---			
25:						
Eslendo, saline	0-11	.64	.64	2	4L	86
	11-47	.55	.55			
	47-72	---	---			
Happle, saline-sodic	0-9	.05	.15	5	5	56
	9-30	.05	.20			
	30-51	.15	.24			
	51-72	.32	.55			
	72-115	.10	.32			
	115-200	.17	.32			
Rock outcrop, Mesaverde Formation sandstone.						
26:						
Foy family	0-6	.32	.32	5	5	56
	6-33	.05	.24			
	33-54	.05	.24			
	54-150	.05	.24			
Whitesage family	0-7	.15	.20	5	5	56
	7-28	.17	.24			
	28-43	.32	.32			
	43-90	.37	.37			
	90-153	.28	.43			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
27:						
Gladel	0-10	.28	.28	1	3	86
	10-27	.32	.32			
	27-52	---	---			
Plumasano	0-9	.28	.28	5	3	86
	9-28	.32	.32			
	28-105	.32	.32			
	105-197	.32	.32			
28:						
Goblin	0-6	.37	.37	1	3	86
	6-22	.37	.37			
	22-40	---	---			
	40-65	---	---			
29:						
Goblin	0-8	.49	.49	2	6	48
	8-38	.43	.43			
	38-63	---	---			
Clapper	0-5	.10	.37	3	6	48
	5-60	.10	.37			
	60-82	.20	.37			
	82-112	.24	.37			
	112-137	---	---			
30:						
Goblin	0-19	.43	.43	1	3	86
	19-44	---	---			
Ivanpatch	0-13	.24	.24	5	2	134
	13-43	.28	.28			
	43-177	.15	.15			
31:						
Hanksville, saline-sodic	0-7	.49	.49	4	4L	86
	7-28	.43	.43			
	28-95	.37	.37			
	95-112	.43	.43			
	112-137	---	---			
Chipeta, saline	0-10	.49	.49	2	6	48
	10-39	.43	.43			
	39-64	---	---			
32:						
Hanksville, saline-sodic	0-4	.55	.55	3	4L	86
	4-15	.43	.43			
	15-44	.43	.43			
	44-63	.55	.55			
	63-88	---	---			
Notal, saline-sodic	0-8	.28	.28	5	3	86
	8-26	.28	.28			
	26-121	.43	.43			
	121-152	.49	.49			
	152-177	---	---			
33:						
Kydestea	0-10	.10	.24	1	6	48
	10-20	.05	.24			
	20-45	---	---			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
33:						
Vessilla	0-13	.17	.28	1	5	56
	13-30	.37	.37			
	30-55	---	---			
Rock outcrop, Moenkopi Formation sandstone.						
34:						
Kydestea	0-10	.10	.28	1	6	48
	10-35	---	---			
Vessilla	0-7	.32	.32	1	3	86
	7-32	---	---			
Rock outcrop, Moenkopi Formation sandstone.						
35:						
Lavodnas	0-3	.55	.55	1	5	56
	3-17	.55	.55			
	17-26	---	---			
	26-51	---	---			
Retsabal	0-2	.55	.55	1	5	56
	2-12	.55	.55			
	12-37	---	---			
36:						
Mathis, cool	0-15	.28	.28	2	3	86
	15-36	.10	.32			
	36-180	.05	.32			
	180-205	---	---			
Rock outcrop, Wingate Sandstone.						
37:						
Metuck	0-25	.15	.37	1	6	48
	25-37	.17	.43			
	37-62	---	---			
Rock outcrop, Kaibab Formation limey sandstone.						
Vessilla	0-12	.17	.32	1	5	56
	12-20	.43	.43			
	20-45	---	---			
38:						
Mezzo family	0-10	.24	.24	5	2	134
	10-51	.28	.28			
	51-200	.15	.15			
	200-225	---	---			
39:						
Mido	0-11	.24	.24	5	2	134
	11-38	.28	.28			
	38-115	.28	.28			
	115-155	.37	.37			
	155-163	---	---			
	163-188	---	---			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
39:						
Rock outcrop, Entrada Formation sandstone.						
40:						
Mido	0-4	.15	.15	5	1	250
	4-24	.15	.15			
	24-105	.64	.64			
	105-120	.15	.15			
	120-180	.05	.05			
Strych	0-9	.17	.28	2	5	56
	9-45	.10	.24			
	45-180	.05	.20			
Reef	0-10	.15	.37	1	6	48
	10-35	---	---			
41:						
Mikim	0-3	.49	.49	4	3	86
	3-19	.55	.55			
	19-107	.37	.37			
	107-132	---	---			
Mivida, moist	0-6	.28	.28	5	3	86
	6-89	.43	.43			
	89-180	.43	.43			
42:						
Milok, cool	0-18	.28	.28	2	3	86
	18-37	.15	.28			
	37-57	.28	.28			
	57-200	.24	.24			
Clapper	0-9	.28	.28	3	3	86
	9-36	.32	.32			
	36-58	.10	.28			
	58-180	.10	.28			
43:						
Milok, steep	0-12	.37	.37	5	4L	86
	12-40	.24	.37			
	40-180	.37	.37			
Strych	0-13	.28	.28	2	3	86
	13-35	.15	.37			
	35-150	.05	.37			
44:						
Mivida	0-16	.20	.20	5	2	134
	16-56	.28	.28			
	56-96	.43	.43			
	96-109	.17	.28			
	109-162	.24	.24			
	162-184	.15	.32			
45:						
Mivida	0-10	.49	.49	5	3	86
	10-56	.49	.49			
	56-85	.49	.49			
	85-120	.28	.28			
	120-150	.28	.28			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
45:						
Gish	0-9	.43	.43	2	4L	86
	9-23	.43	.43			
	23-61	.37	.37			
	61-115	.32	.32			
	115-141	.49	.49			
	141-160	.37	.37			
	160-180	.49	.49			
Cannonville	0-10	.32	.32	2	4L	86
	10-34	.28	.28			
	34-77	.32	.32			
	77-102	---	---			
46:						
Moab	0-9	.10	.24	2	5	56
	9-21	.10	.24			
	21-43	.05	.24			
	43-180	.05	.24			
Abra family	0-9	.32	.32	3	4L	86
	9-33	.37	.37			
	33-92	.28	.28			
	92-117	.37	.37			
	117-142	---	---			
47:						
Moclom, warm	0-5	.17	.24	1	2	134
	5-22	.17	.24			
	22-47	---	---			
Rock outcrop, Summerville Formation sandstone and conglomerate.						
48:						
Moenkopie, warm	0-4	.15	.43	1	6	48
	4-17	.49	.49			
	17-42	---	---			
Rock outcrop, Carmel Formation sandstone.						
49:						
Moenkopie	0-5	.32	.32	1	2	134
	5-13	.49	.49			
	13-20	.15	.32			
	20-45	---	---			
Rock outcrop.						
50:						
Molen family	0-8	.28	.28	2	3	86
	8-19	.32	.32			
	19-31	.32	.32			
	31-43	.43	.43			
	43-54	.43	.43			
	54-79	.20	.32			
	79-104	---	---			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
50:						
Lazear	0-8	.20	.37	1	5	56
	8-18	.24	.37			
	18-36	.43	.43			
	36-61	---	---			
Gerst	0-8	.17	.32	2	5	56
	8-28	.37	.37			
	28-33	.20	.32			
	33-58	---	---			
51:						
Monue	0-5	.32	.32	5	3	86
	5-15	.32	.32			
	15-72	.32	.32			
	72-190	.32	.32			
Fruitland	0-10	.15	.24	5	5	56
	10-29	.10	.32			
	29-60	.24	.24			
	60-125	.32	.32			
	125-180	.32	.32			
52:						
Monue, saline-sodic	0-11	.43	.43	5	3	86
	11-32	.24	.24			
	32-85	.24	.24			
	85-180	.43	.43			
Myton, saline-sodic	0-10	.10	.24	5	5	56
	10-36	.10	.28			
	36-95	.10	.20			
	95-180	.28	.28			
Uzona, saline-sodic	0-9	.49	.49	5	3	86
	9-19	.49	.49			
	19-41	.43	.43			
	41-80	.55	.55			
	80-125	.37	.37			
	125-180	.32	.32			
53:						
Monue	0-9	.32	.32	4	3	86
	9-32	.49	.49			
	32-115	.32	.32			
	115-192	.24	.24			
Sheppard	0-12	.20	.20	5	2	134
	12-80	.20	.20			
	80-150	.24	.24			
54:						
Mulford	0-6	.43	.43	5	6	48
	6-43	.43	.43			
	43-68	.37	.37			
	68-96	.15	.32			
	96-159	.20	.37			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
55:						
Mussentuchit	0-11	.43	.43	2	3	86
	11-31	.24	.24			
	31-70	.32	.32			
	70-100	---	---			
	100-125	---	---			
Goblin	0-7	.49	.49	1	4L	86
	7-20	.49	.49			
	20-28	---	---			
	28-53	---	---			
Swell family	0-8	.64	.64	5	3	86
	8-20	.55	.55			
	20-69	.55	.55			
	69-165	.32	.32			
	165-218	.37	.37			
	218-243	---	---			
56:						
Nepalto	0-5	.05	.20	5	6	48
	5-18	.15	.24			
	18-76	.05	.17			
	76-119	.05	.17			
	119-152	.15	.37			
	152-163	.05	.20			
57:						
Nizhoni	0-5	.32	.32	1	3	86
	5-20	.24	.37			
	20-45	---	---			
Rock outcrop, Kayenta and Navajo Formations sandstone.						
58:						
Nizhoni	0-6	.32	.32	1	3	86
	6-31	---	---			
Rock outcrop, Kayenta Formation sandstone.						
59:						
Nizhoni	0-8	.37	.37	1	2	134
	8-25	.37	.37			
	25-37	.37	.37			
	37-62	---	---			
Rock outcrop, Kayenta and Wingate Formations sandstone.						
Pinepoint, dry	0-10	.28	.28	5	2	134
	10-42	.28	.28			
	42-120	.17	.17			
	120-165	.37	.37			
	165-190	---	---			
60:						
Notom	0-20	.05	.05	5	1	250
	20-57	.02	.02			
	57-200	.02	.05			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
60:						
Begay, moist	0-10	.24	.24	5	3	86
	10-31	.24	.24			
	31-75	.28	.28			
	75-110	.43	.43			
	110-200	.24	.24			
Bowington	0-12	.15	.15	5	1	250
	12-40	.24	.24			
	40-200	.24	.24			
61:						
Notom	0-12	.20	.20	3	2	134
	12-35	.20	.32			
	35-38	.28	.28			
	38-150	.02	.10			
Aquic Torrifluvents	0-10	.28	.28	4	2	134
	10-30	.32	.32			
	30-44	.55	.55			
	44-70	.05	.10			
	70-150	.05	.10			
62:						
Parkwash	0-3	.24	.24	1	1	250
	3-14	.15	.15			
	14-39	---	---			
Rock outcrop, Navajo Sandstone.						
63:						
Pherson family	0-20	.28	.28	3	3	86
	20-80	.10	.28			
	80-150	.05	.32			
Sandyranch	0-5	.28	.28	5	2	134
	5-31	.28	.28			
	31-65	.28	.28			
	65-180	.28	.28			
Riverwash.						
64:						
Polychrome	0-45	.10	.43	3	1	180
	45-80	.02	.28			
	80-105	---	---			
Badland, Chinle Formation.						
Cerropelon family	0-2	.02	.43	3	8	0
	2-45	.15	.43			
	45-82	.37	.37			
	82-107	---	---			
65:						
Querencia, saline-sodic	0-7	.32	.32	4	4L	86
	7-30	.37	.37			
	30-75	.20	.20			
	75-140	.43	.43			
	140-165	---	---			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
65:						
Lybrook, saline-sodic	0-6	.43	.43	2	4L	86
	6-49	.32	.32			
	49-100	.43	.43			
	100-125	---	---			
66:						
Radnik	0-20	.43	.43	5	3	86
	20-95	.32	.32			
	95-150	.32	.32			
	150-165	.02	.05			
Kwakina	0-10	.49	.49	5	3	86
	10-32	.32	.32			
	32-95	.24	.24			
	95-135	.28	.28			
	135-150	.02	.05			
Pherson family	0-27	.49	.49	3	3	86
	27-80	.02	.20			
	80-117	.32	.32			
	117-150	.10	.28			
67:						
Radnik	0-13	.32	.32	5	3	86
	13-24	.28	.28			
	24-73	.32	.32			
	73-148	.32	.32			
	148-185	.28	.28			
Notom	0-2	.10	.10	5	1	250
	2-15	.15	.24			
	15-180	.10	.24			
Oxyaquic Torrifluvents	0-39	.32	.32	3	2	134
	39-67	.32	.32			
	67-135	.05	.32			
	135-150	.05	.32			
68:						
Razito	0-3	.10	.10	5	1	220
	3-13	.10	.10			
	13-18	.15	.15			
	18-91	.15	.15			
	91-102	.15	.15			
	102-152	.10	.10			
Riverwash.						
69:						
Reef	0-9	.15	.28	1	5	56
	9-43	.05	.37			
	43-68	---	---			
Retsabal	0-10	.32	.32	1	2	134
	10-35	---	---			
Rock outcrop, Carmel Formation.						

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
70:						
Reef	0-10	.10	.32	1	6	48
	10-25	.05	.32			
	25-50	---	---			
Rock outcrop, Moenkopi Formation sandstone.						
71:						
Reef	0-5	.10	.28	1	6	48
	5-29	.10	.28			
	29-54	---	---			
Rock outcrop, Carmel Formation sandstone.						
72:						
Reef	0-10	.15	.49	1	7	38
	10-33	---	---			
	33-58	---	---			
Rock outcrop.						
73:						
Reef	0-10	.10	.28	1	6	48
	10-35	---	---			
Rock outcrop, Kayenta Formation.						
74:						
Reef, warm	0-10	.05	.28	1	8	0
	10-35	---	---			
Rock outcrop, Carmel Formation sandstone.						
Lemrac	0-9	.49	.49	3	3	86
	9-30	.49	.49			
	30-52	.49	.49			
	52-80	.37	.37			
	80-105	---	---			
75:						
Reef	0-8	.24	.55	1	6	48
	8-20	.15	.49			
	20-45	---	---			
Rizno	0-10	.24	.37	1	5	56
	10-35	---	---			
Rock outcrop, Moenkopi Formation sandstone.						-
76:						
Remorris	0-7	.32	.32	2	3	86
	7-20	.32	.32			
	20-45	.32	.32			
	45-70	---	---			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
77:						
Remorris, strongly alkaline	0-5	.15	.37	1	6	48
	5-17	.37	.37			
	17-42	---	---			
Rock outcrop, Curtis, Summerville, and Entrada Formations.						
78:						
Remorris	0-9	.20	.32	2	5	56
	9-27	.32	.32			
	27-49	.37	.37			
	49-60	---	---			
	60-85	---	---			
Milok, extremely stony	0-11	.17	.17	4	3	86
	11-38	.32	.32			
	38-92	.43	.43			
	92-113	.37	.37			
	113-138	---	---			
Rock outcrop, Entrada and Summerville Formations.						
79:						
Remorris	0-7	.17	.37	2	5	56
	7-23	.37	.37			
	23-41	.37	.37			
	41-66	---	---			
Peachsprings, strongly saline	0-9	.32	.32	5	3	86
	9-30	.32	.32			
	30-115	.37	.37			
	115-185	.37	.37			
80:						
Retsabal	0-3	.43	.43	1	5	56
	3-15	.37	.37			
	15-40	---	---			
Lemrac	0-10	.37	.37	2	2	134
	10-37	.32	.32			
	37-56	.32	.32			
	56-81	---	---			
81:						
Rizno	0-9	.28	.28	1	1	250
	9-20	.17	.17			
	20-40	.37	.37			
	40-65	---	---			
Mido, warm	0-13	.02	.02	5	1	250
	13-53	.05	.05			
	53-180	.05	.05			
Rock outcrop, Entrada Formation sandstone.						

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
82:						
Rizno	0-5	.15	.24	1	5	56
	5-10	.17	.28			
	10-14	---	---			
	14-39	---	---			
Rock outcrop.						
83:						
Rizno, warm	0-6	.17	.32	1	5	56
	6-26	.64	.64			
	26-51	---	---			
Rock outcrop, Dakota Formation sandstone.						
84:						
Rock outcrop.						
Arches	0-3	.20	.20	1	1	250
	3-28	.20	.20			
	28-53	---	---			
85:						
Rock outcrop, Kayenta and Navajo Formations sandstone.						
Arches	0-10	.37	.37	1	2	134
	10-30	.37	.37			
	30-55	---	---			
86:						
Rock outcrop, Morrison Formation, Salt Wash Member.						
Daklos	0-10	.10	.32	1	6	48
	10-22	.15	.32			
	22-47	---	---			
Moclom	0-4	.10	.17	1	1	220
	4-11	.10	.17			
	11-36	---	---			
87:						
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones.						
Myton	0-12	.10	.28	5	6	48
	12-60	.10	.28			
	60-180	.10	.28			
Somorent	0-5	.37	.37	2	4L	86
	5-15	.43	.43			
	15-32	.43	.43			
	32-57	---	---			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
88:						
Rock outcrop, Navajo Sandstone.						
Nalcase	0-3	.20	.20	1	1	250
	3-23	.15	.15			
	23-48	---	---			
89:						
Rock outcrop.						
Needle	0-3	.20	.20	1	1	220
	3-28	.20	.20			
	28-53	---	---			
90:						
Rock outcrop, Navajo Sandstone.						
Mezzo family, dry	0-4	.20	.20	5	2	134
	4-16	.24	.24			
	16-58	.15	.15			
	58-150	.15	.15			
Strell family	0-9	.24	.24	1	2	134
	9-20	.28	.28			
	20-45	---	---			
91:						
Rock outcrop, Navajo Sandstone.						
Santrick	0-13	.32	.32	2	2	134
	13-51	.32	.32			
	51-64	.28	.28			
	64-89	---	---			
Nalcase	0-5	.37	.37	1	2	134
	5-18	.37	.37			
	18-29	.28	.28			
	29-54	---	---			
92:						
Rock outcrop.						
Typic Torriorthents	0-5	.17	.37	1	6	48
	5-25	.10	.32			
	25-43	.32	.32			
	43-68	---	---			
93:						
Rosced family	0-7	.20	.20	2	3	86
	7-26	.10	.28			
	26-60	.05	.24			
	60-180	.02	.24			
Quezcan, sodic	0-19	.24	.24	3	4L	86
	19-58	.24	.24			
	58-83	---	---			
94:						
Saemo	0-12	.20	.32	5	5	56
	12-32	.24	.43			
	32-85	.10	.32			
	85-150	.15	.32			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
95:						
Sandyranch	0-9	.24	.24	5	2	134
	9-125	.15	.15			
	125-140	.28	.28			
	140-192	.15	.15			
Aquic Torrifluvents	0-15	.37	.37	3	5	56
	15-45	.28	.28			
	45-73	.20	.20			
	73-102	.32	.32			
	102-127	---	---			
Water.						
96:						
Sandyranch	0-5	.15	.15	5	1	250
	5-23	.17	.17			
	23-85	.02	.02			
	85-110	.17	.17			
	110-150	.02	.02			
Mido	0-6	.15	.15	5	1	250
	6-23	.15	.15			
	23-90	.15	.15			
	90-200	.15	.15			
Mident	0-2	.28	.28	2	2	134
	2-28	.32	.32			
	28-53	---	---			
	53-78	---	---			
97:						
Sandyranch	0-6	.02	.02	5	1	250
	6-14	.28	.28			
	14-41	.02	.02			
	41-180	.02	.02			
Radnik	0-5	.49	.49	5	5	56
	5-22	.32	.32			
	22-36	.20	.32			
	36-80	.28	.28			
	80-153	.10	.20			
Riverwash.						
98:						
Seeg	0-7	.24	.24	3	2	134
	7-20	.10	.20			
	20-31	.24	.24			
	31-180	.05	.24			
Moffat	0-13	.17	.17	5	1	250
	13-22	.32	.32			
	22-40	.28	.28			
	40-75	.28	.28			
	75-180	.17	.28			
98:						
Needle	0-6	.37	.37	1	1	250
	6-30	.37	.37			
	30-55	---	---			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
99:						
Simel, saline	0-6	.55	.55	1	6	48
	6-20	.55	.55			
	20-30	.55	.55			
	30-45	---	---			
	45-70	---	---			
Catahoula, saline	0-10	.05	.17	5	5	56
	10-44	.05	.17			
	44-54	.15	.20			
	54-200	.02	.10			
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations.						
100:						
Simel	0-9	.37	.37	2	6	48
	9-22	.43	.43			
	22-39	.43	.43			
	39-64	---	---			
Rock outcrop, Moenkopi and Chinle Formations.						
101:						
Simel	0-7	.28	.43	1	5	56
	7-18	.49	.49			
	18-28	.55	.55			
	28-35	---	---			
	35-60	---	---			
Simel, steep	0-5	.10	.43	1	8	0
	5-28	.43	.43			
	28-39	---	---			
	39-64	---	---			
Rock outcrop, Moenkopi Formation sandstone.						
102:						
Skos	0-5	.24	.43	1	6	48
	5-17	.24	.55			
	17-34	.10	.64			
	34-59	---	---			
Badland, Moenkopi Formation.						
103:						
Strych	0-7	.24	.37	2	5	56
	7-23	.05	.20			
	23-40	.05	.17			
	40-89	.05	.28			
	89-200	.05	.24			
104:						
Sulphurcreek	0-7	.32	.32	5	6	48
	7-30	.28	.28			
	30-45	.43	.43			
	45-68	.37	.37			
	68-162	.32	.32			

Table 21.—Erosion Properties—Continued

Map unit symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
105:						
Tesihim	0-6	.32	.32	2	2	134
	6-14	.32	.32			
	14-25	.28	.28			
	25-50	---	---			
Rizno, steep	0-9	.32	.32	1	3	86
	9-16	.32	.32			
	16-41	---	---			
Rock outcrop, Jurassic or Cretaceous sandstones.						
Badland.						
106:						
Tineoyler	0-12	.37	.37	5	5	56
	12-32	.37	.37			
	32-83	.32	.32			
	83-151	.37	.37			
	151-173	.32	.32			
107:						
Ustic Torriorthents	0-3	.15	.20	2	5	56
	3-20	.15	.24			
	20-58	.10	.28			
	58-83	---	---			
Rock outcrop.						
Badland.						
108.						
Water						

Table 22.—Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that data were not estimated)

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
1:						
Abra, moist	No restriction	---	---	Moderate	Low	Low
Sazi, moist	Lithic bedrock	50-150	Very strongly cemented	Moderate	Low	Low
Strych, moist	No restriction	---	---	Moderate	Low	Low
2:						
Aquima	No restriction	---	---	Moderate	Moderate	Low
3:						
Arches	Lithic bedrock	10-50	Indurated	Low	Low	Low
Mido	No restriction	---	---	Low	Low	Low
Rock outcrop, Kayenta and Wingate Formations sandstone.						
4:						
Badland, Morrison Formation, Brushy Basin Member						
Emco family	Paralithic bedrock	20-50	Weakly cemented	Low	High	High
5:						
Barx	No restriction	---	---	Moderate	Low	Low
Remorris	Paralithic bedrock	10-51	Moderately cemented	Moderate	Moderate	Low
6:						
Beclabito	Lithic bedrock	51-102	Indurated	Low	High	Moderate
Lybrook, saline-sodic	Paralithic bedrock	50-100	Moderately cemented	Low	High	High
7:						
Begay, moist	No restriction	---	---	Moderate	Low	Low
8:						
Begay	No restriction	---	---	Moderate	Moderate	Low

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
9:						
Begay, moist	No restriction	---	---	Moderate	Low	Low
10:						
Begay, saline	No restriction	---	---	Moderate	High	Moderate
Querencia, saline-sodic	No restriction	---	---	Moderate	High	High
11:						
Begay, saline-sodic	No restriction	---	---	Moderate	High	High
Begay, moist	No restriction	---	---	Moderate	High	High
Elias	No restriction	---	---	Moderate	High	High
12:						
Begay	No restriction	---	---	Moderate	Low	Low
Ignacio	Lithic bedrock	50-100	Strongly cemented	Moderate	Low	Low
Retsabal	Lithic bedrock	10-50	Strongly cemented	Moderate	Low	High
13:						
Begay, moist	No restriction	---	---	Moderate	Low	Low
Rizno, moist	Lithic bedrock	10-50	Indurated	Moderate	Low	Low
14:						
Begay	No restriction	---	---	Moderate	Low	Low
Strych	No restriction	---	---	Moderate	Low	Low
15:						
Bullpen	Paralithic bedrock	50-150	Weakly cemented	Moderate	Moderate	Low
Daklos	Paralithic bedrock	15-50	Weakly cemented	Moderate	Low	Low
	Lithic bedrock	20-50	Strongly cemented			
Puertecito	Lithic bedrock	10-50	Very strongly cemented	Moderate	Moderate	Low
16:						
Calladito, saline-sodic	No restriction	---	---	Low	High	High
Yarts, saline-sodic	No restriction	---	---	Moderate	High	Moderate

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
17:						
Catahoula	Lithic bedrock	50-150	Very strongly cemented	Moderate	Low	Low
Rock outcrop, Wingate Sandstone.						
18:						
Chilton	No restriction	---	---	Moderate	Low	Low
Begay	No restriction	---	---	Moderate	Low	Low
19:						
Chinchin	Lithic bedrock	10-51	Indurated	Moderate	Moderate	Low
Badland, Chinle Formation.						
20:						
Chipeta, saline-sodic	Paralithic bedrock	22-35	Weakly cemented	Low	High	High
Stent family	Lithic bedrock	58-87	Indurated	Moderate	Low	Low
21:						
Daklos	Paralithic bedrock	10-40	Moderately cemented	Moderate	Low	Low
	Lithic bedrock	10-51	Indurated			
Lazear, dry	Lithic bedrock	25-51	Indurated	Moderate	Moderate	Low
Rock outcrop, Shinarump Member, Chinle Formation.						
22:						
Daklos	Lithic bedrock	4-51	Indurated	Moderate	---	Low
Reef	Lithic bedrock	10-51	Indurated	Moderate	---	Low
Rock outcrop, Carmel Formation sandy limestone.						
23:						
Daklos	Lithic bedrock	10-51	Indurated	Moderate	Low	Low
Rizno	Lithic bedrock	10-51	Indurated	Moderate	Low	Low
Rock outcrop, Kaibab Limestone.						

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
24:						
Earlweed	No restriction	---	---	Low	Moderate	Low
Anasazi	Lithic bedrock	51-89	Indurated	Moderate	Moderate	Low
25:						
Eslendo, saline	Paralithic bedrock	20-50	Very weakly cemented	Moderate	High	High
Happle, saline-sodic	No restriction	---	---	Moderate	High	High
Rock outcrop, Mesaverde Formation sandstone.						
26:						
Foy family	No restriction	---	---	Moderate	Low	Low
Whitesage family	No restriction	---	---	Moderate	Low	Low
27:						
Gladel	Lithic bedrock	25-50	Indurated	Moderate	Low	Low
Plumasano	No restriction	---	---	Moderate	Low	Low
28:						
Goblin	Paralithic bedrock	10-50	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	25-50	Very strongly cemented			
29:						
Goblin	Paralithic bedrock	13-50	Moderately cemented	Moderate	Moderate	High
Clapper	Lithic bedrock	102-152	Very strongly cemented	Moderate	Moderate	Moderate
30:						
Goblin	Lithic bedrock	10-50	Very strongly cemented	Moderate	Moderate	High
Ivanpatch	No restriction	---	---	Low	High	High

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
31:						
Hanksville, saline-sodic	Paralithic bedrock	102-203	Moderately cemented	Moderate	High	High
Chipeta, saline	Paralithic bedrock	10-50	Moderately cemented	Low	High	High
32:						
Hanksville, saline-sodic	Paralithic bedrock	50-102	Moderately cemented	Moderate	High	High
Notal, saline-sodic	Paralithic bedrock	152-178	Moderately cemented	Moderate	High	High
33:						
Kydestea	Lithic bedrock	10-51	Indurated	Moderate	Low	Low
Vessilla	Lithic bedrock	20-51	Strongly cemented	Moderate	Low	Low
Rock outcrop, Moenkopi Formation sandstone.						
34:						
Kydestea	Lithic bedrock	10-51	Indurated	Moderate	Low	Low
Vessilla	Lithic bedrock	7-51	Indurated	Moderate	Low	Low
Rock outcrop, Moenkopi Formation sandstone.						
35:						
Lavodnas	Paralithic bedrock	10-30	Weakly cemented	Moderate	Low	High
	Lithic bedrock	20-40	Strongly cemented			
Retsabal	Paralithic bedrock	10-25	Weakly cemented	None	High	High
36:						
Mathis, cool	Lithic bedrock	102-203	Very strongly cemented	Low	Low	Low
Rock outcrop, Wingate Sandstone.						

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
37:						
Metuck	Lithic bedrock	25-50	Indurated	Moderate	Low	Low
Rock outcrop, Kaibab Formation limey sandstone.						
Vessilla	Lithic bedrock	10-50	Indurated	Moderate	Low	Low
38:						
Mezzo family	Lithic bedrock	100-250	Indurated	Low	Low	Low
39:						
Mido	Lithic bedrock Paralithic bedrock	163 155	Indurated Weakly cemented	Low	Low	Low
Rock outcrop, Entrada Formation sandstone.						
40:						
Mido	No restriction	---	---	Low	Low	Low
Strych	No restriction	---	---	Moderate	Low	Low
Reef	Lithic bedrock	10-50	Indurated	Moderate	---	Low
41:						
Mikim	Paralithic bedrock	92-132	Weakly cemented	Moderate	Low	Low
Mivida, moist	No restriction	---	---	Moderate	Low	Low
42:						
Milok, cool	No restriction	---	---	Moderate	Low	Low
Clapper	No restriction	---	---	Moderate	Low	Low
43:						
Milok, steep	No restriction	---	---	Moderate	Low	Low
Strych	No restriction	---	---	Moderate	Low	Low
44:						
Mivida	No restriction	---	---	Moderate	Moderate	Low

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
45:						
Mivida	No restriction	---	---	Moderate	Low	Low
Gish	No restriction	---	---	Low	High	High
Cannonville	Paralithic bedrock	51-102	Moderately cemented	Low	High	Moderate
46:						
Moab	No restriction	---	---	Moderate	Low	Low
Abra family	Lithic bedrock	100-150	Very strongly cemented	Moderate	Moderate	Low
47:						
Moclom, warm	Lithic bedrock	14-51	Indurated	Low	Low	Low
Rock outcrop, Summerville Formation sandstone and conglomerate.						
48:						
Moenkopie, warm	Lithic bedrock	10-51	Very strongly cemented	Moderate	Moderate	Low
Rock outcrop, Carmel Formation sandstone.						
49:						
Moenkopie	Lithic bedrock	10-36	Indurated	Moderate	Moderate	Low
Rock outcrop.						
50:						
Molen family	Lithic bedrock	51-102	Indurated	Moderate	High	Moderate
Lazear	Lithic bedrock	25-51	Indurated	Moderate	Moderate	Low
Gerst	Paralithic bedrock	15-50	Weakly cemented	Moderate	Moderate	Moderate
51:						
Monue	No restriction	---	---	Moderate	High	Moderate
Fruitland	No restriction	---	---	Moderate	Low	Low

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
52:						
Monue, saline-sodic	No restriction	---	---	Moderate	High	High
Myton, saline-sodic	No restriction	---	---	Moderate	High	Moderate
Uzona, saline-sodic	No restriction	---	---	Moderate	High	High
53:						
Monue	No restriction	---	---	Moderate	Moderate	Low
Sheppard	No restriction	---	---	Low	Low	Low
54:						
Mulford	No restriction	---	---	Moderate	Low	Low
55:						
Mussentuchit	Lithic bedrock	100	Strongly cemented	Moderate	Moderate	High
	Paralithic bedrock	51-102	Weakly cemented			
Goblin	Paralithic bedrock	13-51	Weakly cemented	Moderate	High	High
	Lithic bedrock	25-60	Strongly cemented			
Swell family	Paralithic bedrock	100-250	Moderately cemented	Moderate	High	High
56:						
Nepalto	No restriction	---	---	Low	Moderate	Low
57:						
Nizhoni	Lithic bedrock	10-50	Indurated	Moderate	Low	Low
Rock outcrop, Kayenta and Navajo Formations sandstone.						
58:						
Nizhoni	Lithic bedrock	5-50	Indurated	Moderate	---	Low
Rock outcrop, Kayenta Formation sandstone.						
59:						
Nizhoni	Lithic bedrock	10-50	Indurated	Moderate	Low	Low
Rock outcrop, Kayenta and Wingate Formations sandstone.						

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
59:						
Pinepoint, dry	Lithic bedrock	100-200	Indurated	Low	Low	Low
60:						
Notom	No restriction	---	---	Low	Low	Low
Begay, moist	No restriction	---	---	Moderate	Low	Low
Bowington	No restriction	---	---	Low	Low	Low
61:						
Notom	No restriction	---	---	Low	Low	Low
Aquic Torrifluvents	No restriction	---	---	Low	High	Low
62:						
Parkwash	Lithic bedrock	4-20	Indurated	Low	Low	Low
Rock outcrop, Navajo Sandstone.						
63:						
Pherson family	No restriction	---	---	Moderate	Low	Low
Sandyranch	No restriction	---	---	Low	Low	Low
Riverwash.						
64:						
Polychrome	Paralithic bedrock	51-102	Moderately cemented	Moderate	Moderate	Moderate
Badland, Chinle Formation						
Cerropelon family	Paralithic bedrock	51-102	Weakly cemented	Moderate	Low	Low
65:						
Querencia, saline-sodic	Paralithic bedrock	100-200	Moderately cemented	Moderate	High	High
Lybrook, saline-sodic	Paralithic bedrock	50-150	Moderately cemented	Low	High	High

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
66:						
Radnik	No restriction	---	---	Moderate	Low	Low
Kwakina	No restriction	---	---	Low	Low	Low
Pherson family	No restriction	---	---	Moderate	Low	Low
67:						
Radnik	No restriction	---	---	Moderate	Low	Low
Notom	No restriction	---	---	Low	Low	Low
Oxyaquic Torrifluvents	No restriction	---	---	Low	Low	Low
68:						
Razito	No restriction	---	---	Low	Moderate	Low
Riverwash.						
69:						
Reef	Lithic bedrock	10-50	Indurated	Moderate	Low	Low
Retsabal	Paralithic bedrock	10-50	Moderately cemented	Moderate	High	High
Rock outcrop, Carmel Formation.						
70:						
Reef	Lithic bedrock	20-51	Very strongly cemented	Moderate	Low	Low
Rock outcrop, Moenkopi Formation sandstone.						
71:						
Reef	Lithic bedrock	11-50	Very strongly cemented	Moderate	---	Low
Rock outcrop, Carmel Formation sandstone.						
72:						
Reef	Lithic bedrock	33 10-50	Indurated	Moderate	Low	Low
Rock outcrop.						

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
73:						
Reef	Lithic bedrock	10-50	Indurated	Moderate	---	Low
Rock outcrop, Kayenta Formation.						
74:						
Reef, warm	Lithic bedrock	5-50	Indurated	Moderate	---	Low
Rock outcrop, Carmel Formation sandstone.						
Lemrac	Paralithic bedrock	51-102	Moderately cemented	Moderate	Moderate	High
75:						
Reef	Lithic bedrock	10-50	Very strongly cemented	Moderate	Moderate	Low
Rizno	Lithic bedrock	10-50	Very strongly cemented	Moderate	Moderate	Low
Rock outcrop, Moenkopi Formation sandstone.						
76:						
Remorris	Paralithic bedrock	25-50	Weakly cemented	Moderate	Moderate	Moderate
77:						
Remorris, strongly alkaline	Paralithic bedrock	10-50	Weakly cemented	Moderate	Moderate	Low
Rock outcrop, Curtis, Summerville, and Entrada Formations.						
78:						
Remorris	Paralithic bedrock	38-60	Moderately cemented	Moderate	Moderate	Low
	Lithic bedrock	51-102	Very strongly cemented			
Milok, extremely stony	Paralithic bedrock	102-203	Weakly cemented	Moderate	Moderate	Low
Rock outcrop, Entrada and Summerville Formations.						

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
79:						
Remorris	Paralithic bedrock	20-50	Weakly cemented	Moderate	Moderate	Low
Peachsprings, strongly saline	No restriction	---	---	Moderate	High	High
80:						
Retsabal	Lithic bedrock	15-40	Strongly cemented	None	High	High
Lemrac	Lithic bedrock	51-64	Strongly cemented	None	High	High
81:						
Rizno	Lithic bedrock	16-64	Indurated	Moderate	Low	Low
Mido, warm	No restriction	---	---	Low	Low	Low
Rock outcrop, Entrada Formation sandstone.						
82:						
Rizno	Paralithic bedrock	10-25	Moderately cemented	Moderate	Low	Low
	Lithic bedrock	13-50	Indurated			
Rock outcrop.						
83:						
Rizno, warm	Lithic bedrock	4-50	Indurated	Moderate	Low	Low
Rock outcrop, Dakota Formation sandstone.						
84:						
Rock outcrop.						
Arches	Lithic bedrock	10-28	Indurated	Low	Moderate	Low
85:						
Rock outcrop, Kayenta and Navajo Formations sandstone.						
Arches	Lithic bedrock	10-50	Indurated	Low	Low	Low
86:						
Rock outcrop, Morrison Formation, Salt Wash Member.						

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
86:						
Daklos	Lithic bedrock	13-51	Indurated	Moderate	Low	Low
Moclom	Lithic bedrock	10-51	Indurated	Low	Low	Low
87:						
Rock outcrop, Entrada Formation and Salt Wash Member of the Morrison Formation sandstones.						
Myton	No restriction	---	---	Moderate	Low	Low
Somorent	Paralithic bedrock	14-60	Weakly cemented	Moderate	Moderate	Moderate
88:						
Rock outcrop, Navajo Sandstone.						
Nalcase	Lithic bedrock	10-50	Indurated	Low	Low	Low
89:						
Rock outcrop.						
Needle	Lithic bedrock	10-30	Indurated	Low	Moderate	Low
90:						
Rock outcrop, Navajo Sandstone.						
Mezzo family, dry	No restriction	---	---	Low	Low	Low
Strell family	Lithic bedrock	14-41	Indurated	Low	Low	Low
91:						
Rock outcrop, Navajo Sandstone.						
Santrick	Lithic bedrock	50-102	Very strongly cemented	Low	---	Low
Nalcase	Lithic bedrock	10-50	Very strongly cemented	Low	---	Low
92:						
Rock outcrop.						
Typic Torriorthents	Paralithic bedrock	10-51	Moderately cemented	Low	Moderate	Low

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
93:						
Rosced family	No restriction	---	---	Moderate	Low	Low
Quezcan, sodic	Paralithic bedrock	50-100	Very weakly cemented	Low	Moderate	Low
94:						
Saemo	No restriction	---	---	Moderate	Low	Low
95:						
Sandyranch	No restriction	---	---	Low	Low	Low
Aquic Torrifluvents	Lithic bedrock	50-150	Indurated	Low	High	Low
Water.						
96:						
Sandyranch	No restriction	---	---	Low	Low	Low
Mido	No restriction	---	---	Low	Low	Low
Mident	Paralithic bedrock	10-50	Weakly cemented	Low	Low	Low
	Lithic bedrock	25-102	Strongly cemented			
97:						
Sandyranch	No restriction	---	---	Low	Moderate	Moderate
Radnik	No restriction	---	---	Moderate	Low	Low
Riverwash.						
98:						
Seeg	No restriction	---	---	Moderate	Low	Low
Moffat	No restriction	---	---	Moderate	Low	Low
Needle	Lithic bedrock	6-51	Indurated	Low	Low	Low
99:						
Simel, saline	Paralithic bedrock	10-50	Moderately cemented	Moderate	High	High
	Lithic bedrock	38-77	Very strongly cemented			
Catahoula, saline	No restriction	---	---	Moderate	High	Moderate

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
99:						
Rock outcrop, Moenkopi, Chinle, Wingate, and Kayenta Formations.						
100:						
Simel	Paralithic bedrock	10-51	Weakly cemented	Moderate	Moderate	Low
Rock outcrop, Moenkopi and Chinle Formations.						
101:						
Simel	Paralithic bedrock	10-38	Moderately cemented	Moderate	Low	Low
	Lithic bedrock	25-51	Indurated			
Simel, steep	Paralithic bedrock	10-38	Moderately cemented	Moderate	Moderate	Low
	Lithic bedrock	25-51	Indurated			
Rock outcrop, Moenkopi Formation sandstone.						
102:						
Skos	Lithic bedrock	10-51	Indurated	Moderate	Low	Low
Badland, Moenkopi Formation.						
103:						
Strych	No restriction	---	---	Moderate	Low	Low
104:						
Sulphurcreek	No restriction	---	---	Moderate	Low	Low
105:						
Tesihim	Paralithic bedrock	10-51	Moderately cemented	Moderate	Low	Low
Rizno, steep	Lithic bedrock	10-50	Indurated	Moderate	Low	Low
Rock outcrop, Jurassic or Cretaceous sandstones.						
Badland.						
106:						
Tineoyler	No restriction	---	---	Moderate	Low	Low

Table 22.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		cm				
107:						
Ustic Torriorthents	Lithic bedrock	51-102	Indurated	Low	Moderate	Low
Rock outcrop.						
Badland.						
108.						
Water						

Table 23.—Water Features

(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 unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
1:									
Abra, moist	C	Jan-Dec	---	---	---	---	None	---	None
Sazi, moist	A	Jan-Dec	---	---	---	---	None	---	None
Strych, moist	A	Jan-Dec	---	---	---	---	None	---	None
2:									
Aquima	B	Jan-Dec	---	---	---	---	None	---	None
3:									
Arches	D	Jan-Dec	---	---	---	---	None	---	None
Mido	A	Jan-Dec	---	---	---	---	None	---	None
4:									
Emco family	D	Jan-Dec	---	---	---	---	None	---	None
5:									
Barx	B	Jan-Dec	---	---	---	---	None	---	None
Remorris	D	Jan-Dec	---	---	---	---	None	---	None
6:									
Beclabito	D	Jan-Dec	---	---	---	---	None	---	None
Lybrook, saline-sodic	D	Jan-Dec	---	---	---	---	None	---	None
7:									
Begay, moist	A	Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
8:									
Begay	A								
		Jan-Dec	---	---	---	---	None	---	None
9:									
Begay, moist	A								
		July	---	---	---	---	None	---	Very rare
		August	---	---	---	---	None	---	Very rare
		September	---	---	---	---	None	---	Very rare
10:									
Begay, saline	A								
		Jan-Dec	---	---	---	---	None	---	None
Querencia, saline-sodic	A								
		Jan-Dec	---	---	---	---	None	---	None
11:									
Begay, saline-sodic	B								
		Jan-Dec	---	---	---	---	None	---	None
Begay, moist	A								
		Jan-Dec	---	---	---	---	None	---	None
Elias	C								
		Jan-Dec	---	---	---	---	None	---	None
12:									
Begay	A								
		Jan-Dec	---	---	---	---	None	---	None
Ignacio	B								
		Jan-Dec	---	---	---	---	None	---	None
Retsabal	D								
		Jan-Dec	---	---	---	---	None	---	None
13:									
Begay, moist	A								
		Jan-Dec	---	---	---	---	None	---	None
Rizno, moist	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
14:									
Begay	A	Jan-Dec	---	---	---	---	None	---	None
Strych	A	Jan-Dec	---	---	---	---	None	---	None
15:									
Bullpen	C	Jan-Dec	---	---	---	---	None	---	None
Daklos	D	Jan-Dec	---	---	---	---	None	---	None
Puertecito	D	Jan-Dec	---	---	---	---	None	---	None
16:									
Calladito, saline-sodic	A	Jan-Dec	---	---	---	---	None	---	None
Yarts, saline-sodic	A	Jan-Dec	---	---	---	---	None	---	None
17:									
Catahoula	B	Jan-Dec	---	---	---	---	None	---	None
18:									
Chilton	A	Jan-Dec	---	---	---	---	None	---	None
Begay	A	Jan-Dec	---	---	---	---	None	---	None
19:									
Chinchin	D	Jan-Dec	---	---	---	---	None	---	None
20:									
Chipeta, saline-sodic	D	Jan-Dec	---	---	---	---	None	---	None
Stent family	B	Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
21:									
Daklos	D	Jan-Dec	---	---	---	---	None	---	None
Lazear, dry	D	Jan-Dec	---	---	---	---	None	---	None
22:									
Daklos	D	Jan-Dec	---	---	---	---	None	---	None
Reef	D	Jan-Dec	---	---	---	---	None	---	None
23:									
Daklos	D	Jan-Dec	---	---	---	---	None	---	None
Rizno	D	Jan-Dec	---	---	---	---	None	---	None
24:									
Earlweed	A	Jan-Dec	---	---	---	---	None	---	None
Anasazi	B	Jan-Dec	---	---	---	---	None	---	None
25:									
Eslendo, saline	D	Jan-Dec	---	---	---	---	None	---	None
Happle, saline-sodic	A	Jan-Dec	---	---	---	---	None	---	None
26:									
Foy family	A	Jan-Dec	---	---	---	---	None	---	None
Whitesage family	C	Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
27:									
Gladel	D	Jan-Dec	---	---	---	---	None	---	None
Plumasano	A	Jan-Dec	---	---	---	---	None	---	None
28:									
Goblin	D	Jan-Dec	---	---	---	---	None	---	None
29:									
Goblin	D	Jan-Dec	---	---	---	---	None	---	None
Clapper	A	Jan-Dec	---	---	---	---	None	---	None
30:									
Goblin	D	Jan-Dec	---	---	---	---	None	---	None
Ivanpatch	A	Jan-Dec	---	---	---	---	None	---	None
31:									
Hanksville, saline-sodic	C	Jan-Dec	---	---	---	---	None	---	None
Chipeta, saline	D	Jan-Dec	---	---	---	---	None	---	None
32:									
Hanksville, saline-sodic	C	Jan-Dec	---	---	---	---	None	---	None
Notal, saline-sodic	B	Jan-Dec	---	---	---	---	None	---	None
33:									
Kydestea	D	Jan-Dec	---	---	---	---	None	---	None
Vessilla	D	Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
34:									
Kydestea	D								
		Jan-Dec	---	---	---	---	None	---	None
Vessilla	D								
		Jan-Dec	---	---	---	---	None	---	None
35:									
Lavodnas	D								
		Jan-Dec	---	---	---	---	None	---	None
Retsabal	D								
		Jan-Dec	---	---	---	---	None	---	None
36:									
Mathis, cool	A								
		Jan-Dec	---	---	---	---	None	---	None
37:									
Metuck	D								
Vessilla	D								
		Jan-Dec	---	---	---	---	None	---	None
38:									
Mezzo family	A								
		Jan-Dec	---	---	---	---	None	---	None
39:									
Mido	A								
		Jan-Dec	---	---	---	---	None	---	None
40:									
Mido	A								
		Jan-Dec	---	---	---	---	None	---	None
Strych	A								
		Jan-Dec	---	---	---	---	None	---	None
Reef	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
41:									
Mikim	B								
		Jan-Dec	---	---	---	---	None	---	None
Mivida, moist	A								
		Jan-Dec	---	---	---	---	None	---	None
42:									
Milok, cool	A								
		Jan-Dec	---	---	---	---	None	---	None
Clapper	B								
		Jan-Dec	---	---	---	---	None	---	None
43:									
Milok, steep	A								
		Jan-Dec	---	---	---	---	None	---	None
Strych	A								
		Jan-Dec	---	---	---	---	None	---	None
44:									
Mivida	A								
		Jan-Dec	---	---	---	---	None	---	None
45:									
Mivida	A								
		Jan-Dec	---	---	---	---	None	---	None
Gish	C								
		Jan-Dec	---	---	---	---	None	---	None
Cannonville	D								
		Jan-Dec	---	---	---	---	None	---	None
46:									
Moab	A								
		Jan-Dec	---	---	---	---	None	---	None
Abra family	B								
		Jan-Dec	---	---	---	---	None	---	None
47:									
Moclom, warm	D								
		July	---	---	---	---	None	---	Very rare
		August	---	---	---	---	None	---	Very rare
		September	---	---	---	---	None	---	Very rare

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
48:									
Moenkopie, warm	D								
		Jan-Dec	---	---	---	---	None	---	None
49:									
Moenkopie	D								
		Jan-Dec	---	---	---	---	None	---	None
50:									
Molen family	C								
		Jan-Dec	---	---	---	---	None	---	None
Lazear	D								
		Jan-Dec	---	---	---	---	None	---	None
Gerst	D								
		Jan-Dec	---	---	---	---	None	---	None
51:									
Monue	A								
		Jan-Dec	---	---	---	---	None	---	None
Fruitland	A								
		Jan-Dec	---	---	---	---	None	---	None
52:									
Monue, saline-sodic	A								
		Jan-Dec	---	---	---	---	None	---	None
Myton, saline-sodic	A								
		Jan-Dec	---	---	---	---	None	---	None
Uzona, saline-sodic	C								
		Jan-Dec	---	---	---	---	None	---	None
53:									
Monue	A								
		July	---	---	---	---	None	---	Very rare
		August	---	---	---	---	None	---	Very rare
		September	---	---	---	---	None	---	Very rare
Sheppard	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
54:									
Mulford	C								
		July	---	---	---	---	None	---	Rare
		August	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare
55:									
Mussentuchit	B								
		Jan-Dec	---	---	---	---	None	---	None
Goblin	D								
		Jan-Dec	---	---	---	---	None	---	None
Swell family	A								
		Jan-Dec	---	---	---	---	None	---	None
56:									
Nepalto	A								
		Jan-Dec	---	---	---	---	None	---	None
57:									
Nizhoni	D								
		Jan-Dec	---	---	---	---	None	---	None
58:									
Nizhoni	D								
		Jan-Dec	---	---	---	---	None	---	None
59:									
Nizhoni	D								
		Jan-Dec	---	---	---	---	None	---	None
Pinepoint, dry	A								
		Jan-Dec	---	---	---	---	None	---	None
60:									
Notom	A								
		July	---	---	---	---	None	---	Rare
		August	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare
Begay, moist	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
60:									
Bowington	A/D								
		July	12	45 >200	---	---	None	Very brief	Frequent
		August	12	45 >200	---	---	None	Very brief	Frequent
		September	12	45 >200	---	---	None	Very brief	Frequent
61:									
Notom	A								
		July	---	---	---	---	None	Very brief	Occasional
		August	---	---	---	---	None	Very brief	Occasional
		September	---	---	---	---	None	Very brief	Occasional
Aquic Torrifluvents	A								
		July	67	---	---	---	None	Very brief	Frequent
		August	67	---	---	---	None	Very brief	Frequent
		September	67	---	---	---	None	Very brief	Frequent
62:									
Parkwash	D								
		Jan-Dec	---	---	---	---	None	---	None
63:									
Pherson family	A								
		July	---	---	---	---	None	Very brief	Occasional
		August	---	---	---	---	None	Very brief	Occasional
		September	---	---	---	---	None	Very brief	Occasional
Sandyranch	A								
		July	---	---	---	---	None	---	Rare
		August	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare
64:									
Polychrome	A								
		Jan-Dec	---	---	---	---	None	---	None
Cerropelon family	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
65:									
Querencia, saline-sodic	C								
		Jan-Dec	---	---	---	---	None	---	None
Lybrook, saline-sodic	D								
		Jan-Dec	---	---	---	---	None	---	None
66:									
Radnik	A								
		July	---	---	---	---	None	Very brief	Occasional
		August	---	---	---	---	None	Very brief	Occasional
		September	---	---	---	---	None	Very brief	Occasional
Kwakina	A								
		July	---	---	---	---	None	Very brief	Occasional
		August	---	---	---	---	None	Very brief	Occasional
		September	---	---	---	---	None	Very brief	Occasional
Pherson family	A								
		July	---	---	---	---	None	---	Very rare
		August	---	---	---	---	None	---	Very rare
		September	---	---	---	---	None	---	Very rare
67:									
Radnik	A								
		Jan-Dec	---	---	---	---	None	---	None
Notom	A								
		April	---	---	---	---	None	Very brief	Occasional
		May	---	---	---	---	None	Very brief	Occasional
		June	---	---	---	---	None	Very brief	Occasional
		July	---	---	---	---	None	Very brief	Occasional
		August	---	---	---	---	None	Very brief	Occasional
		September	---	---	---	---	None	Very brief	Occasional
Oxyaquic Torrifluvents	A								
		July	135	---	---	---	None	Very brief	Occasional
		August	135	---	---	---	None	Very brief	Occasional
		September	135	---	---	---	None	Very brief	Occasional

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
68:									
Razito	A								
		January	---	---	---	---	None	---	Rare
		February	---	---	---	---	None	---	Rare
		March	---	---	---	---	None	---	Rare
		April	---	---	---	---	None	---	Rare
		May	---	---	---	---	None	---	Rare
		June	---	---	---	---	None	---	Rare
		July	---	---	---	---	None	---	Rare
		August	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare
		October	---	---	---	---	None	---	Rare
		November	---	---	---	---	None	---	Rare
		December	---	---	---	---	None	---	Rare
69:									
Reef	D								
		Jan-Dec	---	---	---	---	None	---	None
Retsabal	D								
		Jan-Dec	---	---	---	---	None	---	None
70:									
Reef	D								
		Jan-Dec	---	---	---	---	None	---	None
71:									
Reef	D								
		Jan-Dec	---	---	---	---	None	---	None
72:									
Reef	D								
		Jan-Dec	---	---	---	---	None	---	None
73:									
Reef	D								
		Jan-Dec	---	---	---	---	None	---	None
74:									
Reef, warm	D								
		Jan-Dec	---	---	---	---	None	---	None
Lemrac	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
75:									
Reef	D	Jan-Dec	---	---	---	---	None	---	None
Rizno	D	Jan-Dec	---	---	---	---	None	---	None
76:									
Remorris	D	Jan-Dec	---	---	---	---	None	---	None
77:									
Remorris, strongly alkaline	D	Jan-Dec	---	---	---	---	None	---	None
78:									
Remorris	D	Jan-Dec	---	---	---	---	None	---	None
Milok, extremely stony	A	Jan-Dec	---	---	---	---	None	---	None
79:									
Remorris	D	Jan-Dec	---	---	---	---	None	---	None
Peachsprings, strongly saline	B	Jan-Dec	---	---	---	---	None	---	None
80:									
Retsabal	D	Jan-Dec	---	---	---	---	None	---	None
Lemrac	B	Jan-Dec	---	---	---	---	None	---	None
81:									
Rizno	D	Jan-Dec	---	---	---	---	None	---	None
Mido, warm	A	Jan-Dec	---	---	---	---	None	---	None
82:									
Rizno	D	Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
83:									
Rizno, warm	D	Jan-Dec	---	---	---	---	None	---	None
84:									
Arches	D	Jan-Dec	---	---	---	---	None	---	None
85:									
Arches	D	Jan-Dec	---	---	---	---	None	---	None
86:									
Daklos	D	Jan-Dec	---	---	---	---	None	---	None
Moclom	D	Jan-Dec	---	---	---	---	None	---	None
87:									
Myton	A	Jan-Dec	---	---	---	---	None	---	None
Somorent	D	Jan-Dec	---	---	---	---	None	---	None
88:									
Nalcase	D	Jan-Dec	---	---	---	---	None	---	None
89:									
Needle	D	Jan-Dec	---	---	---	---	None	---	None
90:									
Mezzo family, dry	A	Jan-Dec	---	---	---	---	None	---	None
Strell family	D	Jan-Dec	---	---	---	---	None	---	None
91:									
Santrick	A	Jan-Dec	---	---	---	---	None	---	None
Nalcase	D	Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
92:									
Typic Torriorthents	D								
		Jan-Dec	---	---	---	---	None	---	None
93:									
Rosced family	A								
		Jan-Dec	---	---	---	---	None	---	None
Quezcan, sodic	D								
		Jan-Dec	---	---	---	---	None	---	None
94:									
Saemo	A								
		Jan-Dec	---	---	---	---	None	---	None
95:									
Sandyranch	A								
		July	---	---	---	---	None	---	Rare
		August	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare
Aquic Torrifluvents	A/D								
		July	12	45 >200	---	---	None	Very brief	Frequent
		August	12	45 >200	---	---	None	Very brief	Frequent
		September	12	45 >200	---	---	None	Very brief	Frequent
96:									
Sandyranch	A								
		July	---	---	---	---	None	Very brief	Occasional
		August	---	---	---	---	None	Very brief	Occasional
		September	---	---	---	---	None	Very brief	Occasional
Mido	A								
		Jan-Dec	---	---	---	---	None	---	None
Mident	D								
		Jan-Dec	---	---	---	---	None	---	None
97:									
Sandyranch	A								
		April	---	---	---	---	None	---	Rare
		July	---	---	---	---	None	---	Rare
		August	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
97:									
Radnik	A								
		April	---	---	---	---	None	Very brief	Occasional
		July	---	---	---	---	None	Very brief	Occasional
		August	---	---	---	---	None	Very brief	Occasional
		September	---	---	---	---	None	Very brief	Occasional
98:									
Seeg	A								
		Jan-Dec	---	---	---	---	None	---	None
Moffat	A								
		Jan-Dec	---	---	---	---	None	---	None
Needle	D								
		Jan-Dec	---	---	---	---	None	---	None
99:									
Simel, saline	D								
		Jan-Dec	---	---	---	---	None	---	None
Catahoula, saline	A								
		Jan-Dec	---	---	---	---	None	---	None
100:									
Simel	D								
		Jan-Dec	---	---	---	---	None	---	None
101:									
Simel	D								
		Jan-Dec	---	---	---	---	None	---	None
Simel, steep	D								
		Jan-Dec	---	---	---	---	None	---	None
102:									
Skos	D								
		Jan-Dec	---	---	---	---	None	---	None
103:									
Strych	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 23.—Water Features—Continued

Map unit symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Cm	Cm	Cm				
104:									
Sulphurcreek	C								
		July	---	---	---	---	None	---	Rare
		August	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare
105:									
Tesihim	D								
		Jan-Dec	---	---	---	---	None	---	None
Rizno, steep	D								
		Jan-Dec	---	---	---	---	None	---	None
106:									
Tineoyler	A								
		July	---	---	---	---	None	---	Rare
		August	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare
107:									
Ustic Torriorthents	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 24.—Chemical Soil Properties

(Absence of an entry indicates that data were not estimated)

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
1:							
Abra, moist	0-8	8.9-20.8	7.4-8.4	0-5	0	0.0-2.0	0
	8-24	8.9-20.3	7.4-8.4	1-5	0	0.0-2.0	0
	24-43	10.9-27.5	7.9-8.4	5-35	0	0.0-2.0	0
	43-200	10.9-27.5	7.9-8.4	10-40	0	0.0-2.0	0
Sazi, moist	0-9	7.6-15.5	7.4-7.8	0-5	0	0.0-2.0	0
	9-32	7.6-15.1	7.9-8.4	1-15	0	0.0-2.0	0
	32-75	7.6-15.1	7.9-8.4	5-35	0	0.0-2.0	0
	75-110	7.6-16.2	7.4-7.8	1-5	0	0.0-2.0	0
	110-135	---	---	---	---	---	---
Strych, moist	0-10	7.6-15.5	7.4-7.8	1-15	0	0.0-2.0	0
	10-35	7.6-15.1	7.9-8.4	5-35	0	0.0-2.0	0
	35-200	7.6-15.1	7.9-8.4	10-45	0	0.0-2.0	0
2:							
Aquima	0-7	8.9-15.5	7.9-8.4	10-15	0	0.0-2.0	0
	7-20	12.9-21.7	7.9-8.4	10-15	0	0.0-2.0	0
	20-50	12.9-21.7	7.9-8.4	10-15	0	0.0-2.0	0
	50-85	12.9-21.7	7.9-8.4	10-15	0	0.0-2.0	0
	85-160	12.9-21.7	7.9-8.4	10-15	0	0.0-2.0	0
	160-190	12.9-21.2	7.9-9.0	10-15	0	0.0-2.0	0-5
3:							
Arches	0-8	1.4-5.3	7.4-8.4	0-3	0	0.0-2.0	0
	8-24	1.4-4.7	7.4-8.4	0-3	0	0.0-2.0	0
	24-49	---	---	---	---	---	---
Mido	0-9	1.4-5.3	7.4-8.4	0-1	0	0.0-2.0	0
	9-49	1.4-4.7	7.4-8.4	0-3	0	0.0-2.0	0
	49-185	1.4-4.7	7.4-8.4	0-3	0	0.0-2.0	0
4:							
Emco family	0-5	23.5-33.3	7.9-9.0	0-10	0-2	0.0-4.0	0-5
	5-19	26.3-35.6	7.9-9.0	0-10	0-2	8.0-30.0	0-10
	19-37	26.3-35.6	7.9-9.0	0-10	0-2	8.0-30.0	0-10
	37-62	---	---	---	---	---	---
5:							
Barx	0-13	7.3-15.5	7.4-7.8	1-3	0	0.0-2.0	0
	13-30	15.7-21.5	7.9-8.4	1-5	0	0.0-2.0	0
	30-79	6.2-14.3	7.4-8.4	1-3	0	0.0-2.0	0
	79-122	6.2-12.9	7.9-8.4	15-40	0	0.0-2.0	0
	122-152	6.2-12.9	7.9-8.4	10-20	0	0.0-2.0	0
Remorris	0-8	21.7-28.2	7.9-8.4	10-20	0	0.0-2.0	0
	8-25	21.2-27.5	7.9-8.4	10-20	0	0.0-2.0	0
	25-38	18.6-27.2	7.9-8.4	10-20	0	0.0-2.0	0-2
	38-63	---	---	---	---	---	---
6:							
Beclabito	0-10	17.3-28.2	7.9-8.4	1-3	0-2	0.0-2.0	0-5
	10-39	23.4-34.5	8.5-9.0	5-15	0-2	4.0-8.0	10-20
	39-75	20.4-27.5	7.9-8.4	5-15	0-2	2.0-4.0	0-5
	75-100	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
6:							
Lybrook, saline-sodic	0-10	20.4-35.4	8.5-9.0	3-10	0-2	8.0-16.0	10-20
	10-23	26.4-34.5	8.5-9.0	3-10	0-2	8.0-16.0	10-20
	23-73	25.9-29.6	7.9-9.0	1-3	0-15	8.0-16.0	10-20
	73-95	16.9-29.6	7.9-9.0	1-3	0-15	8.0-16.0	10-20
	95-120	---	---	---	---	---	---
7:							
Begay, moist	0-9	6.2-10.8	7.4-8.4	1-3	0	0.0-2.0	0
	9-48	7.6-12.8	7.4-8.4	1-3	0	0.0-2.0	0
	48-196	6.2-10.5	7.9-8.4	1-5	0	0.0-2.0	0
8:							
Begay	0-14	7.6-15.5	7.9-8.4	1-10	0	0	0
	14-80	7.6-15.1	7.9-8.4	1-10	0	0.0-2.0	0
	80-197	7.6-14.7	7.9-8.4	1-10	0	0.0-2.0	0
9:							
Begay, moist	0-6	6.2-13.2	7.4-8.4	1-5	0	0.0-2.0	0
	6-28	7.6-15.1	7.9-8.4	1-10	0	0.0-2.0	0
	28-85	7.6-15.1	7.9-8.4	1-10	0	0.0-2.0	0
	85-130	6.2-14.7	7.4-8.4	1-10	0	0.0-2.0	0
	130-170	6.2-14.7	7.4-8.4	1-10	0	0.0-2.0	0
	170-185	6.2-14.7	7.4-8.4	1-10	0	0.0-2.0	0
10:							
Begay, saline	0-9	6.2-13.2	7.9-8.4	1-5	0	0.0-2.0	0
	9-28	7.6-15.1	7.9-8.4	1-5	0	0.0-8.0	0
	28-68	7.6-15.1	7.9-8.4	1-5	0	0.0-8.0	0
	68-121	6.2-12.5	7.9-8.4	1-10	0	0.0-8.0	0
	121-185	6.2-12.5	7.9-8.4	1-10	0	8.0-16.0	0
Querencia, saline-sodic	0-6	7.6-15.5	7.9-8.4	1-5	0	0	0
	6-16	12.9-21.7	7.9-9.0	1-5	1-4	0.0-4.0	10-20
	16-43	7.6-21.7	7.9-9.0	1-5	1-4	0.0-4.0	10-20
	43-70	12.9-21.7	7.9-9.0	5-10	1-4	4.0-8.0	10-20
	70-100	12.9-21.7	7.9-9.0	5-10	1-4	4.0-8.0	10-20
	100-180	7.6-14.7	7.9-9.0	5-10	1-4	8.0-16.0	10-20
11:							
Begay, saline-sodic	0-12	7.6-15.5	7.9-8.4	1-3	0	0.0-2.0	0
	12-26	10.9-15.1	7.9-9.0	5-10	0	0.0-2.0	0-5
	26-95	10.9-15.1	7.9-9.0	5-15	0	0.0-2.0	0-5
	95-155	10.9-21.7	7.9-9.0	5-15	0	8.0-16.0	0-5
	155-180	10.9-21.7	7.9-9.0	5-15	0	8.0-16.0	0-5
Begay, moist	0-10	10.9-15.5	7.9-8.4	1-3	0	0	0
	10-35	10.9-23.9	7.9-9.0	5-15	0	0	0-5
	35-82	10.9-23.9	7.9-9.0	5-15	0	0	0-5
	82-140	10.9-21.7	7.9-9.0	5-15	0	4.0-16.0	0-5
	140-180	10.9-21.7	7.9-9.0	5-15	0	4.0-16.0	0-5
Elias	0-14	10.9-15.5	7.9-8.4	5-15	0	0.0-2.0	0
	14-33	19.2-27.5	9.1-11.0	5-15	0	4.0-8.0	10-20
	33-85	14.2-21.7	8.5-9.0	1-3	0	4.0-8.0	10-20
	85-150	18.6-34.5	8.5-9.0	1-3	0	8.0-16.0	10-20
	150-180	18.6-34.5	8.5-9.0	1-3	0	8.0-16.0	10-20

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
12:							
Begay	0-9	4.1-9.1	7.4-8.4	1-10	0	0.0-2.0	0
	9-24	5.5-12.8	7.9-9.0	1-10	0	0.0-2.0	0
	24-51	5.5-12.8	7.9-9.0	1-10	0	0.0-2.0	0
	51-130	4.1-10.2	7.9-9.0	1-10	0-2	0.0-2.0	0
	130-192	4.1-10.2	7.9-9.0	1-10	0-2	0.0-2.0	0
Ignacio	0-7	6.2-15.5	7.9-8.4	1-10	0-2	0.0-2.0	0
	7-31	5.5-16.6	7.4-8.4	1-10	0-4	0.0-2.0	0
	31-53	5.5-16.6	7.4-8.4	1-10	0-4	0.0-2.0	0
	53-68	4.1-14.7	7.4-9.0	1-10	0-4	0.0-4.0	0-5
	68-93	---	---	---	---	---	---
Retsabal	0-6	2.0-8.8	7.4-8.4	1-10	10-20	0.0-2.0	0
	6-17	2.0-8.6	7.4-8.4	1-10	15-25	0.0-2.0	0
	17-42	---	---	---	---	---	---
13:							
Begay, moist	0-6	5.5-13.2	7.4-8.4	0-5	0	0.0-2.0	0
	6-26	7.6-15.1	7.4-8.4	0-10	0	0.0-2.0	0
	26-41	5.5-14.7	7.9-8.4	0-10	0	0.0-2.0	0
	41-73	5.5-13.2	7.9-8.4	0-10	0	0.0-2.0	0
	73-183	5.5-14.7	7.9-9.0	0-10	0	0.0-2.0	0
Rizno, moist	0-6	8.9-15.5	7.9-8.4	1-10	0	0.0-2.0	0
	6-18	8.9-15.1	7.9-8.4	1-10	0	0.0-2.0	0
	18-39	8.9-14.7	7.9-8.4	1-15	0	0.0-2.0	0
	39-64	---	---	---	---	---	---
14:							
Begay	0-10	6.2-13.2	7.9-8.4	1-3	0	0.0-2.0	0
	10-24	7.6-15.1	7.9-8.4	1-3	0	0.0-2.0	0
	24-115	7.6-15.1	7.9-8.4	1-3	0	0.0-2.0	0
	115-180	6.2-15.1	7.9-8.4	2-10	0	0.0-2.0	0
Strych	0-15	6.2-13.2	7.9-8.4	5-10	0	0.0-2.0	0
	15-39	7.6-15.1	7.9-8.4	10-25	0	0.0-2.0	0
	39-180	7.6-15.1	7.9-8.4	10-45	0	0.0-2.0	0
15:							
Bullpen	0-9	12.9-22.3	7.9-8.4	1-5	0	0.0-2.0	0
	9-19	12.9-21.7	7.9-8.4	1-5	0	0.0-2.0	0
	19-43	15.4-27.5	7.9-8.4	5-15	0	0.0-2.0	0
	43-112	15.4-27.5	7.9-8.4	5-15	0	0.0-2.0	0
	112-137	---	---	---	---	---	---
Daklos	0-9	8.9-15.5	7.4-8.4	5-15	0	0.0-2.0	0
	9-26	10.9-21.7	7.9-8.4	10-30	0	0.0-2.0	0
	26-39	10.9-21.7	7.9-8.4	10-30	0	0.0-2.0	0
	39-45	---	---	---	---	---	---
	45-70	---	---	---	---	---	---
Puertecito	0-10	10.9-23.1	7.4-7.8	5-15	0	0.0-2.0	0
	10-25	12.9-25.3	7.9-8.4	10-30	0	0.0-2.0	0
	25-50	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
16:							
Calladito, saline-sodic	0-7	1.4-4.5	7.9-9.0	1-3	0	0.0-2.0	0
	7-24	1.4-7.8	7.9-9.0	1-3	0	0.0-2.0	2-10
	24-54	1.4-7.8	7.9-9.0	1-3	0	0.0-2.0	2-15
	54-180	1.4-7.4	7.9-9.0	1-3	0	8.0-16.0	8-16
Yarts, saline-sodic	0-16	4.1-15.5	7.9-8.4	1-3	0	0.0-2.0	0
	16-49	4.1-15.1	7.9-8.4	1-3	0	0.0-2.0	0
	49-120	4.1-14.7	7.9-11.0	1-3	0	4.0-8.0	0-5
	120-180	2.6-16.2	7.9-11.0	1-3	0	4.0-16.0	0-5
17:							
Catahoula	0-7	4.1-13.2	7.9-8.4	1-5	0	0.0-2.0	0
	7-18	10.9-27.5	7.9-8.4	1-5	0	0.0-2.0	0
	18-34	10.9-27.5	7.9-8.4	1-5	0	0.0-2.0	0
	34-80	10.9-27.5	7.9-8.4	1-5	0	0.0-2.0	0
	80-103	7.6-14.7	7.9-8.4	1-5	0	0.0-2.0	0
	103-128	---	---	---	---	---	---
18:							
Chilton	0-11	8.9-17.0	7.9-8.4	1-10	0-2	0.0-2.0	0
	11-49	10.9-20.3	7.4-8.4	1-15	0-2	0.0-2.0	0
	49-81	10.9-20.3	7.4-8.4	1-15	0-5	0.0-2.0	0-2
	81-180	8.9-16.2	7.9-9.0	1-15	0-2	0.0-2.0	0-2
Begay	0-11	7.6-13.2	7.4-8.4	1-10	0-2	0.0-2.0	0
	11-43	7.6-15.1	7.4-8.4	1-10	0-2	0.0-2.0	0
	43-150	7.6-14.7	7.4-8.4	1-10	0-2	0.0-2.0	0
19:							
Chinchin	0-10	12.0-17.0	7.9-8.4	10-15	0	0.0-2.0	0
	10-26	16.0-21.0	7.9-8.4	15-30	0	0.0-2.0	0
	26-51	---	---	---	---	---	---
20:							
Chipeta, saline-sodic	0-4	7.9-20.2	7.9-9.0	5-15	5-18	4.0-8.0	5-10
	4-17	9.9-24.4	8.5-9.0	0-10	5-20	5.0-16.0	10-20
	17-28	8.6-26.9	8.5-9.0	0-10	10-25	10.0-18.0	10-20
	28-53	---	---	---	---	---	---
Stent family	0-9	6.2-12.8	7.9-8.4	2-10	0	0.0-2.0	0
	9-62	6.2-12.8	7.4-8.4	5-20	0	0.0-2.0	0
	62-87	---	---	---	---	---	---
21:							
Daklos	0-2	2.0-12.0	7.9-8.4	5-15	0	0.0-2.0	0
	2-10	0.3-10.3	7.9-8.4	5-15	0	0.0-2.0	0
	10-31	0.0-9.5	7.9-8.4	5-15	0	0.0-2.0	0
	31-37	---	---	---	---	---	---
	37-62	---	---	---	---	---	---
Lazear, dry	0-11	15.1-22.3	7.9-8.4	1-5	0	0.0-2.0	0
	11-28	12.9-21.4	8.5-9.0	1-10	0	0.0-2.0	0-2
	28-53	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
22:							
Daklos	0-10	7.6-14.7	7.9-8.4	15-30	1-4	0.0-2.0	0
	10-35	---	---	---	---	---	---
Reef	0-14	6.2-14.7	7.9-8.4	15-25	0-2	0.0-2.0	0
	14-49	6.2-14.7	7.9-8.4	15-25	0-2	0.0-2.0	0
	49-74	---	---	---	---	---	---
23:							
Daklos	0-10	8.9-15.5	7.9-8.4	5-15	0	0.0-2.0	0
	10-20	8.9-15.1	7.9-8.4	5-15	0	0.0-2.0	0
	20-45	---	---	---	---	---	---
Rizno	0-10	8.9-15.5	7.9-8.4	5-15	0	0.0-2.0	0
	10-35	---	---	---	---	---	---
24:							
Earlweed	0-3	4.0-8.0	7.9-8.4	0-2	0	0.0-2.0	0-1
	3-33	3.0-8.0	7.9-8.4	0-2	0	0.0-2.0	0-1
	33-76	3.0-8.0	7.9-8.4	0-2	0	0.0-2.0	0-1
	76-112	3.0-8.0	7.9-8.4	5-20	0	0.0-2.0	0-1
	112-152	3.0-8.0	7.9-8.4	5-20	0	0.0-2.0	0-1
Anasazi	0-3	7.0-11.0	7.9-8.4	0-2	0	0.0-2.0	0-1
	3-20	6.0-10.0	7.9-8.4	0-5	0	0.0-2.0	0-1
	20-43	6.0-10.0	7.9-8.4	5-20	0	0.0-2.0	0-1
	43-74	8.0-12.0	7.9-8.4	5-20	0	0.0-2.0	0-1
	74-99	---	---	---	---	---	---
25:							
Eslendo, saline	0-11	10.9-26.7	7.9-8.4	1-10	0-5	8.0-16.0	0-5
	11-47	10.9-26.7	7.9-8.4	1-10	0-5	8.0-16.0	0-5
	47-72	---	---	---	---	---	---
Happle, saline-sodic	0-9	7.6-15.1	7.9-8.4	1-10	0-5	8.0-16.0	0-5
	9-30	7.6-15.1	7.9-9.0	1-10	0-5	8.0-16.0	0-5
	30-51	7.6-14.7	7.9-9.0	1-10	0-5	8.0-16.0	0-15
	51-72	6.1-13.6	7.9-9.0	1-10	0-5	8.0-16.0	0-15
	72-115	3.3-8.6	7.9-9.0	1-10	0-5	8.0-16.0	0-15
	115-200	7.6-14.7	7.9-9.0	1-10	0-5	8.0-16.0	0-15
26:							
Foy family	0-6	8.9-25.0	7.4-8.4	1-10	0	0.0-2.0	0
	6-33	10.3-24.6	7.9-8.4	5-15	0	0.0-2.0	0
	33-54	10.3-24.6	7.9-8.4	10-35	0	0.0-2.0	0
	54-150	10.3-24.6	7.9-8.4	10-35	0	0.0-2.0	0
Whitesage family	0-7	12.8-23.5	7.9-8.4	1-5	0	0.0-2.0	0
	7-28	12.9-28.2	7.9-8.4	1-15	0	0.0-2.0	0
	28-43	12.9-28.2	7.9-9.0	5-35	0	0.0-2.0	0
	43-90	12.9-28.2	7.9-9.0	10-35	0	0.0-2.0	0
	90-153	12.9-27.5	7.9-9.0	5-20	0	0.0-2.0	0
27:							
Gladel	0-10	6.4-15.8	6.6-7.8	0-5	0	0.0-2.0	0
	10-27	5.5-15.5	7.4-8.4	0-5	0	0.0-2.0	0
	27-52	---	---	---	---	---	---
Plumasano	0-9	7.3-15.8	6.6-7.8	0-5	0	0.0-2.0	0
	9-28	6.2-15.5	6.6-7.8	0-5	0	0.0-2.0	0
	28-105	6.2-15.5	6.6-7.8	0-5	0	0.0-2.0	0
	105-197	4.8-15.5	7.4-8.4	0-5	0	0.0-2.0	0

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
28:							
Goblin	0-6	6.3-10.6	7.4-8.4	1-5	5-10	4.0-8.0	0
	6-22	6.3-10.6	7.4-7.8	1-5	5-10	4.0-8.0	0
	22-40	---	---	---	---	---	---
	40-65	---	---	---	---	---	---
29:							
Goblin	0-8	3.7-9.9	7.4-9.0	15-25	15-25	2.0-4.0	0-2
	8-38	3.1-10.5	7.4-8.4	15-25	20-30	2.0-4.0	0-4
	38-63	---	---	---	---	---	---
Clapper	0-5	4.6-13.4	7.4-8.4	2-15	0-4	0.0-4.0	0-4
	5-60	4.1-13.2	7.4-8.4	2-15	0-4	0.0-4.0	0-4
	60-82	4.1-13.2	7.9-8.4	2-15	0-4	0.0-4.0	0-4
	82-112	4.1-13.2	7.9-8.4	2-15	0-4	0.0-4.0	0-4
	112-137	---	---	---	---	---	---
30:							
Goblin	0-19	5.7-9.6	7.4-8.4	1-5	10-15	2.0-4.0	5-10
	19-44	---	---	---	---	---	---
Ivanpatch	0-13	4.2-11.7	7.4-8.4	1-5	0-20	0.0-2.0	0-2
	13-43	3.5-9.8	7.4-8.4	5-15	5-20	4.0-16.0	0-2
	43-177	3.8-10.6	7.4-8.4	1-10	5-20	8.0-16.0	0-2
31:							
Hanksville, saline-sodic	0-7	9.1-14.4	7.9-8.4	1-5	1-4	4.0-8.0	0
	7-28	12.6-18.6	7.9-9.0	1-5	1-4	16.0-40.0	10-20
	28-95	12.6-18.6	7.9-9.0	1-5	1-4	16.0-40.0	10-20
	95-112	12.6-18.4	7.9-9.0	1-5	1-4	16.0-40.0	10-20
	112-137	---	---	---	---	---	---
Chipeta, saline	0-10	9.1-14.4	7.9-8.4	1-10	1-4	4.0-8.0	0
	10-39	15.1-21.0	7.9-8.4	1-10	1-4	8.0-16.0	0
	39-64	---	---	---	---	---	---
32:							
Hanksville, saline-sodic	0-4	10.1-14.4	7.9-8.4	20-30	0	4.0-8.0	0
	4-15	13.6-18.6	8.5-9.0	20-30	1-4	16.0-40.0	10-20
	15-44	8.8-14.9	8.5-9.0	20-30	5-10	16.0-40.0	10-20
	44-63	7.6-12.9	8.5-9.0	20-30	1-4	40.0-60.0	10-20
	63-88	---	---	---	---	---	---
Notal, saline-sodic	0-8	5.1-8.1	7.9-8.4	5-10	0	0.0-2.0	0
	8-26	6.1-9.7	7.9-8.4	5-10	0	0.0-2.0	0
	26-121	10.1-14.4	8.5-9.0	10-15	1-4	16.0-30.0	10-20
	121-152	10.1-14.3	8.5-9.0	10-15	1-4	16.0-30.0	10-20
	152-177	---	---	---	---	---	---
33:							
Kydestea	0-10	12.8-21.2	7.9-8.4	1-5	0	0.0-2.0	0
	10-20	10.9-19.7	7.9-8.4	1-5	0	0.0-2.0	0
	20-45	---	---	---	---	---	---
Vessilla	0-13	5.4-13.6	7.9-8.4	1-5	0	0.0-2.0	0
	13-30	5.1-13.4	7.9-8.4	1-5	0	0.0-2.0	0
	30-55	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
34:							
Kydestea	0-10	12.8-21.2	7.9-8.4	1-5	0	0.0-2.0	0
	10-35	---	---	---	---	---	---
Vessilla	0-7	7.5-10.9	7.9-8.4	1-5	0	0.0-2.0	0
	7-32	---	---	---	---	---	---
35:							
Lavodnas	0-3	7.5-14.4	7.4-7.8	1-4	2-25	0.0-2.0	0
	3-17	4.5-11.0	7.4-8.4	0-15	15-40	0.0-2.0	0
	17-26	---	---	---	---	---	---
	26-51	---	---	---	---	---	---
Retsabal	0-2	8.1-13.5	7.4-7.8	2-4	0-5	0.0-2.0	0
	2-12	2.1-5.4	7.4-7.8	0-1	50-85	0.0-2.0	0
	12-37	---	---	---	---	---	---
36:							
Mathis, cool	0-15	2.0-8.2	7.9-8.4	0-5	0	0.0-2.0	0
	15-36	2.0-7.4	7.9-8.4	0-5	0	0.0-2.0	0
	36-180	2.0-7.4	7.9-8.4	0-5	0	0.0-2.0	0
	180-205	---	---	---	---	---	---
37:							
Metuck	0-25	8.9-15.8	7.9-8.4	5-20	0	0.0-2.0	0
	25-37	7.6-17.0	7.9-8.4	5-20	0	0.0-2.0	0
	37-62	---	---	---	---	---	---
Vessilla	0-12	8.9-17.3	7.9-8.4	5-20	0	0.0-2.0	0
	12-20	7.6-17.0	7.9-8.4	5-20	0	0.0-2.0	0
	20-45	---	---	---	---	---	---
38:							
Mezzo family	0-10	1.9-6.2	6.6-7.8	0-1	0	0.0-2.0	0
	10-51	1.4-7.1	7.4-8.4	0-3	0	0.0-2.0	0
	51-200	1.4-7.1	7.4-8.4	0-3	0	0.0-2.0	0
	200-225	---	---	---	---	---	---
39:							
Mido	0-11	2.0-6.8	7.9-8.4	1-3	0	0.0-2.0	0
	11-38	2.0-6.4	7.9-8.4	1-3	0	0.0-2.0	0
	38-115	2.0-6.1	7.9-8.4	1-3	0	0.0-2.0	0
	115-155	2.0-6.1	7.9-8.4	1-3	0	0.0-2.0	0
	155-163	---	---	---	---	---	---
	163-188	---	---	---	---	---	---
40:							
Mido	0-4	0.8-4.5	7.4-8.4	0-3	0-2	0.0-2.0	0-2
	4-24	0.8-4.0	7.4-9.0	1-10	0-2	0.0-2.0	0-2
	24-105	0.8-4.0	7.4-9.0	1-10	0-2	0.0-2.0	0-2
	105-120	0.8-4.0	7.4-9.0	1-10	0-2	0.0-2.0	0-2
	120-180	0.8-4.0	7.4-9.0	1-10	0-2	0.0-2.0	0-2
Strych	0-9	7.6-13.2	7.9-8.4	10-20	0-2	0.0-2.0	0
	9-45	7.6-15.1	7.9-8.4	20-40	0-2	0.0-2.0	0
	45-180	7.6-12.5	7.9-8.4	5-15	0-2	0.0-2.0	0
Reef	0-10	7.6-14.7	7.9-8.4	10-20	0-2	0.0-2.0	0
	10-35	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
41:							
Mikim	0-3	6.2-13.2	7.9-8.4	1-4	0	0.0-2.0	0
	3-19	7.6-12.5	7.9-8.4	2-4	0	0.0-2.0	0
	19-107	12.9-19.7	8.5-9.0	5-15	0	0.0-2.0	0-5
	107-132	---	---	---	---	---	---
Mivida, moist	0-6	6.2-13.2	6.6-7.3	0-4	0	0.0-2.0	0
	6-89	7.6-15.1	7.4-7.8	0-4	0	0.0-2.0	0
	89-180	6.9-20.3	7.9-8.4	5-15	0	0.0-2.0	0
42:							
Milok, cool	0-18	6.2-15.5	7.9-8.4	1-15	0	0.0-2.0	0
	18-37	7.6-15.1	7.9-8.4	1-25	0	0.0-2.0	0
	37-57	7.6-15.1	7.9-8.4	15-45	0	0.0-2.0	0
	57-200	7.6-15.1	7.9-8.4	15-45	0	0.0-2.0	0
Clapper	0-9	7.6-15.5	7.9-8.4	1-15	0	0.0-2.0	0
	9-36	7.6-15.1	7.9-8.4	5-25	0	0.0-2.0	0
	36-58	7.6-16.6	7.9-8.4	15-40	0	0.0-2.0	0
	58-180	7.6-20.3	7.9-8.4	15-40	0	0.0-2.0	0
43:							
Milok, steep	0-12	7.6-15.5	7.9-8.4	1-15	0	0.0-2.0	0
	12-40	7.6-15.1	7.9-8.4	5-20	0	0.0-2.0	0
	40-180	7.6-15.1	7.9-8.2	5-40	0	0.0-2.0	0
Strych	0-13	7.6-15.5	7.9-8.4	1-15	0	0.0-2.0	0
	13-35	7.6-15.1	7.9-8.4	5-20	0	0.0-2.0	0
	35-150	7.6-15.1	7.9-8.4	5-40	0	0.0-2.0	0
44:							
Mivida	0-16	2.9-9.8	7.9-8.4	3-10	0	0.0-2.0	0
	16-56	2.8-9.7	7.9-8.4	3-10	0	0.0-2.0	0-1
	56-96	6.2-11.7	7.9-8.8	10-25	0-2	0.0-4.0	0-2
	96-109	6.2-11.0	7.9-8.8	15-30	0-2	0.0-4.0	0-2
	109-162	3.3-10.2	7.9-8.8	5-15	0-2	0.0-4.0	0-2
	162-184	4.1-12.5	7.9-8.8	5-15	0-2	0.0-4.0	0-2
45:							
Mivida	0-10	7.6-13.2	7.4-8.4	1-3	0	0.0-2.0	0
	10-56	8.9-15.1	7.9-8.4	1-3	0	0.0-2.0	0
	56-85	8.9-15.1	7.9-8.4	5-15	0	0.0-2.0	0
	85-120	8.9-15.1	7.9-9.0	15-40	0	0.0-2.0	0-5
	120-150	8.9-15.1	7.9-9.0	15-40	0	0.0-2.0	0-5
Gish	0-9	14.5-21.9	7.9-8.4	5-15	0	0.0-2.0	0
	9-23	14.5-21.5	7.9-8.4	5-15	0	0.0-2.0	0
	23-61	20.5-33.3	8.5-9.0	5-15	0	0.0-2.0	13-20
	61-115	20.5-33.3	8.5-9.0	5-15	0	8.0-16.0	13-20
	115-141	20.5-33.3	8.5-9.0	5-15	0	8.0-16.0	13-20
	141-160	14.5-32.5	8.5-9.0	5-15	0	16.0-30.0	13-20
	160-180	14.5-32.5	8.5-9.0	5-15	0	16.0-30.0	13-20
Cannonville	0-10	18.8-27.4	7.9-8.4	5-15	0	0.0-2.0	0
	10-34	26.3-36.5	8.5-9.0	1-3	0	0.0-2.0	10-20
	34-77	26.3-35.6	7.9-8.4	1-3	0-1	8.0-16.0	10-20
	77-102	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
46:							
Moab	0-9	2.9-15.7	7.9-8.4	5-15	0	0.0-2.0	0
	9-21	2.9-14.4	7.9-8.4	15-30	0	0.0-2.0	0
	21-43	2.9-14.4	7.9-8.4	30-50	0	0.0-2.0	0
	43-180	2.9-14.4	7.9-8.4	15-30	0	0.0-2.0	0
Abra family	0-9	8.9-17.0	7.9-8.4	5-15	0	0.0-2.0	0
	9-33	10.9-20.3	8.5-9.0	5-15	0	0.0-2.0	0-5
	33-92	10.9-22.5	7.9-9.0	15-40	0	0.0-4.0	0-5
	92-117	8.9-15.1	7.4-8.4	10-40	0	0.0-2.0	0
	117-142	---	---	---	---	---	---
47:							
Moclom, warm	0-5	3.1-11.7	7.4-8.4	2-4	0	0.0-2.0	0
	5-22	3.1-10.5	7.4-8.4	1-4	0	0.0-2.0	0
	22-47	---	---	---	---	---	---
48:							
Moenkopie, warm	0-4	7.6-12.8	7.9-8.4	1-10	0	0.0-4.0	0
	4-17	7.6-14.7	7.9-8.4	1-10	0	0.0-4.0	0
	17-42	---	---	---	---	---	---
49:							
Moenkopie	0-5	4.0-9.0	7.4-7.8	0-5	0	0.0-2.0	0-1
	5-13	9.0-15.0	7.9-8.4	0-5	0	0.0-2.0	0-1
	13-20	8.0-12.0	7.9-8.4	0-5	0	0.0-2.0	0-1
	20-45	---	---	---	---	---	---
50:							
Molen family	0-8	5.5-14.3	7.4-8.4	2-10	0	0.0-2.0	0
	8-19	7.0-14.9	7.9-8.4	2-15	0	0.0-2.0	0
	19-31	9.2-11.9	7.9-8.4	15-30	0	0.0-4.0	0-1
	31-43	12.9-16.4	7.9-8.8	15-35	0-1	0.0-8.0	0-2
	43-54	12.9-16.4	7.9-8.8	15-35	0-1	0.5-8.0	0-4
	54-79	13.6-19.7	7.9-8.8	10-25	1-5	0.5-8.0	0-4
	79-104	---	---	---	---	---	---
Lazear	0-8	12.5-18.8	7.9-8.4	1-10	0	0.0-2.0	0
	8-18	14.7-19.6	7.9-8.8	1-10	0	0.0-2.0	0
	18-36	14.7-19.6	7.9-8.8	1-10	0	0.0-2.0	0
	36-61	---	---	---	---	---	---
Gerst	0-8	12.5-19.6	7.9-8.6	1-15	0	0.0-4.0	0-2
	8-28	14.3-21.5	7.9-8.6	1-15	0-3	0.0-8.0	0-2
	28-33	18.6-24.7	7.9-8.6	1-15	0-3	0.0-8.0	0-2
	33-58	---	---	---	---	---	---
51:							
Monue	0-5	4.1-15.5	7.9-8.4	1-10	0-1	0.0-2.0	0-5
	5-15	4.1-15.5	7.9-8.4	1-15	0-1	0.0-2.0	0-5
	15-72	4.1-15.1	7.9-8.4	1-15	0-1	4.0-16.0	0-5
	72-190	4.1-15.1	7.9-8.4	1-15	0-1	4.0-16.0	0-10
Fruitland	0-10	6.2-15.5	7.9-8.4	1-10	0-1	0.0-2.0	0
	10-29	6.2-14.7	7.9-8.4	1-10	0-1	0.0-2.0	0
	29-60	6.2-15.1	7.9-8.4	5-15	0-1	0.0-2.0	0
	60-125	6.2-14.7	7.9-8.4	1-10	0-1	0.0-2.0	0
	125-180	6.2-14.7	7.9-8.4	1-10	0-1	0.0-2.0	0

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
52:							
Monue, saline-sodic--	0-11	7.6-13.9	7.9-9.0	3-10	0-2	0.0-2.0	0-10
	11-32	7.6-13.6	7.9-9.0	3-10	0-2	0.0-2.0	0-5
	32-85	7.6-13.6	7.9-9.0	3-10	0-2	0.0-2.0	0-5
	85-180	7.6-14.7	7.9-9.0	3-10	1-4	4.0-16.0	0-5
Myton, saline-sodic--	0-10	5.7-11.1	7.9-8.4	1-5	0-2	0.0-2.0	0
	10-36	5.7-10.5	7.9-9.0	1-5	0-2	2.0-8.0	0-5
	36-95	5.7-10.5	7.9-9.0	1-5	0-2	2.0-8.0	0-5
	95-180	5.7-10.5	7.9-9.0	1-5	0-2	2.0-8.0	0-5
Uzona, saline-sodic--	0-9	9.3-13.2	7.9-9.0	1-5	0-2	0.0-2.0	0-5
	9-19	9.3-12.9	7.9-9.0	1-5	0-2	0.0-2.0	0-5
	19-41	18.8-26.8	7.9-9.0	10-15	0-2	0.0-2.0	0-5
	41-80	13.2-26.8	7.9-9.0	10-15	0-2	4.0-8.0	0-5
	80-125	23.5-32.5	8.5-9.0	10-15	0-2	16.0-35.0	0-5
	125-180	23.5-32.5	8.5-9.0	10-15	0-2	16.0-35.0	0-5
53:							
Monue----------	0-9	4.1-12.8	7.4-8.4	1-4	0	0.0-2.0	0
	9-32	7.6-12.8	7.9-8.4	2-4	0	0.0-2.0	0
	32-115	7.6-12.8	7.4-7.8	1-3	1-3	0.0-2.0	0
	115-192	1.8-7.1	7.9-9.0	1-4	0	0.0-2.0	0
Sheppard----------	0-12	0.8-4.2	7.4-7.8	1-4	0	0.0-2.0	0
	12-80	0.8-4.0	7.4-7.8	1-4	0	0.0-2.0	0
	80-150	0.8-4.7	7.4-7.8	1-3	0	0.0-2.0	0
54:							
Mulford----------	0-6	14.2-24.6	7.4-8.4	0-15	0	0.0-2.0	0
	6-43	14.2-23.9	7.4-8.4	0-15	0-4	0.0-2.0	0
	43-68	14.2-23.9	7.4-8.4	0-15	0-4	0.0-2.0	0
	68-96	14.2-23.9	7.4-8.4	0-15	0-4	0.0-2.0	0
	96-159	7.6-30.2	7.4-8.4	0-10	0	0.0-2.0	0
55:							
Mussentuchit---------	0-11	3.7-8.3	7.6-8.4	5-15	1-5	2.0-4.0	1-3
	11-31	3.5-8.9	7.6-8.4	5-15	15-25	0.0-4.0	0-1
	31-70	1.8-8.9	7.6-8.4	5-15	15-30	0.0-4.0	0-1
	70-100	---	---	---	30-40	---	---
	100-125	---	---	---	---	---	---
Goblin----------	0-7	1.6-9.4	7.9-8.4	5-25	15-30	0.0-4.0	0-3
	7-20	1.7-9.4	7.9-8.4	5-25	15-30	0.0-4.0	1-5
	20-28	---	---	---	---	2.0-8.0	1-5
	28-53	---	---	---	---	---	---
Swell family---------	0-8	1.1-6.0	7.4-8.4	1-10	0-1	0.0-4.0	0
	8-20	3.2-7.5	7.4-8.4	5-14	0-1	0.0-4.0	0
	20-69	3.8-5.9	7.4-8.4	15-25	1-5	0.0-4.0	0
	69-165	3.7-5.9	7.4-8.4	15-25	10-30	0.0-8.0	0-6
	165-218	5.2-9.6	7.4-8.4	10-25	10-35	2.0-12.0	3-13
	218-243	---	---	---	---	---	---
56:							
Nepalto----------	0-5	4.0-15.0	7.4-8.4	0-2	0	0.0-2.0	0-1
	5-18	4.0-15.0	7.4-8.4	0-2	0	0.0-2.0	0-1
	18-76	4.0-15.0	7.4-8.4	0-5	0	0.0-2.0	0-1
	76-119	4.0-15.0	7.4-8.4	0-5	0	0.0-2.0	0-1
	119-152	4.0-15.0	7.4-8.4	0-2	0	0.0-2.0	0-1
	152-163	4.0-15.0	7.4-8.4	0-2	0	0.0-2.0	0-1

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
57:							
Nizhoni	0-5	4.8-13.4	7.4-8.4	0-5	0	0.0-2.0	0
	5-20	6.2-13.6	7.4-8.4	0-10	0	0.0-2.0	0
	20-45	---	---	---	---	---	---
58:							
Nizhoni	0-6	5.1-11.7	7.4-8.4	1-5	0	0.0-2.0	0
	6-31	---	---	---	---	---	---
59:							
Nizhoni	0-8	3.5-7.0	7.4-7.8	0-1	0	0.0-2.0	0
	8-25	2.5-6.4	7.4-8.4	0-3	0	0.0-2.0	0
	25-37	2.5-6.4	7.4-8.4	0-3	0	0.0-2.0	0
	37-62	---	---	---	---	---	---
Pinepoint, dry	0-10	2.0-5.0	7.4-7.8	0-1	0	0.0-2.0	0
	10-42	1.4-5.0	7.4-8.4	0-3	0	0.0-2.0	0
	42-120	1.4-5.0	7.4-8.4	0-3	0	0.0-2.0	0
	120-165	1.4-5.0	7.4-8.4	0-3	0	0.0-2.0	0
	165-190	---	---	---	---	---	---
60:							
Notom	0-20	2.0-6.4	7.9-8.4	1-3	0	0.0-2.0	0
	20-57	2.0-6.1	7.9-8.4	1-3	0	0.0-2.0	0
	57-200	2.0-6.1	7.9-8.4	1-3	0	0.0-2.0	0
Begay, moist	0-10	7.6-13.2	7.9-8.4	1-3	0	0.0-2.0	0
	10-31	10.9-15.1	7.9-8.4	3-5	0	0.0-2.0	0
	31-75	10.9-15.1	7.9-8.4	3-5	0	0.0-2.0	0
	75-110	10.9-15.1	7.9-8.4	3-5	0	0.0-2.0	0
	110-200	7.6-14.7	7.9-8.4	1-3	0	0.0-2.0	0
Bowington	0-12	0.8-4.0	7.9-8.4	1-3	0	0.0-2.0	0
	12-40	0.8-6.1	7.9-8.4	1-3	0	0.0-2.0	0
	40-200	0.8-6.1	7.9-8.4	1-3	0	0.0-2.0	0
61:							
Notom	0-12	2.0-6.8	7.9-8.4	1-3	0	0.0-2.0	0
	12-35	2.0-6.1	7.9-8.4	1-3	0	0.0-2.0	0
	35-38	2.6-6.8	7.9-8.4	1-3	0	0.0-2.0	0
	38-150	1.4-6.1	7.9-8.4	1-3	0	0.0-2.0	0
Aquic Torrifluvents	0-10	0.8-5.3	7.9-8.4	0-3	0	0.0-2.0	0
	10-30	0.8-4.7	7.4-8.4	0-3	0	0.0-2.0	0
	30-44	0.8-4.7	7.4-8.4	0-3	0	0.0-2.0	0
	44-70	0.8-4.7	7.9-8.4	0-3	0	0.0-2.0	0
	70-150	0.8-4.7	7.9-8.4	0-3	0	0.0-2.0	0
62:							
Parkwash	0-3	1.4-9.1	6.6-7.8	0-1	0	0.0-2.0	0
	3-14	1.4-9.1	6.6-7.8	0-1	0	0.0-2.0	0
	14-39	---	---	---	---	---	---
63:							
Pherson family	0-20	4.1-9.1	7.4-8.4	0-10	0	0.0-2.0	0
	20-80	4.1-8.6	7.4-8.4	0-10	0	0.0-2.0	0
	80-150	4.1-10.2	7.4-8.4	0-10	0	0.0-2.0	0
Sandyranch	0-5	2.0-8.2	7.9-8.4	1-5	0	0.0-2.0	0
	5-31	2.0-7.4	7.9-8.4	1-5	0	0.0-2.0	0
	31-65	2.0-7.4	7.9-8.4	1-5	0	0.0-2.0	0
	65-180	2.0-7.4	7.9-8.4	1-5	0	0.0-2.0	0

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
64:							
Polychrome	0-45	2.0-7.0	7.9-8.4	5-15	0	2.0-4.0	0
	45-80	5.0-15.0	7.9-8.4	5-15	0	2.0-4.0	0
	80-105	---	---	---	---	---	---
Cerropelon family	0-2	6.0-11.0	7.9-8.4	5-15	0	0.0-2.0	0
	2-45	6.0-11.0	7.9-8.4	5-15	0	0.0-2.0	0
	45-82	11.0-16.0	7.9-8.4	5-15	0	0.0-2.0	0
	82-107	---	---	---	---	---	---
65:							
Querencia, saline-sodic	0-7	12.9-28.2	7.4-8.4	1-10	1-4	4.0-8.0	0
	7-30	12.9-27.5	7.4-8.4	1-15	1-4	4.0-8.0	0
	30-75	12.9-26.7	7.4-8.4	1-15	1-4	16.0-30.0	10-20
	75-140	12.9-26.7	7.4-8.4	1-15	1-4	16.0-30.0	10-20
	140-165	---	---	---	---	---	---
Lybrook, saline-sodic	0-6	12.9-28.2	7.9-8.4	1-15	1-4	2.0-4.0	0
	6-49	20.4-34.5	8.5-9.0	1-15	1-4	16.0-30.0	10-20
	49-100	23.4-36.9	8.5-9.0	1-15	1-4	16.0-30.0	10-20
	100-125	---	---	---	---	---	---
66:							
Radnik	0-20	4.8-13.2	7.9-8.4	1-5	0	0.0-2.0	0
	20-95	4.1-10.2	7.4-8.4	1-5	0	0.0-2.0	0
	95-150	4.1-10.2	7.4-8.4	1-5	0	0.0-2.0	0
	150-165	1.0-7.1	7.9-8.4	1-5	0	0.0-2.0	0
Kwakina	0-10	1.4-8.2	7.4-8.4	0-5	0	0.0-2.0	0
	10-32	1.4-7.4	7.4-8.4	0-5	0	0.0-2.0	0
	32-95	2.0-6.1	7.9-8.4	1-5	0	0.0-2.0	0
	95-135	2.0-6.1	7.9-8.4	1-5	0	0.0-2.0	0
	135-150	2.0-6.1	7.9-8.4	1-5	0	0.0-2.0	0
Pherson family	0-27	4.1-9.1	7.9-8.4	1-5	0	0.0-2.0	0
	27-80	4.1-8.6	7.9-8.4	1-5	0	0.0-2.0	0
	80-117	4.1-8.6	7.9-8.4	1-5	0	0.0-2.0	0
	117-150	4.1-8.6	7.9-8.4	1-5	0	0.0-2.0	0
67:							
Radnik	0-13	3.3-13.2	7.4-8.4	1-5	0	0.0-2.0	0
	13-24	3.3-13.2	7.4-8.4	1-5	0	0.0-2.0	0
	24-73	3.3-11.0	7.4-8.4	1-5	0	0.0-2.0	0
	73-148	3.3-11.0	7.4-8.4	1-5	0	0.0-2.0	0
	148-185	3.3-11.0	7.4-8.4	1-5	0	0.0-2.0	0
Notom	0-2	1.4-6.1	7.4-7.8	1-3	0	0.0-2.0	0
	2-15	1.4-6.1	7.4-7.8	1-3	0	0.0-2.0	0
	15-180	1.4-6.1	7.4-7.8	1-3	0	0.0-2.0	0
Oxyaquic Torrifluvents	0-39	0.8-5.0	7.9-8.4	0-3	0	0.0-2.0	0
	39-67	0.8-4.7	7.9-8.4	0-3	0	0.0-2.0	0
	67-135	0.8-4.7	7.4-8.4	0-3	0	0.0-2.0	0
	135-150	0.8-4.7	7.4-8.4	0-3	0	0.0-2.0	0

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
68:							
Razito	0-3	0.8-6.4	7.4-8.4	0-2	0	0.0-2.0	0-1
	3-13	0.8-6.1	7.9-8.4	0-2	0	0.0-2.0	0-1
	13-18	0.8-6.1	7.9-8.4	0-5	0	0.0-2.0	0-1
	18-91	0.8-6.1	7.9-8.4	0-5	0	0.0-2.0	0-1
	91-102	0.8-6.1	7.9-8.4	0-5	0	0.0-2.0	0-1
	102-152	0.8-6.1	7.9-8.4	0-5	0	0.0-2.0	0-1
69:							
Reef	0-9	6.2-15.5	7.9-8.4	5-15	0-2	0.0-2.0	0
	9-43	6.2-15.1	7.9-8.4	10-30	0-2	0.0-2.0	0
	43-68	---	---	---	---	---	---
Retsabal	0-10	1.5-10.6	7.4-8.4	1-10	15-30	4.0-8.0	0-3
	10-35	---	---	---	---	---	---
70:							
Reef	0-10	8.9-15.5	7.9-8.4	10-20	0	0.0-2.0	0
	10-25	8.9-15.1	7.9-8.4	10-20	0	0.0-2.0	0
	25-50	---	---	---	---	---	---
71:							
Reef	0-5	5.5-14.7	7.9-8.4	15-45	0-4	0.0-2.0	0
	5-29	5.5-14.7	7.9-8.4	15-45	0-4	0.0-2.0	0
	29-54	---	---	---	---	---	---
72:							
Reef	0-10	6.0-16.0	7.9-8.4	0-2	0	0	0
	10-33	---	---	---	---	---	---
	33-58	---	---	---	---	---	---
73:							
Reef	0-10	6.2-12.5	7.9-8.4	1-10	0	0.0-2.0	0
	10-35	---	---	---	---	---	---
74:							
Reef, warm	0-10	6.2-14.7	7.9-8.4	5-15	0-5	0.0-2.0	1-5
	10-35	---	---	---	---	---	---
Lemrac	0-9	4.0-14.0	7.9-8.4	1-10	5-10	0.0-4.0	0
	9-30	2.2-12.4	7.4-8.4	1-10	5-20	0.0-4.0	0
	30-52	2.2-12.4	7.4-8.4	1-10	5-20	0.0-4.0	0
	52-80	2.4-12.4	7.4-8.4	1-10	5-20	0.0-4.0	0
	80-105	---	---	---	---	---	---
75:							
Reef	0-8	8.9-21.2	7.4-8.4	5-15	0-2	0.0-2.0	0
	8-20	8.9-21.2	7.4-8.4	5-30	0-2	0.0-2.0	0
	20-45	---	---	---	---	---	---
Rizno	0-10	7.6-21.2	7.9-8.4	5-15	0-2	0.0-2.0	0
	10-35	---	---	---	---	---	---
76:							
Remorris	0-7	8.9-20.8	7.4-8.4	1-5	0-5	4.0-8.0	0
	7-20	10.9-20.3	7.4-8.4	1-5	0-5	4.0-8.0	0
	20-45	10.9-19.7	7.4-8.4	1-5	0-5	4.0-8.0	0
	45-70	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
77:							
Remorris, strongly alkaline	0-5	10.9-28.2	8.5-11.0	5-15	0-2	0.0-4.0	5-10
	5-17	12.9-26.7	7.9-9.0	5-20	0-2	0.0-4.0	5-10
	17-42	---	---	---	---	---	---
78:							
Remorris	0-9	10.3-22.3	7.9-8.4	1-15	0-2	0.0-2.0	0
	9-27	8.9-23.3	7.9-8.4	1-15	0-2	0.0-2.0	0
	27-49	8.9-23.3	7.9-8.4	1-15	0-2	0.0-2.0	0
	49-60	---	---	---	---	---	---
	60-85	---	---	---	---	---	---
Milok, extremely stony	0-11	6.2-17.0	7.9-8.4	5-30	0	0.0-2.0	0
	11-38	7.6-18.1	7.9-9.0	5-35	0	0.0-2.0	0-5
	38-92	7.6-18.1	7.9-9.0	5-35	0	0.0-2.0	0-5
	92-113	7.6-19.7	7.9-9.0	5-30	0	0.0-2.0	0-5
	113-138	---	---	---	---	---	---
79:							
Remorris	0-7	12.9-26.0	7.9-9.0	5-15	0-2	0.0-4.0	0
	7-23	12.9-24.7	7.9-9.0	5-15	0-2	0.0-4.0	0
	23-41	12.9-24.7	7.9-9.0	5-15	0-2	0.0-4.0	0
	41-66	---	---	---	---	---	---
Peachsprings, strongly saline	0-9	8.9-15.5	7.9-9.0	1-5	1-4	0.0-4.0	0-5
	9-30	10.9-20.3	7.9-9.0	5-15	1-4	4.0-8.0	0-5
	30-115	12.9-21.2	7.9-9.0	1-10	1-4	16.0-50.0	0-5
	115-185	12.9-21.2	7.9-9.0	1-10	1-4	16.0-50.0	0-5
80:							
Retsabal	0-3	2.0-12.7	7.4-8.4	2-4	10-20	0.0-2.0	0
	3-15	2.4-5.5	7.4-8.4	0-1	50-90	0.0-2.0	0
	15-40	---	---	---	---	---	---
Lemrac	0-10	8.2-10.0	7.4-8.4	0-4	40-80	0.0-2.0	0
	10-37	2.2-2.7	7.4-8.4	0-4	40-80	0.0-2.0	0
	37-56	2.2-2.7	7.4-8.4	0-4	40-80	0.0-2.0	0
	56-81	---	---	---	---	---	---
81:							
Rizno	0-9	2.5-6.0	7.9-8.4	1-3	0	0.0-2.0	0
	9-20	2.5-5.4	7.9-8.4	1-3	0	0.0-2.0	0
	20-40	5.7-11.1	7.9-9.0	2-4	0	0.0-2.0	0
	40-65	---	---	---	---	---	---
Mido, warm	0-13	1.4-6.0	7.4-7.8	1-3	0	0.0-2.0	0
	13-53	1.4-6.1	7.4-8.4	1-3	0	0.0-2.0	0
	53-180	2.0-6.1	7.4-8.4	2-4	0	0.0-2.0	0
82:							
Rizno	0-5	6.0-13.0	7.9-8.4	0-5	0	0	0
	5-10	8.0-15.0	7.9-8.4	0-15	0	0	0
	10-14	---	---	---	---	---	---
	14-39	---	---	---	---	---	---
83:							
Rizno, warm	0-6	5.5-13.2	7.4-8.4	1-5	0	0.0-2.0	0
	6-26	7.6-14.7	7.4-8.4	1-5	0	0.0-2.0	0
	26-51	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
84:							
Arches	0-3	2.0-5.0	7.4-7.8	0-2	0	0.0-2.0	0-1
	3-28	2.0-5.0	7.4-7.8	0	0	0.0-2.0	0-1
	28-53	---	---	---	---	---	---
85:							
Arches	0-10	1.4-5.3	7.4-8.4	0-3	0	0.0-2.0	0
	10-30	1.4-6.1	7.4-8.4	0-3	0	0.0-2.0	0
	30-55	---	---	---	---	---	---
86:							
Daklos	0-10	7.6-15.5	7.9-8.4	5-15	0	0.0-2.0	0
	10-22	7.6-15.1	7.9-8.4	5-15	0	0.0-2.0	0
	22-47	---	---	---	---	---	---
Moclom	0-4	1.4-6.8	7.4-7.8	0-3	0	0.0-2.0	0
	4-11	0.8-5.7	7.4-7.8	0-3	0	0.0-2.0	0
	11-36	---	---	---	---	---	---
87:							
Myton	0-12	6.2-12.8	7.9-8.4	2-4	0	0.0-2.0	0
	12-60	6.2-12.8	7.9-9.0	2-4	0	0.0-2.0	0-1
	60-180	6.2-12.8	7.9-9.0	2-4	0	0.0-2.0	0-1
Somorent	0-5	14.2-24.6	7.4-8.4	0-10	0	0.0-2.0	0
	5-15	17.3-27.5	7.9-9.0	0-10	0	0.0-2.0	0
	15-32	17.3-27.5	8.5-9.0	0-10	0-10	2.0-4.0	0
	32-57	---	---	---	---	---	---
88:							
Nalcase	0-3	---	7.4-8.4	0-2	0	0.0-2.0	0
	3-23	---	7.4-8.4	0-2	0	0.0-2.0	0
	23-48	---	---	---	---	---	---
89:							
Needle	0-3	2.0-6.0	7.4-8.4	0-2	0	0.0-2.0	0-1
	3-28	1.0-5.0	7.4-8.4	0-2	0	0.0-2.0	0-1
	28-53	---	---	---	---	---	---
90:							
Mezzo family, dry	0-4	1.9-6.2	7.4-7.8	0-3	0	0.0-2.0	0
	4-16	1.4-6.0	7.4-8.4	0-3	0	0.0-2.0	0
	16-58	1.4-4.2	7.9-8.4	0-3	0	0.0-2.0	0
	58-150	1.4-4.2	7.9-8.4	0-3	0	0.0-2.0	0
Strell family	0-9	1.9-4.6	6.6-7.3	0-3	0	0.0-2.0	0
	9-20	2.0-4.2	7.4-8.4	0-3	0	0.0-2.0	0
	20-45	---	---	---	---	---	---
91:							
Santrick	0-13	0.8-6.1	7.4-8.4	0-1	0	0.0-2.0	0
	13-51	0.8-6.1	7.9-8.4	0-1	0	0.0-2.0	0
	51-64	0.8-6.1	7.9-8.4	1-3	0	0.0-2.0	0
	64-89	---	---	---	---	---	---
Nalcase	0-5	0.8-6.1	7.4-8.4	0-1	0	0.0-2.0	0
	5-18	0.8-6.1	7.4-8.4	0-1	0	0.0-2.0	0
	18-29	0.8-6.1	7.4-8.4	1-3	0	0.0-2.0	0
	29-54	---	---	---	---	---	---

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
92:							
Typic Torriorthents--	0-5	9.0-14.0	7.4-8.4	0-2	0	0.0-2.0	0-1
	5-25	5.0-9.0	7.4-8.4	0-2	0	0.0-2.0	0-1
	25-43	5.4-8.6	7.4-8.4	0-5	0	0.0-2.0	0-1
	43-68	---	---	---	---	---	---
93:							
Rosced family--------	0-7	4.8-13.4	7.4-8.4	0-10	0	0.0-2.0	0
	7-26	4.1-13.2	7.4-9.0	0-10	0	0.0-2.0	0
	26-60	4.1-13.2	7.4-9.0	0-10	0	0.0-2.0	0
	60-180	4.1-8.9	7.4-8.4	0-10	0	0.0-2.0	0
Quezcan, sodic-------	0-19	20.5-33.3	7.9-9.0	0-10	0-2	0.0-4.0	0-5
	19-58	20.5-33.3	8.5-9.0	0-10	0-2	0.0-4.0	0-5
	58-83	---	---	---	---	---	---
94:							
Saemo----------	0-12	8.9-24.6	7.9-9.0	0-10	0	0.0-2.0	0
	12-32	10.9-25.3	7.9-9.0	5-15	0	0.0-2.0	0
	32-85	10.9-25.3	7.9-9.0	5-15	0	0.0-2.0	0
	85-150	7.6-21.9	7.9-9.0	5-15	0	0.0-2.0	0
95:							
Sandyranch-----------	0-9	0.8-6.8	7.4-8.4	0-3	0	0.0-2.0	0
	9-125	0.8-4.7	7.9-8.4	0-3	0	0.0-2.0	0
	125-140	0.8-4.7	7.9-8.4	0-3	0	0.0-2.0	0
	140-192	0.8-4.7	7.9-8.4	0-3	0	0.0-2.0	0
Aquic Torrifluvents--	0-15	4.7-13.7	7.9-8.4	1-4	0	0.0-2.0	0
	15-45	3.1-8.6	7.9-8.4	1-4	0	0.0-2.0	0
	45-73	0.8-4.7	6.6-7.8	0-3	0	0.0-2.0	0
	73-102	0.8-4.7	6.6-7.8	0-3	0	0.0-2.0	0
	102-127	---	---	---	---	---	---
96:							
Sandyranch-----------	0-5	2.0-9.6	7.9-8.2	1-5	0	0.0-2.0	0
	5-23	0.8-7.4	7.9-9.0	1-10	0	0.0-2.0	0
	23-85	0.8-7.4	7.9-9.0	1-10	0	0.0-2.0	0
	85-110	0.8-7.4	7.9-9.0	1-10	0	0.0-2.0	0
	110-150	0.8-7.4	7.9-9.0	1-10	0	0.0-2.0	0
Mido-----------------	0-6	0.8-6.8	7.9-8.4	1-5	0	0.0-2.0	0
	6-23	0.8-6.4	7.9-8.4	1-5	0	0.0-2.0	0
	23-90	0.8-6.4	7.9-8.4	1-5	0	0.0-2.0	0
	90-200	0.8-6.1	7.9-8.4	1-5	0	0.0-2.0	0
Mident---------------	0-2	3.1-8.2	7.9-8.4	1-5	0-1	0.0-2.0	0
	2-28	3.1-7.4	7.9-9.0	1-5	0-1	0.0-2.0	0
	28-53	---	---	---	---	---	---
	53-78	---	---	---	---	---	---
97:							
Sandyranch-----------	0-6	0.8-6.4	7.9-9.0	1-5	0	0.0-4.0	0-5
	6-14	0.8-6.4	7.9-9.0	1-5	0	0.0-4.0	0-5
	14-41	0.8-6.4	7.9-9.0	1-5	0	0.0-4.0	0-5
	41-180	0.8-6.4	7.9-9.0	1-5	0	0.0-4.0	0-5
Radnik---------------	0-5	4.1-13.2	7.4-8.4	1-3	0	0.0-2.0	0
	5-22	4.1-12.5	7.9-8.4	1-3	0	0.0-2.0	0
	22-36	4.1-12.5	7.9-8.4	1-3	0	0.0-2.0	0
	36-80	4.1-12.5	7.9-8.4	1-3	0	0.0-2.0	0
	80-153	4.1-12.5	7.9-8.4	1-3	0	0.0-2.0	0

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
98:							
Seeg	0-7	3.3-12.8	7.9-8.4	1-5	0	0.0-2.0	0
	7-20	7.6-12.8	7.9-8.4	1-5	0	0.0-2.0	0
	20-31	7.6-15.1	7.9-8.4	5-15	0	0.0-2.0	0
	31-180	7.6-12.5	7.9-8.4	1-5	0	0.0-2.0	0
Moffat	0-13	3.3-8.9	7.9-8.4	1-5	0	0.0-2.0	0
	13-22	4.1-8.9	7.9-8.4	1-5	0	0.0-2.0	0
	22-40	7.6-15.1	7.9-9.0	5-15	0	0.0-2.0	0
	40-75	8.9-15.1	7.9-9.0	5-15	0	0.0-2.0	0-3
	75-180	8.9-15.1	7.9-9.0	5-15	0	0.0-2.0	0-3
Needle	0-6	1.4-4.2	7.9-8.4	0-5	0	0.0-2.0	0
	6-30	1.4-4.0	7.9-8.4	0-5	0	0.0-2.0	0
	30-55	---	---	---	---	---	---
99:							
Simel, saline	0-6	12.9-26.7	7.9-9.0	1-5	0	8.0-16.0	0-5
	6-20	12.9-26.7	7.9-9.0	1-5	0	8.0-16.0	0-5
	20-30	12.9-26.7	7.9-9.0	1-5	1-5	16.0-30.0	0-5
	30-45	---	---	---	---	---	---
	45-70	---	---	---	---	---	---
Catahoula, saline	0-10	7.6-15.1	7.9-8.4	0-3	0-5	0.0-2.0	0
	10-44	7.6-15.1	7.9-8.4	0-3	0-5	2.0-4.0	0
	44-54	7.6-15.1	7.9-8.4	0-3	0-5	4.0-8.0	0
	54-200	4.1-14.7	7.9-9.0	0-3	0-5	4.0-8.0	0-5
100:							
Simel	0-9	14.2-21.7	7.4-8.4	1-5	0	0.0-4.0	0
	9-22	14.2-21.2	7.4-8.4	0-3	0	0.0-4.0	0
	22-39	14.2-21.2	7.4-8.4	0-3	0	0.0-4.0	0
	39-64	---	---	---	---	---	---
101:							
Simel	0-7	12.9-21.7	7.9-8.4	1-10	0	0.0-2.0	0
	7-18	14.2-26.7	7.9-8.4	1-10	0	0.0-2.0	0
	18-28	14.2-26.7	7.9-8.4	1-10	0	0.0-2.0	0
	28-35	---	---	---	---	---	---
	35-60	---	---	---	---	---	---
Simel, steep	0-5	12.9-21.7	7.9-8.4	1-10	0	0.0-2.0	0
	5-28	14.2-26.7	7.9-8.4	1-10	0	0.0-2.0	0
	28-39	---	---	---	---	---	---
	39-64	---	---	---	---	---	---
102:							
Skos	0-5	8.0-18.0	7.9-8.4	5-10	0	0.0-2.0	0
	5-17	6.5-16.5	7.9-8.4	10-15	0	0.0-2.0	0
	17-34	5.5-15.5	7.9-8.4	15-20	0	0.0-2.0	0
	34-59	---	---	---	---	---	---
103:							
Strych	0-7	7.6-15.5	7.9-8.4	1-15	0	0.0-2.0	0
	7-23	7.6-15.1	7.9-8.4	5-25	0	0.0-2.0	0
	23-40	7.6-16.6	7.9-8.4	15-45	0	0.0-2.0	0
	40-89	7.6-16.6	7.9-8.4	15-45	0	0.0-2.0	0
	89-200	7.6-16.6	7.9-8.4	10-20	0	0.0-2.0	0

Table 24.—Chemical Soil Properties—Continued

Map unit symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	Cm	meq/100 g	pH	Pct	Pct	mmhos/cm	
104:							
Sulphurcreek---------	0-7	16.7-24.6	7.4-7.8	0-10	0	0.0-3.0	0
	7-30	19.2-31.8	7.4-8.4	0-10	0	0.0-3.0	0
	30-45	7.6-20.3	7.4-7.8	1-3	0	0.0-2.0	0
	45-68	4.8-26.7	7.4-7.8	1-3	0	0.0-2.0	0
	68-162	4.1-16.2	7.4-7.8	0-3	0	0.0-2.0	0
105:							
Tesihim--------------	0-6	5.5-13.2	7.4-8.4	1-10	0	0.0-2.0	0
	6-14	7.6-14.7	7.9-8.4	1-10	0	0.0-2.0	0
	14-25	7.6-14.7	7.9-8.4	1-10	0	0.0-2.0	0
	25-50	---	---	---	---	---	---
Rizno, steep---------	0-9	7.6-15.5	7.9-8.4	5-15	0	0.0-2.0	0
	9-16	7.6-14.7	7.9-9.0	5-15	0	0.0-2.0	0-5
	16-41	---	---	---	---	---	---
106:							
Tineoyler------------	0-12	12.9-20.8	6.6-7.8	0-10	0	0.0-2.0	0
	12-32	8.9-18.1	6.6-8.4	0-3	0	0.0-2.0	0
	32-83	5.5-12.8	6.6-8.4	0-3	0	0.0-2.0	0
	83-151	3.3-10.2	6.6-7.8	0-4	0	0.0-2.0	0
	151-173	3.3-10.2	6.6-7.8	0-4	0	0.0-2.0	0
107:							
Ustic Torriorthents--	0-3	7.0-12.0	7.4-7.8	0-5	0	0.0-2.0	0-1
	3-20	7.0-12.0	7.9-8.4	0-5	0-5	0.0-2.0	0-1
	20-58	8.0-12.0	7.9-8.4	0-5	0-5	0.0-2.0	0-1
	58-83	---	---	---	---	---	---

Accessibility Statement

The Natural Resources Conservation Service (NRCS) is committed to making its information accessible to all of its customers and employees. If you are experiencing accessibility issues and need assistance, please contact our Helpdesk by phone at (800) 457-3642 or by e-mail at ServiceDesk-FTC@ftc.usda.gov. For assistance with publications that include maps, graphs, or similar forms of information, you may also wish to contact our State or local office. You can locate the correct office and phone number at http://offices.sc.egov.usda.gov/locator/app.

The USDA Target Center can convert USDA information and documents into alternative formats, including Braille, large print, video description, diskette, and audiotape. For more information, visit the TARGET Center's Web site (http://www.targetcenter.dm.usda.gov/) or call (202) 720-2600 (Voice/TTY).