United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with United States Department of Agriculture, Forest Service; Missouri Department of Natural Resources; Missouri Department of Conservation; Missouri Agricultural Experiment Station; and Texas County Soil and Water Conservation District

Soil Survey of Texas County, Missouri

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How To Use This Soil Survey

General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

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

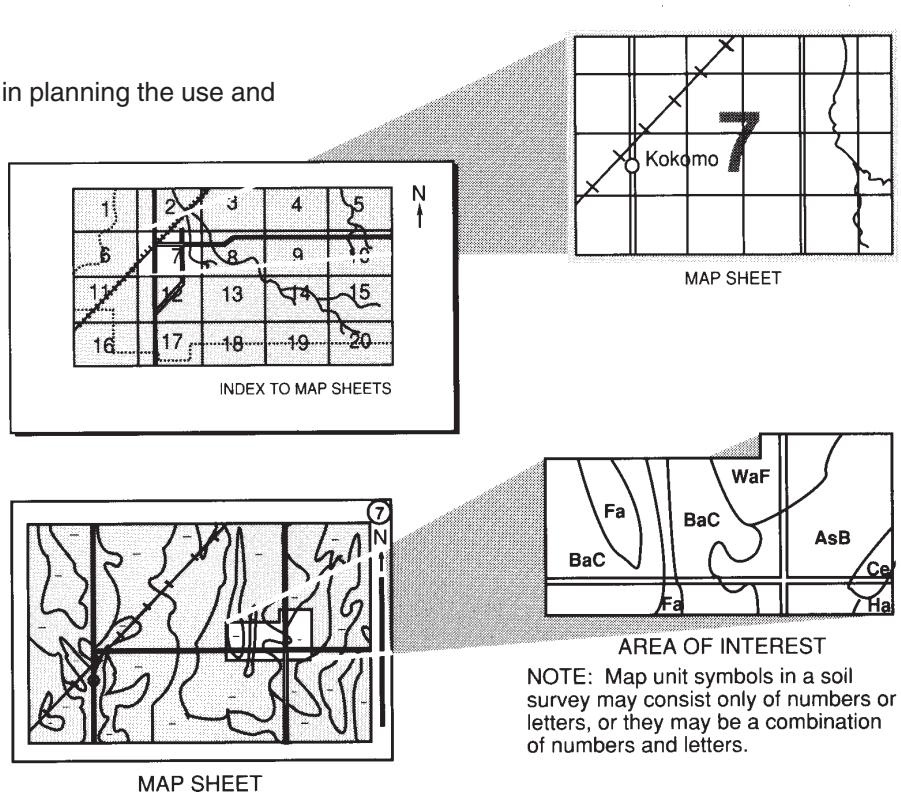
Detailed Soil Maps

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

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

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

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



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

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1995. Soil names and descriptions were approved in 2003. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1995. This survey was made cooperatively by the Natural Resources Conservation Service; United States Department of Agriculture, Forest Service; the Missouri Department of Natural Resources; the Missouri Department of Conservation; and the Missouri Agricultural Experiment Station. The Missouri Department of Natural Resources provided a soil scientist to assist with the fieldwork. The survey is part of the technical assistance furnished to the Texas County Soil and Water Conservation District.

Cover: Fall colors brighten the hills of Texas County.

Additional information about the Nation's natural resources is available on the Natural Resources Conservation Service home page on the World Wide Web. The address is http://www.nrcs.usda.gov.

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Foreword

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

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

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

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

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

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Soil Survey of
Texas County, Missouri

By John D. Preston, Natural Resources Conservation Service

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United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with
United States Department of Agriculture, Forest Service; Missouri Department of Natural Resources; Missouri Department of Conservation; Missouri Agricultural Experiment Station, and Texas County Soil and Water Conservation District

TEXAS COUNTY is located in the south-central portion of Missouri (fig. 1). It has an area of 755,469 acres, or about 1,180 square miles. It is bordered on the north by Pulaski and Phelps Counties, on the east by Dent and Shannon Counties, on the south by Howell and Douglas Counties, and on the west by Wright and Laclede Counties. Houston, the county seat, is in the central part of the county. According to the 1990 census, the population of Texas County was 21,500 and the population of the city of Houston was 2,157.

Beef cattle and dairy cattle are the dominant livestock species in the county. Cool-season grasses, shallow-rooted legumes and deep-rooted legumes, such as tall fescue, red clover, and alfalfa, are the main forage species grown for pasture and hay. Forage sorghum is the most common row crop, but a few small areas are used for corn and wheat. These crops are used on the farm for livestock feed. A majority of the county is in timber, both mature and regenerating. The remaining areas are used for pasture and hay and occupy a portion of the gently and moderately sloping uplands and a major part of the bottom lands.

The county is dominantly rural. The local economy is based on retail business, livestock farming, and service facilities. Several small towns have business districts that are supported by the surrounding rural areas. The Jack's Fork, Big Piney, and Little Piney Rivers, along with several large creeks, provide opportunities for recreational activities, such as fishing and canoeing. The Forest Service manages 47,392 acres in the northwestern part of the county, including the Paddy Creek Wilderness Area. These areas are extensively used for hunting, camping, and hiking.

Figure 1.—Location of Texas County in Missouri.

This survey updates the earlier survey of Texas County that was published in 1919 (Watkins, 1919). It defines the soil boundaries more clearly and provides more detailed information.

General Nature of the Survey Area

This section gives information about the climate of Texas County.

Climate

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

In winter, the average temperature is 31.4 degrees F and the average daily minimum temperature is 20.3 degrees. The lowest temperature on record, which occurred at Licking on January 20, 1985, was -24 degrees. In summer, the average temperature is 74.2 degrees and the average daily maximum temperature is 85.9 degrees. The highest temperature, which occurred at Licking on July 15, 1954, was 114 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The average annual total precipitation is about 42.78 inches. Of this, about 24 inches, or 56 percent, usually falls in April through September. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 5.55 inches at Licking on October 1, 1986. Thunderstorms occur on about 52 days each year, and most occur between May and August.

The average seasonal snowfall is 17 inches. The greatest snow depth at any one time was 16 inches recorded on November 7, 1951. On an average, 22 days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 15 inches recorded on November 6, 1951.

The average relative humidity in midafternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 83 percent. The sun shines 66 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the south for most of the year. It is from the northwest during February and March. Average windspeed is highest, between 11 and 12 miles per hour, from November to April.

How This Survey Was Made

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

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

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

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

compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

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

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

General Soil Map Units

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. These broad areas are called associations. Each association on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one association can occur in another but in a different pattern.

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

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

1. Poynor-Bendavis Association

Composition

Extent of the association in the survey area: 31 percent
Extent of the components in the association (fig. 2):
Poynor and similar soils—55 percent
Bendavis and similar soils—25 percent
Soils of minor extent—20 percent

Soils of Minor Extent

- Alred, Bender, Mano, Ocie, Pomme, Scholten, Tonti, and Viburnum

Landscape

Poynor—ridgetops, shoulder slopes, and backslopes
Bendavis—ridgetops, shoulder slopes, and backslopes

Parent Material

Poynor—loess, hillslope sediments, and the underlying clayey sediments and residuum
Bendavis—loess and hillslope sediments

Slope Range

Poynor—1 to 50 percent
Bendavis—1 to 50 percent

2. Mano-Ocie Association

Composition

Extent of the association in the survey area: 21 percent
Extent of the components in the association (fig. 3):
Mano and similar soils—35 percent
Ocie and similar soils—30 percent
Soils of minor extent—35 percent

Soils of Minor Extent

- Gatewood, Gunlock, Jerktail, Moko, Poynor, Tick, Tonti, and Viburnum

Landscape

Mano—ridgetops, shoulder slopes, and backslopes
Ocie—ridgetops, shoulder slopes, and backslopes

Parent Material

Mano—loess, hillslope sediments, and the underlying clayey sediments and residuum
Ocie—loess, hillslope sediments, and the underlying clayey sediments and residuum

Slope Range

Mano—1 to 35 percent
Ocie—1 to 35 percent

3. Bender-Lily-Rock Outcrop Association

Composition

Extent of the association in the survey area: 13 percent
Extent of the components in the association (fig. 4):
Bender and similar soils—55 percent
Lily and similar soils—15 percent
Rock outcrop—15 percent
Soils of minor extent—15 percent

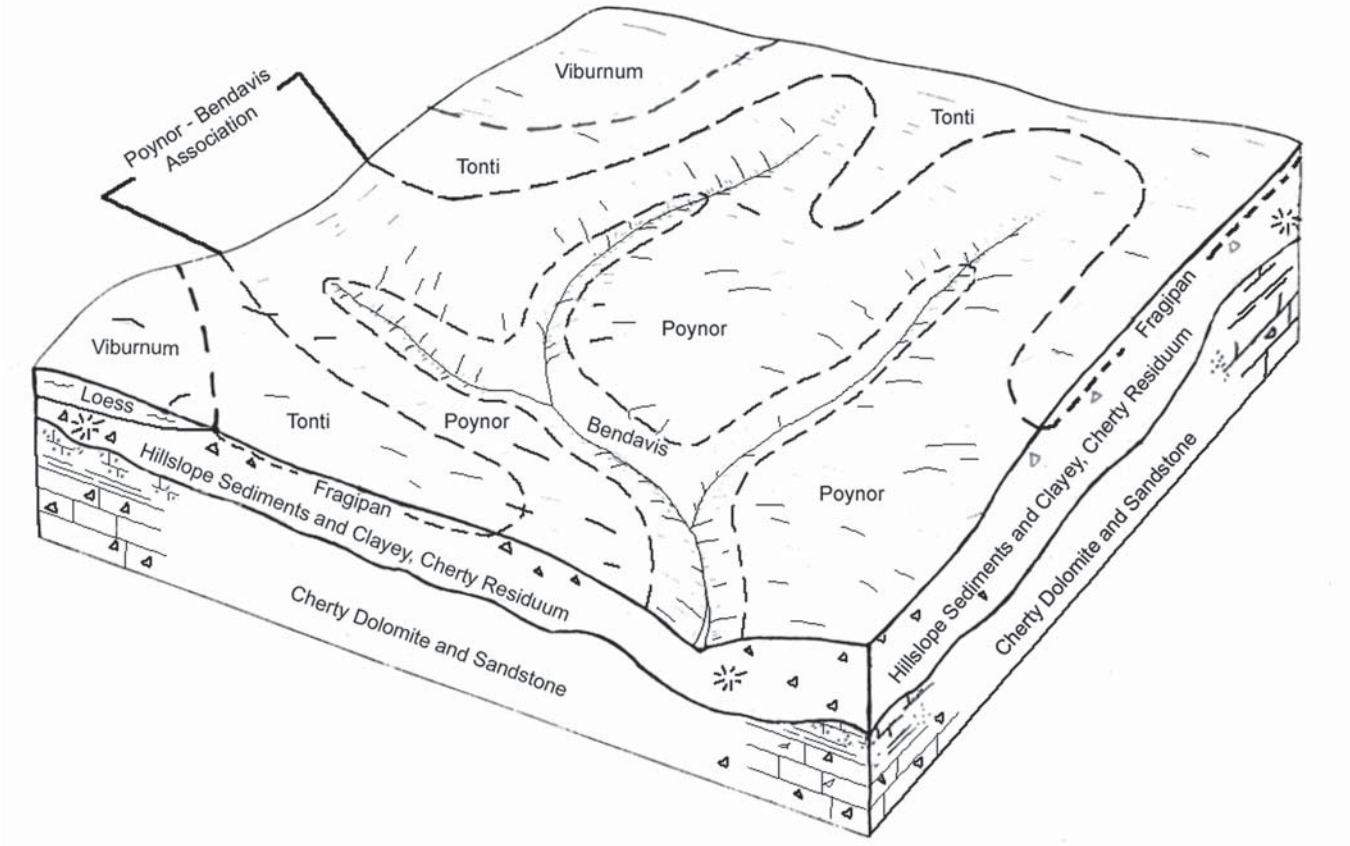

Figure 2.—Typical pattern of soils and parent material in the Poyner-Bendavis and Tonti-Viburnum associations.

Soils of Minor Extent

- Alred, Bardley, Bendavis, Lecoma, and Yelton

Landscape

Bender—ridgetops, shoulder slopes, and backslopes
Lily—ridgetops and shoulder slopes
Rock outcrop—ridgetops, shoulder slopes, and backslopes

Parent Material and Type of Rock Outcrop

Bender—residuum derived from sandstone
Lily—residuum derived from sandstone
Rock outcrop—dolostone, sandstone

Slope Range

Bender—3 to 60 percent
Lily—3 to 15 percent
Rock outcrop—3 to 60 percent

4. Tonti-Viburnum Association

Composition

Extent of the association in the survey area: 11 percent

Extent of the components in the association (fig. 2):
Tonti and similar soils—42 percent
Viburnum and similar soils—31 percent
Soils of minor extent—27 percent

Soils of Minor Extent

- Bendavis, Branson, Celt, Gunlock, Hogcreek, Jerktail, Mano, Ocie, Poynor, and Splitlimb

Landscape

Tonti—ridgetops and shoulder slopes
Viburnum—ridgetops and shoulder slopes

Parent Material

Tonti—loess and hillslope sediments and the underlying clayey sediments or residuum
Viburnum—loess and hillslope sediments and the underlying clayey sediments or residuum

Slope Range

Tonti—1 to 8 percent
Viburnum—1 to 15 percent

5. Gatewood-Mano-Ocie Association

Composition

Extent of the association in the survey area: 10 percent
Extent of the components in the association (fig. 5):
Gatewood and similar soils—38 percent
Mano and similar soils—22 percent
Ocie and similar soils—20 percent
Soils of minor extent—20 percent

Soils of Minor Extent

- Gunlock, Jerktail, Moko, Pomme, and Poynor

Landscape

Gatewood—narrow ridgetops, shoulder slopes, and backslopes
Mano—narrow ridgetops, shoulder slopes, and backslopes
Ocie—narrow ridgetops, shoulder slopes, and backslopes

Parent Material

Gatewood—loess, hillslope sediments, and the underlying clayey sediments and residuum
Mano—loess, hillslope sediments, and the underlying clayey sediments and residuum
Ocie—loess, hillslope sediments, and the underlying clayey sediments and residuum

Slope Range

Gatewood—3 to 35 percent
Mano—1 to 35 percent
Ocie—1 to 35 percent

6. Cedargap-Kaintuck-Pomme Association

Composition

Extent of the association in the survey area: 8 percent
Extent of the components in the association (fig. 3):
Cedargap and similar soils—50 percent
Kaintuck and similar soils—28 percent
Pomme and similar soils—15 percent
Soils of minor extent—7 percent

Soils of Minor Extent

- Deible, Lecoma, Possumtrot, Racket, Raftville, Razort, Relfe, Secesh, Stultz, Tanglenook, Tilk, and Winnipeg

Landscape

Cedargap—flood plains of small streams
Kaintuck—flood plains of small streams

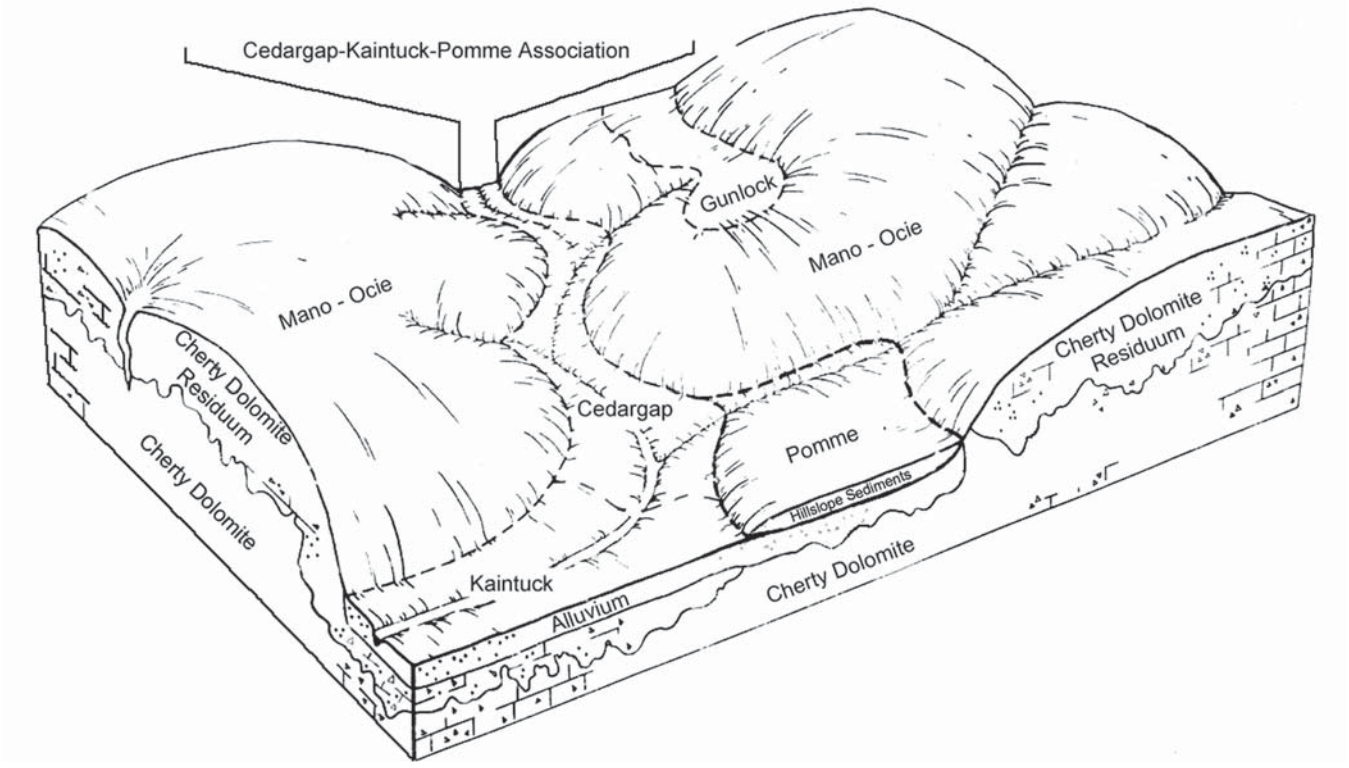

Figure 3.—Typical pattern of soils and parent material in the Mano-Ocie and Cedargap-Kaintuck-Pomme associations.

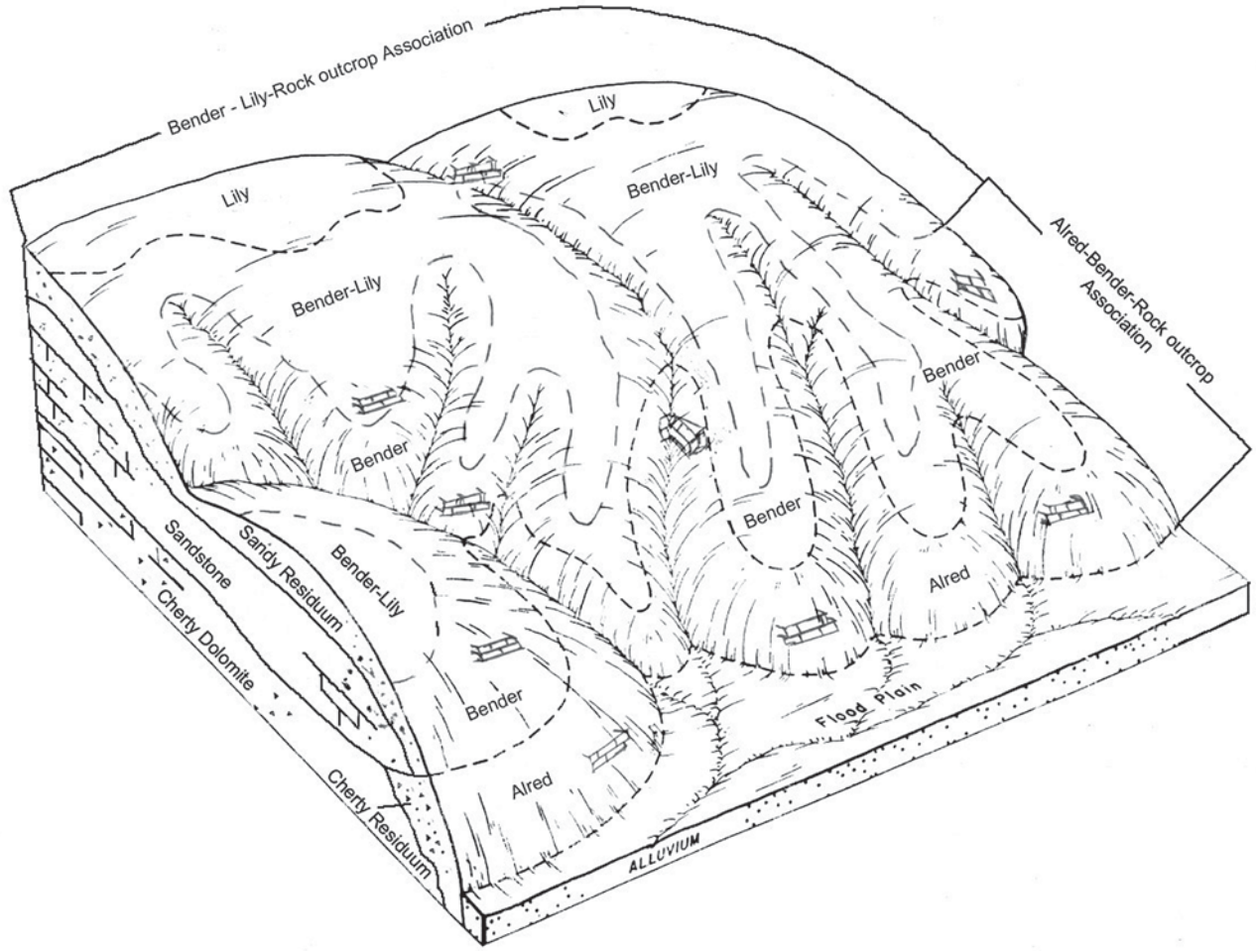

Figure 4.—Typical pattern of soils and parent material in the Bender-Lily-Rock outcrop and Alred-Bender-Rock outcrop associations.

Pomme—flood plains of small streams

Parent Material

Cedargap—gravelly alluvium
Kaintuck—loamy alluvium
Pomme—loess and the underlying hillslope sediments and alluvium

Slope Range

Cedargap—0 to 3 percent
Kaintuck—0 to 3 percent
Pomme—3 to 8 percent

7. Tick Association

Composition

Extent of the association in the survey area: 3 percent
Extent of the components in the association (fig. 5):
Tick and similar soils—91 percent
Soils of minor extent—9 percent

Soils of Minor Extent

- Mano, Ocie, Poynor, and Viburnum

Landscape

Tick—narrow ridgetops, shoulder slopes, and backslopes

Parent Material

Tick—residuum from dense, clayey sediments

Slope Range

Tick—3 to 50 percent

8. Alred-Bender-Rock Outcrop Association

Composition

Extent of the association in the survey area: 3 percent

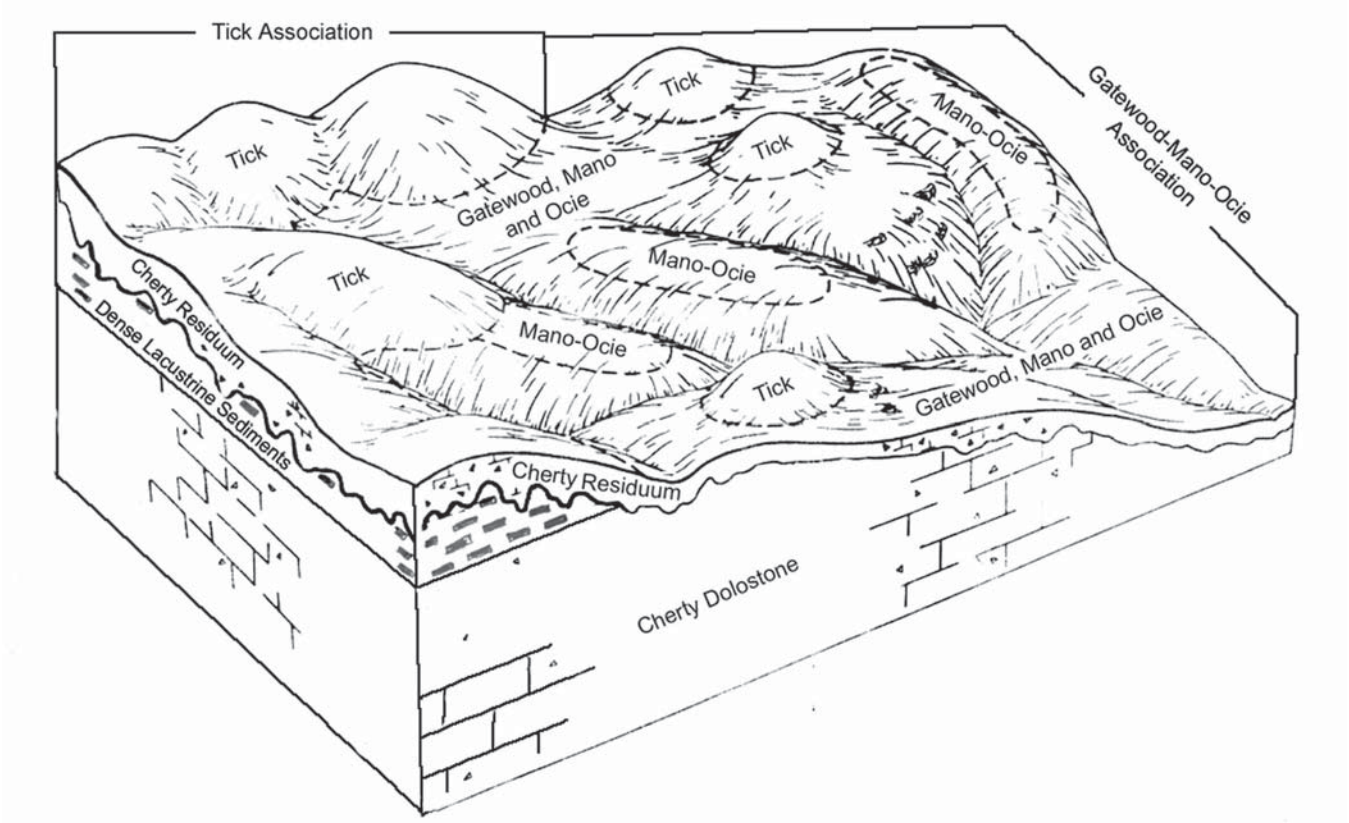

Figure 5.—Typical pattern of soils and parent material in the Gatewood-Mano-Ocie and Tick associations.

Extent of the components in the association (fig. 4):
Alred and similar soils—35 percent
Bender and similar soils—33 percent
Rock outcrop—17 percent
Soils of minor extent—15 percent

Soils of Minor Extent

- Bendavis, Lecoma, Lily, Poynor, and Yelton

Landscape

Alred—backslopes
Bender—backslopes
Rock outcrop—backslopes

Parent Material and Type of Rock Outcrop

Alred—hillslope sediments and the underlying clayey sediments and residuum
Bender—residuum from sandstone
Rock outcrop—sandstone and dolostone

Slope Range

Alred—15 to 60 percent
Bender—15 to 60 percent
Rock outcrop—15 to 60 percent

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

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

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

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

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

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Tonti silt loam, 3 to 8 percent slopes, is a phase of the Tonti series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes. A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Mano-Ocie complex, 1 to 8 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. The map unit Pits, quarries, is an example.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils

and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

70022—Tonti silt loam, 3 to 8 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Tonti

Percent of the map unit: 85 percent
Position on the landform: Summits, shoulders
Parent material: Silty slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium
Depth to restrictive feature: 16 to 28 inches to a fragipan

Component Hydrologic Properties

Flooding: None
Current depth to water table: 18 to 30 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 8 inches; silt loam
Bt—8 to 20 inches; gravelly silty clay loam
2Btx—20 to 34 inches; extremely gravelly silt loam
3Bt—34 to 80 inches; very gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Hogcreek and similar soils

Estimated percent of the map unit: 0 to 5 percent

Celt and similar soils

Estimated percent of the map unit: 0 to 5 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 5 percent

70025—Branson-Splitlimb complex, 1 to 3 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Branson

Percent of the map unit: 50 percent
Position on the landform: Summits
Parent material: Loess over hillslope sediments
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 8 inches; silt loam
Bt1—8 to 26 inches; silt loam
2Bt2—26 to 40 inches; silty clay loam
3Bt3—40 to 80 inches; silty clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Splitlimb

Percent of the map unit: 30 percent
Position on the landform: Summits
Parent material: Loess over hillslope sediments
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low

Component Hydrologic Properties

Flooding: None
Current depth to water table: 12 to 21 inches
Drainage class: Somewhat poorly drained

Typical Profile

Ap—0 to 10 inches; silt loam
Bt1—10 to 20 inches; silt loam
Bt2—20 to 29 inches; silt loam
2Bt3—29 to 80 inches; silty clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Tonti and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 5 percent

Celt and similar soils

Estimated percent of the map unit: 0 to 5 percent

Pomme and similar soils

Estimated percent of the map unit: 0 to 5 percent

Well drained soils within sinkholes

Estimated percent of the map unit: 0 to 5 percent

70026—Tonti silt loam, 1 to 3 percent slopes

Map Unit Setting

Landform: Ridges (fig. 6)

Component Description

Tonti

Percent of the map unit: 80 percent
Position on the landform: Summits
Parent material: Silty slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low
Depth to restrictive feature: 13 to 25 inches to a fragipan

Figure 6.—Tall fescue, commonly grown for hay production, in an area of Tonti silt loam, 1 to 3 percent slopes.

Component Hydrologic Properties

Flooding: None
Current depth to water table: 18 to 30 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 8 inches; silt loam
Bt—8 to 20 inches; gravelly silty clay loam
2Btx—20 to 34 inches; extremely gravelly silt loam
3Bt—34 to 80 inches; very gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Scholten and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 5 percent

Celt and similar soils

Estimated percent of the map unit: 0 to 5 percent

73000—Pomme silt loam, 3 to 8 percent slopes

Map Unit Setting

Landform: Strath terraces

Component Description

Pomme

Percent of the map unit: 80 percent
Parent material: Silty slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 7 inches; silt loam
Bt1—7 to 19 inches; silty clay loam
2Bt2—19 to 57 inches; very gravelly silty clay loam
3Bt3—57 to 86 inches; extremely gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Poynor and similar soils

Estimated percent of the map unit: 0 to 5 percent

Winnipeg and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viraton and similar soils

Estimated percent of the map unit: 0 to 5 percent

Eroded areas

Estimated percent of the map unit: 0 to 5 percent

Hartville and similar soils

Estimated percent of the map unit: 0 to 5 percent

73013—Lowassie silt loam, 0 to 3 percent slopes, frequently ponded

Map Unit Setting

Landform: Sinkholes

Component Description

Lowassie

Percent of the map unit: 90 percent
Parent material: Loess, silty and clayey slope alluvium
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: None
Current depth to water table: At the surface
Drainage class: Poorly drained

Typical Profile

Ap—0 to 10 inches; silt loam
BE—10 to 18 inches; silt loam
Btg1—18 to 36 inches; silty clay
2Btg2—36 to 80 inches; silt loam, silty clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional

information is provided in the tables described under the heading “Soil Properties.”

Minor Components

Celt and similar soils

Estimated percent of the map unit: 0 to 5 percent

Splitlimb and similar soils

Estimated percent of the map unit: 0 to 5 percent

Well drained soils within sinkholes

Estimated percent of the map unit: 0 to 5 percent

73017—Bendavis-Poynor complex, 15 to 50 percent slopes, rocky, very stony

Map Unit Setting

Landform: Hills

Component Description

Bendavis

Percent of the map unit: 70 percent
Position on the landform: Backslopes
Parent material: Slope alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.10 to 3 percent (stones)
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 3 inches; very gravelly silt loam
E—3 to 14 inches; very gravelly silt loam
Bt—14 to 34 inches; very gravelly silt loam
2R—34 inches; bedrock

Detailed profile descriptions are given in the “Classification of the Soils” section. Additional information is provided in the tables described under the heading “Soil Properties.”

Poynor

Percent of the map unit: 20 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0 to 3 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 4 inches; very gravelly silt loam
E—4 to 10 inches; very gravelly silt loam
Bt1—10 to 28 inches; very gravelly silt loam
2Bt2—28 to 80 inches; clay

Detailed profile descriptions are given in the “Classification of the Soils” section. Additional information is provided in the tables described under the heading “Soil Properties.”

Minor Components

Rock outcrop

Estimated percent of the map unit: 0 to 10 percent

Coulstone and similar soils

Estimated percent of the map unit: 0 to 5 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 5 percent

73019—Poynor very gravelly silt loam, 1 to 8 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Poynor

Percent of the map unit: 90 percent
Position on the landform: Summits
Parent material: Slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 4 inches; very gravelly silt loam
E—4 to 10 inches; very gravelly silt loam
Bt1—10 to 28 inches; very gravelly silty clay loam
2Bt2—28 to 80 inches; gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Scholten and similar soils

Estimated percent of the map unit: 0 to 10 percent

Tonti and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 5 percent

73021—Poynor extremely gravelly silt loam, 15 to 35 percent slopes, stony

Map Unit Setting

Landform: Hills

Component Description

Poynor

Percent of the map unit: 90 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0 to 3 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 4 inches; extremely gravelly silt loam
E—4 to 10 inches; very gravelly silt loam
Bt1—10 to 28 inches; very gravelly silty clay loam
2Bt2—28 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Scholten and similar soils

Estimated percent of the map unit: 0 to 5 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 5 percent

73023—Mano-Ocie complex, 1 to 8 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Mano

Percent of the map unit: 65 percent
Position on the landform: Summits
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: High

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 3 inches; gravelly silt loam
E—3 to 13 inches; gravelly silt loam
Bt1—13 to 33 inches; very gravelly silt loam
2Bt2—33 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Ocie

Percent of the map unit: 25 percent
Position on the landform: Summits

Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Deep (40 to 60 inches)
Surface runoff class: High
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 5 inches; very gravelly silt loam
E—5 to 11 inches; very gravelly silt loam
Bt1—11 to 24 inches; very gravelly silty clay loam
2Bt2—24 to 56 inches; clay
3R—56 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Gatewood and similar soils

Estimated percent of the map unit: 0 to 5 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viraton and similar soils

Estimated percent of the map unit: 0 to 5 percent

Gressy and similar soils

Estimated percent of the map unit: 0 to 5 percent

73024—Mano-Ocie complex, 8 to 15 percent slopes, stony

Map Unit Setting

Landform: Hills

Component Description

Mano

Percent of the map unit: 55 percent
Position on the landform: Shoulders
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: High
Percent of surface covered by rock fragments: 0.01 to 0.1 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 3 inches; very gravelly silt loam
E—3 to 13 inches; very gravelly silt loam
Bt1—13 to 33 inches; very gravelly silt loam
2Bt2—33 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Ocie

Percent of the map unit: 35 percent
Position on the landform: Shoulders
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Deep (40 to 60 inches)
Surface runoff class: High
Percent of surface covered by rock fragments: 0.01 to 0.1 percent (stones)
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 5 inches; very gravelly silt loam
E—5 to 11 inches; very gravelly silt loam
Bt1—11 to 24 inches; very gravelly silt loam
2Bt2—24 to 56 inches; gravelly clay
3R—56 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bendavis and similar soils

Estimated percent of the map unit: 0 to 5 percent

Gatewood and similar soils

Estimated percent of the map unit: 0 to 5 percent

Gressy and similar soils

Estimated percent of the map unit: 0 to 5 percent

73032—Gatewood very gravelly silt loam, 3 to 15 percent slopes, stony

Map Unit Setting

Landform: Hills

Component Description

Gatewood

Percent of the map unit: 80 percent
Position on the landform: Shoulders, summits
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.01 to 0.1 percent (stones)
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 18 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 2 inches; very gravelly silt loam
E—2 to 5 inches; very gravelly silt loam
2Bt—5 to 36 inches; clay
3R—36 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Moko and similar soils

Estimated percent of the map unit: 0 to 5 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 5 percent

Ocie and similar soils

Estimated percent of the map unit: 0 to 5 percent

Rock outcrop

Estimated percent of the map unit: 0 to 5 percent

73033—Gatewood extremely gravelly silt loam, 15 to 35 percent slopes, very rocky, very stony

Map Unit Setting

Landform: Hills

Component Description

Gatewood

Percent of the map unit: 80 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0 to 3 percent (stones)
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 18 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 2 inches; extremely gravelly silt loam
E—2 to 5 inches; very gravelly silt loam
2Bt—5 to 36 inches; clay
3R—36 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Rock outcrop

Estimated percent of the map unit: 0 to 10 percent

Ocie and similar soils

Estimated percent of the map unit: 0 to 5 percent

Moko and similar soils

Estimated percent of the map unit: 0 to 5 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 5 percent

73051—Winnipeg silt loam, 2 to 5 percent slopes

Map Unit Setting

Landform: Strath terraces

Component Description

Winnipeg

Percent of the map unit: 80 percent
Position on the landform: Footslopes
Parent material: Loess over slope alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 6 inches; silt loam
Bt1—6 to 16 inches; silt loam
2Bt2—16 to 44 inches; silty clay loam
3Bt3—44 to 80 inches; gravelly silty clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Pomme and similar soils

Estimated percent of the map unit: 0 to 5 percent

Splitlimb and similar soils

Estimated percent of the map unit: 0 to 5 percent

Poynor and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viraton and similar soils

Estimated percent of the map unit: 0 to 5 percent

73052—Lily loam, 3 to 8 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Lily

Percent of the map unit: 85 percent
Position on the landform: Summits
Parent material: Residuum from sandstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Medium
Depth to restrictive feature: 20 to 39 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 3 inches; loam
Bt1—3 to 10 inches; loam
Bt2—10 to 24 inches; gravelly loam
2R—24 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bender and similar soils

Estimated percent of the map unit: 0 to 5 percent

Coulstone and similar soils

Estimated percent of the map unit: 0 to 5 percent

Yelton and similar soils

Estimated percent of the map unit: 0 to 5 percent

Lecoma and similar soils

Estimated percent of the map unit: 0 to 5 percent

73053—Lily-Bender complex, 3 to 15 percent slopes

Map Unit Setting

Landform: Hills

Component Description

Lily

Percent of the map unit: 45 percent
Position on the landform: Backslopes
Parent material: Residuum from sandstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: High
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 3 inches; loam
Bt1—3 to 15 inches; loam
Bt2—15 to 21 inches; gravelly loam
2R—21 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Bender

Percent of the map unit: 40 percent
Position on the landform: Backslopes
Parent material: Residuum from sandstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: High
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

Ap—0 to 4 inches; very cobbly fine sandy loam
Bt1—4 to 12 inches; very cobbly fine sandy loam
Bt2—12 to 23 inches; extremely gravelly sandy loam
2R—23 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Coulstone and similar soils

Estimated percent of the map unit: 0 to 5 percent

Yelton and similar soils

Estimated percent of the map unit: 0 to 5 percent

Lecoma and similar soils

Estimated percent of the map unit: 0 to 5 percent

73054—Viburnum silt loam, 1 to 3 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Viburnum

Percent of the map unit: 90 percent
Position on the landform: Summits
Parent material: Slope alluvium over residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low

Component Hydrologic Properties

Flooding: None
Current depth to water table: 18 to 22 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 7 inches; silt loam
Bt1—7 to 20 inches; silty clay loam
2Bt2—20 to 38 inches; silty clay
3Bt3—38 to 80 inches; gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional

information is provided in the tables described under the heading “Soil Properties.”

Minor Components

Lowassie and similar soils

Estimated percent of the map unit: 0 to 5 percent

Splitlimb and similar soils

Estimated percent of the map unit: 0 to 5 percent

Tonti and similar soils

Estimated percent of the map unit: 0 to 5 percent

Celt and similar soils

Estimated percent of the map unit: 0 to 5 percent

73056—Viburnum very gravelly silt loam, 8 to 15 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Viburnum

Percent of the map unit: 85 percent
Position on the landform: Summits, shoulders, backslopes
Parent material: Slope alluvium over residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: 15 to 20 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 6 inches; very gravelly silt loam
Bt1—6 to 18 inches; gravelly silty clay loam
2Bt2—18 to 35 inches; gravelly silty clay
3Bt3—35 to 80 inches; clay

Detailed profile descriptions are given in the “Classification of the Soils” section. Additional information is provided in the tables described under the heading “Soil Properties.”

Minor Components

Tick and similar soils

Estimated percent of the map unit: 0 to 5 percent

Ocie and similar soils

Estimated percent of the map unit: 0 to 5 percent

Poynor and similar soils

Estimated percent of the map unit: 0 to 5 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 5 percent

73057—Jerktail silt loam, 1 to 3 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Jerktail

Percent of the map unit: 85 percent
Position on the landform: Summits
Parent material: Slope alluvium over residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low
Depth to restrictive feature: 60 to 80 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 11 to 24 inches
Drainage class: Somewhat poorly drained

Typical Profile

Ap—0 to 6 inches; silt loam
Bt1—6 to 14 inches; silt loam
2Bt2—14 to 21 inches; gravelly silty clay loam
3Bt3—21 to 63 inches; gravelly clay
4R—63 inches; bedrock

Detailed profile descriptions are given in the “Classification of the Soils” section. Additional information is provided in the tables described under the heading “Soil Properties.”

Minor Components

Eudy and similar soils

Estimated percent of the map unit: 0 to 5 percent

Gunlock and similar soils

Estimated percent of the map unit: 0 to 5 percent

Ocie and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viraton and similar soils

Estimated percent of the map unit: 0 to 5 percent

73058—Gunlock silt loam, 1 to 8 percent slopes

Map Unit Setting

Landform: Hills

Component Description

Gunlock

Percent of the map unit: 85 percent
Position on the landform: Footslopes
Parent material: Slope alluvium over residuum from dolostone
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: 18 to 36 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 5 inches; silt loam
Bt—5 to 25 inches; silty clay loam
2Btx—25 to 43 inches; silty clay loam
3Bt—43 to 80 inches; gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Mano and similar soils

Estimated percent of the map unit: 0 to 5 percent

Jerktail and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viraton and similar soils

Estimated percent of the map unit: 0 to 5 percent

Hartville and similar soils

Estimated percent of the map unit: 0 to 5 percent

Gressy and similar soils

Estimated percent of the map unit: 0 to 5 percent

73063—Bendavis-Poynor complex, 1 to 8 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Bendavis

Percent of the map unit: 60 percent
Position on the landform: Summits
Parent material: Slope alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Medium
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 8 inches; gravelly silt loam
E—8 to 14 inches; very gravelly silt loam
Bt—14 to 31 inches; very gravelly silt loam
2R—31 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Poynor

Percent of the map unit: 30 percent
Position on the landform: Summits
Parent material: Slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 4 inches; very gravelly silt loam
E—4 to 10 inches; very gravelly silt loam
Bt1—10 to 28 inches; very gravelly silty clay loam
2Bt2—28 to 80 inches; gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Hogcreek and similar soils

Estimated percent of the map unit: 0 to 10 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 10 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 5 percent

73066—Bender very cobbly fine sandy loam, 3 to 15 percent slopes, stony

Map Unit Setting

Landform: Hills

Component Description

Bender

Percent of the map unit: 85 percent
Position on the landform: Shoulders, summits
Parent material: Residuum from sandstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: High
Percent of surface covered by rock fragments: 0.01 to 0.1 percent (stones)
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

Oi—0 to 1 inch; moderately decomposed plant material
A—1 to 3 inches; very cobbly fine sandy loam
BE—3 to 14 inches; very cobbly sandy loam
Bt—14 to 30 inches; extremely cobbly sandy loam
2R—30 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Lily and similar soils

Estimated percent of the map unit: 0 to 5 percent

Coulstone and similar soils

Estimated percent of the map unit: 0 to 5 percent

Rock outcrop

Estimated percent of the map unit: 0 to 2 percent

73067—Bender-Rock outcrop complex, 15 to 35 percent slopes, very stony

Map Unit Setting

Landform: Hills

Component Description

Bender

Percent of the map unit: 70 percent
Position on the landform: Backslopes
Parent material: Residuum from sandstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.10 to 3 percent (stones) (fig. 7)
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None

Figure 7.—Sandstone and chert stones are very common on the surface of Bender-Rock outcrop complex, 15 to 35 percent slopes, very stony.

Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

Oi—0 to 1 inch; moderately decomposed plant material
A—1 to 3 inches; very cobbly fine sandy loam
BE—3 to 14 inches; very cobbly sandy loam
Bt—14 to 30 inches; extremely cobbly sandy loam
2R—30 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Rock outcrop

Percent of the map unit: 10 percent
Position on the landform: Backslopes

Minor Components

Coulstone and similar soils

Estimated percent of the map unit: 0 to 10 percent

Lecoma and similar soils

Estimated percent of the map unit: 0 to 5 percent

Relfe and similar soils

Estimated percent of the map unit: 0 to 5 percent

73068—Tick very gravelly silt loam, 3 to 15 percent slopes, stony

Map Unit Setting

Landform: Hills

Component Description

Tick

Percent of the map unit: 80 percent
Position on the landform: Summits, shoulders
Parent material: Slope alluvium over clayey residuum from mudstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: High
Percent of surface covered by rock fragments: 0 to 0.10 percent (stones)
Depth to restrictive feature: 40 to 60 inches to dense material

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 5 inches; very gravelly silt loam
E—5 to 10 inches; very gravelly silt loam
Bt1—10 to 18 inches; silty clay loam
Bt2—18 to 42 inches; clay
2Cd—42 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Poynor and similar soils

Estimated percent of the map unit: 0 to 10 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 5 percent

Mano and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 5 percent

73069—Tick extremely gravelly silt loam, 15 to 50 percent slopes, very stony

Map Unit Setting

Landform: Hills

Component Description

Tick

Percent of the map unit: 80 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over clayey residuum from mudstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0 to 3 percent (stones) (fig. 8)
Depth to restrictive feature: 40 to 60 inches to dense material

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 5 inches; extremely gravelly silt loam
E—5 to 10 inches; extremely gravelly silt loam
Bt1—10 to 18 inches; silty clay loam
Bt2—18 to 42 inches; clay
2Cd—42 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Poynor and similar soils

Estimated percent of the map unit: 0 to 10 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 10 percent

Ocie and similar soils

Estimated percent of the map unit: 0 to 5 percent

Tilk and similar soils

Estimated percent of the map unit: 0 to 2 percent

73071—Hogcreek silt loam, 1 to 3 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Hogcreek

Percent of the map unit: 85 percent
Position on the landform: Summits
Parent material: Slope alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Medium
Depth to restrictive feature: 18 to 32 inches to a fragipan; 28 to 42 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 11 to 20 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 5 inches; silt loam
Bt1—5 to 16 inches; silt loam
Bt2—16 to 22 inches; gravelly silty clay loam
2Btx—22 to 34 inches; extremely gravelly silt loam
3R—34 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Tonti and similar soils

Estimated percent of the map unit: 0 to 10 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 10 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 10 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 10 percent

73072—Hogcreek silt loam, 3 to 8 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Hogcreek

Percent of the map unit: 85 percent

Figure 8.—A typical area of Tick extremely gravelly silt loam, 15 to 50 percent slopes, very stony.

Position on the landform: Summits
Parent material: Slope alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: High
Depth to restrictive feature: 18 to 32 inches to a fragipan; 28 to 42 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 11 to 20 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 5 inches; silt loam
Bt1—5 to 16 inches; silt loam
Bt2—16 to 22 inches; gravelly silty clay loam
2Btx—22 to 34 inches; extremely gravelly silt loam
3R—34 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Tonti and similar soils

Estimated percent of the map unit: 0 to 10 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 10 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 10 percent

73073—Scholten-Poynor complex, 8 to 15 percent slopes

Map Unit Setting

Landform: Hills

Component Description

Scholten

Percent of the map unit: 50 percent
Position on the landform: Backslopes, shoulders
Parent material: Slope alluvium over clayey residuum
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: High
Depth to restrictive feature: 17 to 31 inches to a fragipan

Component Hydrologic Properties

Flooding: None
Current depth to water table: 16 to 26 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 7 inches; very gravelly silt loam
Bt—7 to 21 inches; very gravelly silt loam
2Btx—21 to 34 inches; extremely gravelly silt loam
3Bt—34 to 80 inches; gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Poynor

Percent of the map unit: 35 percent
Position on the landform: Shoulders, backslopes
Parent material: Slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: High

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 4 inches; very gravelly silt loam
E—4 to 10 inches; very gravelly silt loam
Bt1—10 to 28 inches; very gravelly silty clay loam
2Bt2—28 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Tonti and similar soils

Estimated percent of the map unit: 2 to 10 percent

Viburnum and similar soils

Estimated percent of the map unit: 2 to 10 percent

Bendavis and similar soils

Estimated percent of the map unit: 2 to 10 percent

73076—Mano-Ocie complex, 15 to 35 percent slopes, stony

Map Unit Setting

Landform: Hills

Component Description

Mano

Percent of the map unit: 45 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.01 to 0.1 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 3 inches; very gravelly silt loam
E—3 to 13 inches; very gravelly silt loam
Bt1—13 to 33 inches; very gravelly silt loam
2Bt2—33 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Ocie

Percent of the map unit: 40 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Deep (40 to 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.01 to 0.1 percent (stones)
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 5 inches; very gravelly silt loam
E—5 to 11 inches; very gravelly silt loam
Bt1—11 to 24 inches; very gravelly silt loam
2Bt2—24 to 56 inches; gravelly clay
3R—56 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Gatewood and similar soils

Estimated percent of the map unit: 0 to 10 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 10 percent

Gressy and similar soils

Estimated percent of the map unit: 0 to 10 percent

73077—Eudy silt loam, 1 to 8 percent slopes

Map Unit Setting

Landform: Hills

Component Description

Eudy

Percent of the map unit: 85 percent
Position on the landform: Summits, shoulders, footslopes
Parent material: Loess over clayey residuum from dolostone
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: High
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 11 to 20 inches
Drainage class: Somewhat poorly drained

Typical Profile

Ap—0 to 6 inches; silt loam
Bt1—6 to 14 inches; silt loam

2Bt2—14 to 36 inches; clay
3R—36 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Gatewood and similar soils

Estimated percent of the map unit: 0 to 10 percent

Viraton and similar soils

Estimated percent of the map unit: 0 to 5 percent

Gressy and similar soils

Estimated percent of the map unit: 0 to 5 percent

Gunlock and similar soils

Estimated percent of the map unit: 0 to 5 percent

Jerktail and similar soils

Estimated percent of the map unit: 0 to 5 percent

73080—Alred-Bardley-Rock outcrop complex, 15 to 60 percent slopes, very stony

Map Unit Setting

Landform: Hills (fig. 9)

Component Description

Alred

Percent of the map unit: 35 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.10 to 3 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 4 inches; extremely cobbly loam
E—4 to 17 inches; extremely gravelly silt loam
Bt1—17 to 27 inches; extremely cobbly silty clay loam
2Bt2—27 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Bardley

Percent of the map unit: 35 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.10 to 3 percent (stones)
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 4 inches; extremely cobbly loam
E—4 to 8 inches; extremely gravelly silt loam
2Bt—8 to 27 inches; clay
3R—27 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Rock outcrop

Percent of the map unit: 15 percent
Position on the landform: Backslopes

Minor Components

Coulstone and similar soils

Estimated percent of the map unit: 0 to 5 percent

Gatewood and similar soils

Estimated percent of the map unit: 0 to 5 percent

Moko and similar soils

Estimated percent of the map unit: 0 to 5 percent

Figure 9.—The Jack's Fork River flows through southeastern Texas County. An area of Alred-Bardley-Rock outcrop complex, 15 to 60 percent slopes, is on the bluffs in the background.

73081—Bender-Alred-Rock outcrop complex, 15 to 60 percent slopes, very stony

Map Unit Setting

Landform: Hills

Component Description

Bender

Percent of the map unit: 35 percent
Position on the landform: Backslopes
Parent material: Residuum from sandstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.1 to 3 percent (stones)
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

Oe—0 to 1 inch; moderately decomposed plant material
A—1 to 5 inches; extremely cobbly sandy loam
Bt1—5 to 21 inches; extremely cobbly sandy loam
Bt2—21 to 31 inches; extremely stony sandy loam
2R—31 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Alred

Percent of the map unit: 30 percent
Position on the landform: Backslopes

Parent material: Slope alluvium over clayey residuum from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0.1 to 3 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 4 inches; extremely cobbly loam
E—4 to 17 inches; extremely gravelly silt loam
Bt1—17 to 27 inches; extremely cobbly silty clay loam
2Bt2—27 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Rock outcrop

Percent of the map unit: 20 percent

Minor Components

Bendavis and similar soils

Estimated percent of the map unit: 0 to 10 percent

Gatewood and similar soils

Estimated percent of the map unit: 0 to 10 percent

Moko and similar soils

Estimated percent of the map unit: 0 to 10 percent

Coulstone and similar soils

Estimated percent of the map unit: 0 to 10 percent

73087—Celt silt loam, 1 to 3 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Celt

Percent of the map unit: 90 percent
Position on the landform: Summits
Parent material: Loess over clayey residuum
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium
Depth to restrictive feature: 20 to 36 inches to a fragipan

Component Hydrologic Properties

Flooding: None
Current depth to water table: 12 to 24 inches
Drainage class: Somewhat poorly drained

Typical Profile

Ap—0 to 4 inches; silt loam
Bt—4 to 22 inches; silty clay
2Btx—22 to 39 inches; gravelly silty clay loam
3Bt—39 to 80 inches; gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Lowassie and similar soils

Estimated percent of the map unit: 0 to 5 percent

Splitlimb and similar soils

Estimated percent of the map unit: 0 to 5 percent

Tonti and similar soils

Estimated percent of the map unit: 0 to 5 percent

Viburnum and similar soils

Estimated percent of the map unit: 0 to 5 percent

73159—Yelton silt loam, 3 to 8 percent slopes

Map Unit Setting

Landform: Hills

Component Description

Yelton

Percent of the map unit: 90 percent
Position on the landform: Footslopes
Parent material: Loess over slope alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)

Surface runoff class: High
Depth to restrictive feature: 18 to 27 inches to a fragipan

Component Hydrologic Properties

Flooding: None
Current depth to water table: 18 to 24 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 3 inches; silt loam
E—3 to 8 inches; silt loam
Bt—8 to 19 inches; silty clay loam
2Btx—19 to 38 inches; loam
3Bt—38 to 65 inches; loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Lily and similar soils

Estimated percent of the map unit: 0 to 10 percent

Lecoma and similar soils

Estimated percent of the map unit: 0 to 10 percent

Coulstone and similar soils

Estimated percent of the map unit: 0 to 10 percent

73176—Bendavis-Poynor complex, 8 to 15 percent slopes, stony

Map Unit Setting

Landform: Hills

Component Description

Bendavis

Percent of the map unit: 50 percent
Position on the landform: Backslopes
Parent material: Slope alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: High
Percent of surface covered by rock fragments: 0.01 to 0.10 percent (stones)
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

A—0 to 5 inches; very gravelly silt loam
E—5 to 9 inches; very gravelly silt loam
Bt—9 to 25 inches; very gravelly silt loam
2R—25 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Poynor

Percent of the map unit: 30 percent
Position on the landform: Backslopes
Parent material: Slope alluvium over residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: High
Percent of surface covered by rock fragments: 0.01 to 0.10 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

A—0 to 5 inches; very gravelly silt loam
E—5 to 11 inches; very gravelly silt loam
Bt1—11 to 17 inches; very gravelly silt loam
2Bt2—17 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bender and similar soils

Estimated percent of the map unit: 0 to 10 percent

Coulstone and similar soils

Estimated percent of the map unit: 0 to 10 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 10 percent

73197—Viburnum silt loam, 3 to 8 percent slopes

Map Unit Setting

Landform: Ridges (fig. 10)

Component Description

Viburnum

Percent of the map unit: 85 percent
Position on the landform: Summits
Parent material: Slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None

Current depth to water table: 15 to 20 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 6 inches; silt loam
Bt1—6 to 18 inches; gravelly silty clay loam
2Bt2—18 to 35 inches; gravelly silty clay
3Bt3—35 to 80 inches; gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Tonti and similar soils

Estimated percent of the map unit: 0 to 5 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 5 percent

Figure 10.—A sinkhole in an area of Viburnum silt loam, 3 to 8 percent slopes.

Bendavis and similar soils

Estimated percent of the map unit: 0 to 2 percent

Hogcreek and similar soils

Estimated percent of the map unit: 0 to 2 percent

Splitlimb and similar soils

Estimated percent of the map unit: 0 to 2 percent

73198—Gressy-Viraton complex, 3 to 8 percent slopes

Map Unit Setting

Landform: Ridges

Component Description

Gressy

Percent of the map unit: 50 percent
Position on the landform: Summits
Parent material: Loess over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 7 inches; silt loam
Bt1—7 to 31 inches; silt loam
2Bt2—31 to 49 inches; gravelly clay loam
3Bt3—49 to 80 inches; gravelly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Viraton

Percent of the map unit: 40 percent
Position on the landform: Summits
Parent material: Loess over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium
Depth to restrictive feature: 16 to 41 inches to a fragipan

Component Hydrologic Properties

Flooding: None
Current depth to water table: 6 to 14 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 3 inches; silt loam
E—3 to 7 inches; silt loam
Bt—7 to 23 inches; gravelly silty clay loam
2Btx—23 to 48 inches; extremely gravelly silt loam
3Bt—48 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Hogcreek and similar soils

Estimated percent of the map unit: 0 to 5 percent

Mano and similar soils

Estimated percent of the map unit: 0 to 5 percent

Splitlimb and similar soils

Estimated percent of the map unit: 0 to 5 percent

Jerktail and similar soils

Estimated percent of the map unit: 0 to 5 percent

73199—Moko-Rock outcrop complex, 3 to 15 percent slopes, very flaggy

Map Unit Setting

Landform: Hills

Component Description

Moko

Percent of the map unit: 75 percent
Position on the landform: Shoulders, summits
Parent material: Residuum derived from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very shallow and shallow (4 to 20 inches)
Surface runoff class: Very high

Percent of surface covered by rock fragments: 0 to 3 percent (flagstones)
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

A1—0 to 7 inches; very gravelly silt loam
A2—7 to 12 inches; extremely flaggy silt loam
2R—12 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Rock outcrop

Percent of the map unit: 20 percent

Minor Components

Gatewood and similar soils

Estimated percent of the map unit: 0 to 10 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 10 percent

73220—Poynor extremely gravelly silt loam, 8 to 15 percent slopes

Map Unit Setting

Landform: Hills

Component Description

Poynor

Percent of the map unit: 80 percent
Position on the landform: Shoulders, backslopes
Parent material: Slope alluvium over clayey residuum
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 4 inches; extremely gravelly silt loam
E—4 to 10 inches; very gravelly silt loam
Bt1—10 to 28 inches; very gravelly silty clay loam
2Bt2—28 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Scholten and similar soils

Estimated percent of the map unit: 0 to 5 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 15 percent

Tick and similar soils

Estimated percent of the map unit: 0 to 5 percent

73221—Poynor very gravelly silt loam, karst, 3 to 35 percent slopes, very stony

Map Unit Setting

Landform: Sinkholes

Component Description

Poynor

Percent of the map unit: 85 percent
Position on the landform: Summits, shoulders, backslopes
Parent material: Slope alluvium over clayey residuum
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0 to 3 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 4 inches; very gravelly silt loam
E—4 to 10 inches; very gravelly silt loam

Bt1—10 to 28 inches; very gravelly silt loam
2Bt2—28 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bendavis and similar soils

Estimated percent of the map unit: 0 to 10 percent

Lowassie and similar soils

Estimated percent of the map unit: 0 to 5 percent

Splitlimb and similar soils

Estimated percent of the map unit: 0 to 5 percent

Rock outcrop

Estimated percent of the map unit: 0 to 5 percent

73222—Splitlimb silt loam, 0 to 3 percent slopes, frequently ponded

Map Unit Setting

Landform: Sinkholes

Component Description

Splitlimb

Percent of the map unit: 80 percent
Position on the landform: Summits
Parent material: Loess over slope alluvium
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very low

Component Hydrologic Properties

Flooding: None
Current depth to water table: 0 to 21 inches
Drainage class: Somewhat poorly drained

Typical Profile

Ap—0 to 10 inches; silt loam
Bt1—10 to 20 inches; silt loam
Bt2—20 to 29 inches; silt loam
2Bt3—29 to 80 inches; silty clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Lowassie and similar soils

Estimated percent of the map unit: 0 to 10 percent

Tilk and similar soils

Estimated percent of the map unit: 0 to 10 percent

Well drained soils within sinkholes

Estimated percent of the map unit: 0 to 10 percent

73223—Coulstone-Bender complex, 15 to 50 percent slopes, very stony

Map Unit Setting

Landform: Hills

Component Description

Coulstone

Percent of the map unit: 40 percent
Position on the landform: Backslopes
Parent material: Colluvium and residuum from sandstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0 to 10 percent (stones)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

Oe—0 to 1 inch; moderately decomposed plant material
A—1 to 6 inches; extremely cobbly sandy loam
Bt1—6 to 29 inches; extremely gravelly sandy loam
Bt2—29 to 42 inches; extremely stony sandy loam
2Bt3—42 to 80 inches; extremely stony clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Bender

Percent of the map unit: 35 percent

Position on the landform: Backslopes
Parent material: Residuum derived from sandstone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0 to 10 percent (stones)
Depth to restrictive feature: 20 to 39 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

Oe—0 to 1 inch; moderately decomposed plant material
A—1 to 5 inches; extremely cobbly fine sandy loam
Bt1—5 to 21 inches; extremely cobbly sandy loam
Bt2—21 to 31 inches; extremely stony sandy loam
2R—31 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bendavis and similar soils

Estimated percent of the map unit: 0 to 20 percent

Poynor and similar soils

Estimated percent of the map unit: 0 to 20 percent

Rock outcrop

Estimated percent of the map unit: 0 to 5 percent

Vertical bluffs

Estimated percent of the map unit: 0 to 5 percent

73224—Moko-Rock outcrop complex, 15 to 35 percent slopes, extremely flaggy

Map Unit Setting

Landform: Hills

Component Description

Moko

Percent of the map unit: 55 percent
Position on the landform: Backslopes
Parent material: Residuum derived from dolostone
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very shallow and shallow (4 to 20 inches)
Surface runoff class: Very high
Percent of surface covered by rock fragments: 0 to 10 percent (flagstones)
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

A1—0 to 7 inches; very gravelly silt loam
A2—7 to 12 inches; extremely flaggy silt loam
2R—12 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Rock outcrop

Percent of the map unit: 40 percent

Minor Components

Gatewood and similar soils

Estimated percent of the map unit: 0 to 5 percent

Bendavis and similar soils

Estimated percent of the map unit: 0 to 10 percent

74626—Tanglenook silt loam, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

Landform: Stream terraces

Component Description

Tanglenook

Percent of the map unit: 85 percent
Position on the landform: Treads
Parent material: Clayey alluvium
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)

Surface runoff class: Very low

Component Hydrologic Properties

Flooding: Rare
Current depth to water table: 0 to 18 inches
Drainage class: Poorly drained

Typical Profile

Ap—0 to 6 inches; silt loam
A—6 to 17 inches; silty clay loam
Btg1—17 to 30 inches; silty clay
Btg2—30 to 56 inches; silty clay
Cg—56 to 80 inches; silty clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Deible and similar soils

Estimated percent of the map unit: 0 to 10 percent

Hartville and similar soils

Estimated percent of the map unit: 0 to 5 percent

Higdon and similar soils

Estimated percent of the map unit: 0 to 5 percent

74627—Hartville silt loam, 1 to 3 percent slopes, rarely flooded

Map Unit Setting

Landform: Stream terraces

Component Description

Hartville

Percent of the map unit: 90 percent
Position on the landform: Treads
Parent material: Silty and clayey alluvium
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low

Component Hydrologic Properties

Flooding: Rare
Current depth to water table: 12 to 30 inches
Drainage class: Somewhat poorly drained

Typical Profile

Ap—0 to 7 inches; silt loam
E—7 to 11 inches; silt loam
Bt1—11 to 40 inches; silty clay
2Bt2—40 to 80 inches; silty clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bearthicket and similar soils

Estimated percent of the map unit: 0 to 5 percent

Pomme and similar soils

Estimated percent of the map unit: 0 to 5 percent

Tanglenook and similar soils

Estimated percent of the map unit: 0 to 5 percent

Deible and similar soils

Estimated percent of the map unit: 0 to 5 percent

74629—Raftville loam, 1 to 8 percent slopes, rarely flooded

Map Unit Setting

Landform: Stream terraces

Component Description

Raftville

Percent of the map unit: 85 percent
Parent material: Alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Surface runoff class: Medium
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: Rare
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 2 inches; loam
Bt1—2 to 8 inches; loam

Bt2—8 to 24 inches; loam
2R—24 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Razort and similar soils

Estimated percent of the map unit: 0 to 5 percent

Lecoma and similar soils

Estimated percent of the map unit: 0 to 5 percent

Winnipeg and similar soils

Estimated percent of the map unit: 0 to 5 percent

74636—Lecoma loam, 3 to 8 percent slopes

Map Unit Setting

Landform: Hills

Component Description

Lecoma

Percent of the map unit: 90 percent
Position on the landform: Footslopes
Parent material: Slope alluvium and the underlying hillslope sediments
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Medium

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 9 inches; loam
Bt1—9 to 31 inches; loam
2Bt2—31 to 80 inches; clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Yelton and similar soils

Estimated percent of the map unit: 0 to 5 percent

Lily and similar soils

Estimated percent of the map unit: 0 to 5 percent

Coulstone and similar soils

Estimated percent of the map unit: 0 to 5 percent

Razort and similar soils

Estimated percent of the map unit: 0 to 2 percent

74637—Lecoma loam, 8 to 15 percent slopes

Map Unit Setting

Landform: Hills

Component Description

Lecoma

Percent of the map unit: 90 percent
Position on the landform: Footslopes
Parent material: Slope alluvium and the underlying hillslope sediments
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: High

Component Hydrologic Properties

Flooding: None
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 7 inches; loam
Bt1—7 to 24 inches; loam
2Bt2—24 to 80 inches; clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Yelton and similar soils

Estimated percent of the map unit: 0 to 10 percent

Lily and similar soils

Estimated percent of the map unit: 0 to 10 percent

Coulstone and similar soils

Estimated percent of the map unit: 0 to 10 percent

74677—Deible silt loam, 0 to 3 percent slopes, rarely slooded

Map Unit Setting

Landform: Stream terraces

Component Description

Deible

Percent of the map unit: 90 percent
Parent material: Silty and clayey alluvium
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very low

Component Hydrologic Properties

Flooding: Rare
Current depth to water table: 0 to 10 inches
Drainage class: Poorly drained

Typical Profile

Ap—0 to 10 inches; silt loam
E—10 to 15 inches; silty clay loam
Btg1—15 to 37 inches; silty clay
2Btg2—37 to 80 inches; clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Tanglenook and similar soils

Estimated percent of the map unit: 0 to 10 percent

Hartville and similar soils

Estimated percent of the map unit: 0 to 10 percent

Higdon and similar soils

Estimated percent of the map unit: 0 to 5 percent

74679—Higdon silt loam, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

Landform: Stream terraces

Component Description

Higdon

Percent of the map unit: 65 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low

Component Hydrologic Properties

Flooding: Rare
Current depth to water table: 5 to 24 inches
Drainage class: Somewhat poorly drained

Typical Profile

Ap—0 to 8 inches; silt loam
Bt—8 to 22 inches; silt loam
2Btg1—22 to 44 inches; silt loam
2Btg2—44 to 80 inches; silt loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Deible and similar soils

Estimated percent of the map unit: 0 to 10 percent

Hartville and similar soils

Estimated percent of the map unit: 0 to 10 percent

Tanglenook and similar soils

Estimated percent of the map unit: 0 to 15 percent

Bearthicket and similar soils

Estimated percent of the map unit: 0 to 20 percent

75381—Bearthicket silt loam, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

Landform: Flood plains and stream terraces

Component Description

Bearthicket

Percent of the map unit: 90 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very low

Component Hydrologic Properties

Flooding: Rare
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 10 inches; silt loam
Bt1—10 to 48 inches; silt loam
Bt2—48 to 80 inches; silt loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Secesh and similar soils

Estimated percent of the map unit: 0 to 5 percent

Cedargap and similar soils

Estimated percent of the map unit: 0 to 5 percent

Higdon and similar soils

Estimated percent of the map unit: 0 to 5 percent

75382—Cedargap gravelly loam, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

Landform: Flood plains

Component Description

Cedargap

Percent of the map unit: 80 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Frequent
Current depth to water table: 48 to 72 inches
Drainage class: Well drained

Typical Profile

Ap—0 to 8 inches; gravelly loam
Bw—8 to 46 inches; very gravelly loam
2C—46 to 80 inches; very gravelly clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Racket and similar soils

Estimated percent of the map unit: 0 to 5 percent

Bearthicket and similar soils

Estimated percent of the map unit: 0 to 5 percent

Hercules and similar soils

Estimated percent of the map unit: 0 to 5 percent

75388—Kaintuck-Relfe complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

Landform: Flood plains

Component Description

Kaintuck

Percent of the map unit: 45 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Frequent
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 6 inches; fine sandy loam

C—6 to 80 inches; stratified fine sand to silt loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Relfe

Percent of the map unit: 40 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Frequent
Current depth to water table: More than 6 feet
Drainage class: Excessively drained

Typical Profile

Ap—0 to 6 inches; very gravelly sandy loam
C—6 to 60 inches; extremely gravelly loamy coarse sand

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Racket and similar soils

Estimated percent of the map unit: 0 to 10 percent

Sandbur and similar soils

Estimated percent of the map unit: 0 to 10 percent

Sand and gravel bars

Estimated percent of the map unit: 0 to 10 percent

75389—Dunning-Hercules complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

Landform: Flood plains

Component Description

Dunning

Percent of the map unit: 45 percent
Parent material: Clayey alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Frequent
Current depth to water table: 0 to 6 inches
Drainage class: Very poorly drained

Typical Profile

Ap—0 to 8 inches; silt loam
A—8 to 20 inches; silty clay loam
Bg—20 to 35 inches; silty clay
Cg—35 to 80 inches; gravelly silty clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Hercules

Percent of the map unit: 40 percent
Parent material: Gravelly alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Frequent

Current depth to water table: 24 to 36 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 8 inches; very cobbly loam
C1—8 to 24 inches; very gravelly clay loam
C2—24 to 80 inches; very cobbly clay

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Cedargap and similar soils

Estimated percent of the map unit: 0 to 10 percent

Stultz and similar soils

Estimated percent of the map unit: 0 to 10 percent

75390—Razort silt loam, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

Landform: Stream terraces

Component Description

Razort

Percent of the map unit: 85 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low

Component Hydrologic Properties

Flooding: Rare
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 7 inches; silt loam
Bt1—7 to 34 inches; silt loam
2Bt2—34 to 80 inches; gravelly loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bearthicket and similar soils

Estimated percent of the map unit: 0 to 10 percent

Kaintuck and similar soils

Estimated percent of the map unit: 0 to 10 percent

Sandbur and similar soils

Estimated percent of the map unit: 0 to 10 percent

75391—Possumtrot fine sandy loam, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

Landform: Flood plains (fig. 11)

Component Description

Possumtrot

Percent of the map unit: 80 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Low

Component Hydrologic Properties

Flooding: Occasional
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 6 inches; fine sandy loam
Bw—6 to 45 inches; fine sandy loam
2C—45 to 80 inches; gravelly sand, gravelly loamy sand, very gravelly sand

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Tilk and similar soils

Estimated percent of the map unit: 0 to 5 percent

Relfe and similar soils

Estimated percent of the map unit: 0 to 5 percent

Razort and similar soils

Estimated percent of the map unit: 0 to 5 percent

Racket and similar soils

Estimated percent of the map unit: 0 to 5 percent

Perche and similar soils

Estimated percent of the map unit: 0 to 5 percent

75392—Stultz very cobbly loam, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

Landform: Flood plains (fig. 12)

Component Description

Stultz

Percent of the map unit: 85 percent
Parent material: Alluvium
Slope shape: Linear

Figure 11.—Alfalfa is being grown for hay in this area of Possumtrot fine sandy loam, 0 to 3 percent slopes, occasionally flooded.

Component Properties and Qualities

Depth to bedrock: Deep (40 to 60 inches)
Surface runoff class: Negligible
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Component Hydrologic Properties

Flooding: Frequent
Current depth to water table: 4 to 13 inches
Drainage class: Somewhat poorly drained

Typical Profile

Ap—0 to 11 inches; very cobbly loam
C—11 to 22 inches; very gravelly clay loam
Cg—22 to 44 inches; very cobbly clay
2R—44 inches; bedrock

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Hercules and similar soils

Estimated percent of the map unit: 0 to 10 percent

Tilk and similar soils

Estimated percent of the map unit: 0 to 10 percent

Cedargap and similar soils

Estimated percent of the map unit: 0 to 10 percent

75406—Racket loam, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

Landform: Flood plains

Component Description

Racket

Percent of the map unit: 90 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Frequent
Current depth to water table: 40 to 72 inches
Drainage class: Well drained

Typical Profile

Ap—0 to 10 inches; loam
A1—10 to 30 inches; loam
A2—30 to 45 inches; loam
2C—45 to 80 inches; stratified extremely gravelly loamy sand to gravelly sandy loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bearthicket and similar soils

Estimated percent of the map unit: 0 to 5 percent

Relfe and similar soils

Estimated percent of the map unit: 0 to 5 percent

Kaintuck and similar soils

Estimated percent of the map unit: 0 to 5 percent

Perche and similar soils

Estimated percent of the map unit: 0 to 5 percent

Figure 12.—An area of dolostone exposed in a creek channel in an area of Stultz very cobbly loam, 0 to 3 percent slopes, frequently flooded.

75417—Relfe-Sandbur complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

Landform: Flood plains

Component Description

Relfe

Percent of the map unit: 40 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Frequent
Current depth to water table: More than 6 feet
Drainage class: Excessively drained

Typical Profile

Ap—0 to 6 inches; very gravelly sandy loam
C—6 to 80 inches; stratified extremely cobbly sand to very gravelly loamy sand

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Sandbur

Percent of the map unit: 30 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Frequent
Current depth to water table: More than 6 feet
Drainage class: Somewhat excessively drained

Typical Profile

Ap—0 to 8 inches; fine sandy loam
C—8 to 80 inches; stratified fine sand to loamy fine sand to fine sandy loam to loam to silt loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Kaintuck and similar soils

Estimated percent of the map unit: 0 to 10 percent

Possumtrot and similar soils

Estimated percent of the map unit: 0 to 10 percent

Racket and similar soils

Estimated percent of the map unit: 0 to 10 percent

Sand and gravel bars

Estimated percent of the map unit: 0 to 10 percent

75418—Tilk very gravelly loam, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

Landform: Alluvial fans

Component Description

Tilk

Percent of the map unit: 85 percent
Parent material: Gravelly alluvium
Slope shape: Convex

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Rare
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 8 inches; very gravelly loam
Bt—8 to 47 inches; very gravelly sandy loam
2C—47 to 80 inches; extremely gravelly coarse sandy loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Relfe and similar soils

Estimated percent of the map unit: 0 to 10 percent

Scholten and similar soils

Estimated percent of the map unit: 0 to 10 percent

Possumtrot and similar soils

Estimated percent of the map unit: 0 to 10 percent

75419—Perche loam, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

Landform: Flood plains

Component Description

Perche

Percent of the map unit: 85 percent
Parent material: Alluvium
Slope shape: Concave

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Very low

Component Hydrologic Properties

Flooding: Occasional
Current depth to water table: 24 to 38 inches
Drainage class: Moderately well drained

Typical Profile

Ap—0 to 6 inches; loam
C1—6 to 47 inches; stratified loam
2C2—47 to 80 inches; gravelly sand, gravelly loamy sand, very gravelly sand

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Kaintuck and similar soils

Estimated percent of the map unit: 0 to 10 percent

Razort and similar soils

Estimated percent of the map unit: 0 to 10 percent

Relfe and similar soils

Estimated percent of the map unit: 0 to 10 percent

Possumtrot and similar soils

Estimated percent of the map unit: 0 to 10 percent

75420—Secesh-Tilk complex, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

Landform: Flood plains

Component Description

Secesh

Percent of the map unit: 50 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Occasional
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 8 inches; silt loam
BE—8 to 11 inches; silt loam
Bt1—11 to 27 inches; loam
2Bt2—27 to 80 inches; gravelly clay loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Tilk

Percent of the map unit: 40 percent
Parent material: Alluvium
Slope shape: Linear

Component Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Surface runoff class: Negligible

Component Hydrologic Properties

Flooding: Occasional
Current depth to water table: More than 6 feet
Drainage class: Well drained

Typical Profile

Ap—0 to 8 inches; very gravelly loam
Bt—8 to 47 inches; very gravelly sandy loam
2C—47 to 80 inches; extremely gravelly coarse sandy loam

Detailed profile descriptions are given in the "Classification of the Soils" section. Additional information is provided in the tables described under the heading "Soil Properties."

Minor Components

Bearthicket and similar soils

Estimated percent of the map unit: 0 to 10 percent

Perche and similar soils

Estimated percent of the map unit: 0 to 10 percent

Relfe and similar soils

Estimated percent of the map unit: 0 to 10 percent

99000—Pits, quarries

General Description

• This map unit consists of areas on uplands that have been or are currently being quarried for limestone or dolostone. Typically, the rock is quarried on one or more of the exposed vertical faces of the pits. Areas of this unit are generally made up of quarry pits; some stockpiles of limestone, dolostone, and other crushed rock; piles of spoil overbudern; sites used for storing equipment; and roads used for transporting the quarried material. Some of the quarry pits contain water. Individual areas vary widely in size. Many of the pits support no vegetation. Some have a sparse cover of grasses, weeds, and trees. Onsite investigation is needed to determine the suitability for any proposed use and the limitations affecting that use.

Component Description

Pits, quarries

Percent of the map unit: 85 percent

Minor Components

Water

Estimated percent of the map unit: 0 to 5 percent

Gravel piles

Estimated percent of the map unit: 0 to 5 percent

Bluffs

Estimated percent of the map unit: 0 to 5 percent

99001—Water

Component Description

• This map unit consists of naturally occurring basins of surface water, such as perennial rivers and creeks. It also includes manmade lakes and ponds that are larger than 5 acres.

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 for predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for waste management; and for wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment. The survey can help planners to maintain or create a land use pattern that is in harmony with nature.

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 land 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 or not limited by all of the soil features that affect a specified use. Terms for the limitation classes are *not limited, slightly limited, moderately limited, limited,* and *very limited.* In certain tables the soils are rated as *improbable, possible,* or *probable* sources of specific materials used for construction purposes.

Numerical Ratings

Numerical ratings in the tables indicate the severity of individual limitations. They also indicate the overall degree to which a soil is limited or not limited for a specific use. The numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

In tables that use limitation class terms, such as *very limited* or *limited,* the limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each map unit component. The overall limitation rating for the component is based on the most severe limitation.

Crops and Pasture

Sid Vander Veen, soil scientist, NRCS, helped prepare this section.

General management needed for crops and pasture is suggested in this section. Prime farmland is described, the estimated yields of the main crops and

pasture plants are listed, and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Approximately 160,000 acres in Texas County is used for crops or for hay and pasture. Of this total, about 100,000 acres is used for permanent pasture, 58,000 acres for hay, and 2,000 acres for cultivated crops, mainly wheat and corn. The acreage used for row crops has steadily decreased. Most of the former cropland has been converted to pasture or hayland. The loss of cropland to highway construction and urban development has been slight.

Most of the hayland and pasture is managed in a manner that meets conservation needs.

Erosion is the major problem on nearly all of the cropland. Loss of the surface layer through erosion results in reduced productivity. It is especially damaging on soils that have a low content of organic matter, a clayey subsoil, or a fragipan. Celt and Tonti are examples of soils that have a fragipan. The effect of erosion on Celt and Tonti soils is doubly serious because it reduces the available water capacity and the effective rooting depth above the fragipan. Also, erosion increases the content of clay and gravel in the surface layer.

Erosion on cropland soils results in sedimentation of streams, rivers, and ponds. Control of erosion minimizes this pollution and improves the quality of water for municipal use, for recreation, for livestock use, and for fish and wildlife.

The best erosion-control practices are no-till farming or another system of conservation tillage that leaves a protective amount of residue on the surface and crop rotations that include grasses and legumes. These practices reduce the runoff rate, increase the rate of water infiltration, and improve tilth and soil productivity. A cropping system that keeps a cover of vegetation or crop residue on the soil surface can hold soil losses to a level that will not reduce the long-term productivity of the soil. Legumes, such as red clover and alfalfa, also provide nitrogen for the subsequent crop.

Terraces and diversions help to control erosion by shortening the length of slopes and thus reducing the runoff rate. Conventional terraces are most practical on uneroded upland soils that have long, smooth slopes of less than 5 percent. Special construction and management techniques are necessary before a system of terraces can be effective.

The use of no-till drills is the most cost-effective means of controlling erosion on cropland. It is becoming more common in Texas County and can be used on a wide variety of soil types. The no-till drill is also very cost effective in improving hay and pasture stands with minimal erosion.

Most of the soils in the county are naturally low in fertility and are naturally acid in the upper part of the root zone. Additional plant nutrients are needed on all soils. On acid soils, applications of ground limestone are needed to raise the pH and calcium levels sufficiently for optimum growth of legumes, row crops, and most grasses. Additions of lime and fertilizer should be based on the results of current soil tests, on the needs of the crop, and on the desired level of yields. The Cooperative Extension Service and some private farm service firms can help in determining the kinds and amounts of fertilizer to be applied.

Currently, about 158,000 acres in Texas County is used for grasses and legumes that largely support the 83,000 head of cattle in the county. The number of dairy cows is about 10,000. About 58,000 acres is harvested for hay. The annual yield from this acreage is 1.5 to 2.0 tons per acre.

In 1990, tall fescue was grown on most of the hayland and pasture. Orchardgrass is another commonly grown cool-season grass. Alfalfa, red clover, lespedeza, hop clover, and ladino clover are the most commonly grown legumes.

In the more level areas, tall fescue commonly is harvested for seed in late June. The residue is baled for hay. Grazing is deferred in these areas until late fall or early winter. If fescue is allowed to grow through the fall and grazed in the winter, little or no hay is required in 3 out of every 5 years. This method cuts labor and machine costs, but it somewhat reduces the quantity and quality of the forage.

Tall fescue is not the most palatable forage species, nor does it produce the most beef per acre, but it requires less management than other species and seems to survive under many adverse conditions. It does not furnish much nutrition during July and August, and some cattle grazing on tall fescue pastures often lose weight during these months.

In Texas County, warm-season grasses are grown primarily for forage during the summer slump of cool-season grasses. Examples of suitable warm-season grasses are big bluestem, Caucasian bluestem, switchgrass, and Indiangrass. These grasses are more difficult to establish and maintain than tall fescue, but they can provide 3 to 5 tons of forage per acre during the period from June through August.

In most areas where warm-season grasses are grown, prescribed burning is necessary to control undesirable vegetation and to improve the quality and quantity of the forage. Burning generally is not necessary more often than once every 3 to 5 years. It should only be done when a specific management objective is to be met.

The chief problem in managing pasture is overgrazing. If good management is applied, 12-month grazing is possible in about 3 out of every 5 years. This management includes deferred or rotational grazing, proper stocking rates, applications of fertilizer, and weed and brush control.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 152,122 acres in the survey area, or nearly 20 percent of the total acreage, meets the soil requirements for prime farmland.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed below. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading "Detailed Soil Map Units."

The soils identified as prime farmland in Texas County are:

70022 Tonti silt loam, 3 to 8 percent slopes
70025 Branson-Splitlimb complex, 1 to 3 percent slopes
70026 Tonti silt loam, 1 to 3 percent slopes
73051 Winnipeg silt loam, 2 to 5 percent slopes
73054 Viburnum silt loam, 1 to 3 percent slopes
73057 Jerktail silt loam, 1 to 3 percent slopes
73071 Hogcreek silt loam, 1 to 3 percent slopes
73072 Hogcreek silt loam, 3 to 8 percent slopes
73087 Celt silt loam, 1 to 3 percent slopes
73197 Viburnum silt loam, 3 to 8 percent slopes
73198 Gressy-Viraton complex, 3 to 8 percent slopes
73222 Splitlimb silt loam, 0 to 3 percent slopes, frequently ponded
74626 Tanglenook silt loam, 0 to 3 percent slopes, rarely flooded (where drained)
74627 Hartville silt loam, 1 to 3 percent slopes, rarely flooded
74677 Deible silt loam, 0 to 3 percent slopes, rarely flooded (where drained)
74679 Higdon silt loam, 0 to 3 percent slopes, rarely flooded
75381 Bearthicket silt loam, 0 to 3 percent slopes, rarely flooded
75389 Dunning-Hercules complex, 0 to 3 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
75390 Razort silt loam, 0 to 3 percent slopes, rarely flooded
75391 Possumtrot fine sandy loam, 0 to 3 percent slopes, occasionally flooded

75406 Racket loam, 0 to 3 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
75419 Perche loam, 0 to 3 percent slopes, occasionally flooded
75420 Secesh-Tilk complex, 0 to 3 percent slopes, occasionally flooded

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 5. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

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

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961). Only class and subclass are used in this survey.

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, 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, 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, forestland, wildlife habitat, or recreation. There are no class 1 or class 5 soils in Texas County.

The capability classification of map units in this survey area is given in table 5.

Pasture and Hayland Suitability Groups

The soils in Texas County are assigned to a pasture and hayland group according to their suitability for pasture management.

Many different pasture and hayland suitability groups are in the survey area. Over time, the combination of plants best suited to a particular soil and climate has or will become dominant. Plant communities are not static but vary slightly from year to year and from place to place.

The relationship between soils and vegetation was ascertained during this survey. Thus, pasture and hayland suitability groups generally can be determined directly from the soil map. Soil properties that affect moisture supply and plant nutrients have the greatest influence on the productivity of each plant species. Soil reaction, salt content, and a seasonal high water table also are important. The "Field Office Technical Guide," which is available at local offices of the Natural Resources Conservation Service, can provide specific information about pasture and hayland suitability groups.

Table 6 shows, for each soil, the assigned pasture and hayland suitability group. Specific concerns and recommendations affecting pasture and hayland management for each group are described in the following paragraphs.

Group WCB—Wet Clayey Bottom. Wetness and flooding are the main management concerns. The soils in this group are poorly suited to hay. The hazard of flooding should be considered when a grazing system is designed. Maintaining stands of desirable species is difficult in depressional areas. A drainage system can improve the growth of deep-rooted species.

Group WCU—Wet Clayey Upland. Wetness is the main management concern. Maintaining stands of desirable species is difficult in depressional areas. A drainage system can improve the growth of deep-rooted species.

Group WLO—Wet Loamy Overflow. Wetness and flooding are the main management concerns. A seedbed can be easily prepared. A drainage system can improve the growth of deep-rooted species. The hazard of flooding should be considered when a grazing system is designed.

Group LyO—Loamy Overflow. Flooding is the main management concern. The hazard of flooding should be considered when a grazing system is designed.

Group LyU—Loamy Upland. No serious concerns affect pasture and hayland management. Erosion is a hazard in newly seeded areas. Timely seedbed preparation is needed to ensure a good ground cover.

Group CyU—Clayey Upland. Pasture and hay crops are effective in controlling erosion. Erosion during seedbed preparation is the main concern. Timely tillage and a quickly established ground cover reduce the hazard of erosion. The forage species that are tolerant of wetness grow best. The production of deep-rooted legumes is limited because of wetness and a restricted rooting depth.

Group GrU—Gravelly Upland. The soils in this group generally are not suited to cultivated crops. Droughtiness and erosion are the main management concerns. Seedbeds should be prepared on the contour. Timely seedbed preparation helps to ensure rapid plant growth and a protective ground cover.

Group MDU—Moderately Deep Upland. Shallow-rooted species that are tolerant of droughtiness should be selected for planting. Erosion is a serious hazard in newly seeded areas. Timely tillage and a quickly established ground cover reduce the hazard of erosion.

Group WtP—Wet Pan. The species that are tolerant of wetness grow best. A dense layer in the subsoil can restrict the rooting depth and result in insufficient soil moisture in dry years. Erosion during seedbed preparation is the main concern. Timely tillage and a quickly established ground cover reduce the hazard of erosion.

Group LyP—Loamy Pan. A few small areas of this group are used for cultivated crops, and some areas are wooded. A dense layer in the subsoil can restrict the rooting depth and result in insufficient soil moisture in dry years. Erosion during seedbed preparation is a hazard. Seedbeds should be prepared on the contour. Timely tillage and a quickly established ground cover reduce the hazard of erosion.

Group GrO—Gravelly Overflow. Most areas of this group have been cleared of trees and are used for pasture and hay. Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use

during periods of flooding help to keep the pasture in good condition.

Group GrP—Gravelly Pan. If the soils in this group are used for improved pasture, chert on the surface hinders tillage. Because of seasonal droughtiness, timely planting is needed to ensure an adequate stand. Erosion is a hazard in newly seeded areas. Timely seedbed preparation helps to ensure a protective ground cover.

Group SyO—Sandy Overflow. The soils in this group tend to be droughty because they are excessively drained, but they are also subject to flooding. Plants should be selected accordingly. A seedbed can be easily prepared. The flooding and the droughtiness should be considered when a grazing system is designed. Because the soils are subject to flooding and droughtiness at different times, a flexible grazing system is needed.

Group GNS—Generally Not Suited. The soils in this group generally are not suited to pasture and hay. The suitability for forage species and the use of equipment are limited by the slope, a high content of rock fragments, or both.

Forest Productivity and Management

Douglas C. Wallace, forester, Natural Resources Conservation Service, helped prepare this section.

Historical records and other data, accompanied by the fact that Texas County is considered part of that area known as "The Ozarks," indicate that at one time the county was nearly 100 percent forested. Today, as a direct result of human activity, only about 68 percent of the county is forested (fig. 13). The majority of the forested land that has been lost is a result of pasture conversion.

Throughout much of the Ozark region, the oak-hickory forest type is dominant. The major tree species commonly found are black oak, white oak, post oak, northern red oak, blackjack oak, and several hickory species. The better oak species, such as white oak and northern red oak, favor the deeper soils, such as Poynor. This is especially true where these soils are situated with a north or east aspect. The poorer tree species, post oak, blackjack oak and some hickory species, are growing on the poorer soils, usually on ridges and south- and west-facing slopes. The forest cover in areas of the Mano-Ocie complex is white oak and northern red oak. The Bender soil supports stands of short-leaf pine. Soils on flood plains, such as Bearthicket and Kaintuck, support stands of sycamore, silver maple, boxelder, and elm. Many sites support both upland and bottom-land species.

The soil serves as a reservoir for moisture, provides an anchor for roots, and supplies essential plant nutrients. Soil properties that affect the growth of trees include reaction (pH), fertility, drainage, texture, structure, soil depth, and position on the landscape.

Available water capacity is primarily influenced by texture, rooting depth, and content of stones and gravel. Bearthicket and other deep soils can have a high or very high available water capacity. The content of gravel or cobbles affect the amount of available water in Poynor soils. Also affecting the available water capacity are features that restrict root development, such as bedrock. Moko and other soils that are shallow over bedrock have a low potential for forest production. The trees that grow on these soils withstand extreme moisture stress. The common species are eastern redcedar, chinkapin oak, blackjack oak, winged elm, and hackberry. The growth rate is slow, and tree form generally is poor.

Other site characteristics that affect tree growth include aspect and topographic position. These site characteristics influence the amount of available sunlight, air drainage, soil temperature, and soil moisture content. Typically, north and east aspects and the lower slope positions, which are cooler and have better moisture conditions than other sites, are the best upland sites for tree growth.

Texas County, like much of the Ozark region, has experienced the adversities of frequent forest burning and cattle grazing. As a result, the leaf layer on the surface has been destroyed. This layer is important because it helps to control erosion and provides plant nutrients. In addition, grazing cattle can severely compact the soil. This compaction decreases the rate of water infiltration, resulting in deterioration of many sites and hindering the regeneration of many desirable timber species. Fire and grazing also damage existing stands, commonly resulting in stands of undesirable species, such as blackjack oak and post oak, or in poor quality, fire-scarred stands of good species. Because of these adverse conditions, forest management should be based on soil suitability and site characteristics rather than the species growing on the site.

The tables described in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forest management.

Figure 13.—Charcoal manufacturing is an industry that takes advantage of a large number of forested areas in Texas County. This charcoal kiln converts waste wood from sawmills in the area into raw charcoal.

Forest Productivity

In table 7, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in 50 years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or through the Agency's Website.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forest Management

In tables 8a and 8b, interpretive ratings are given for various aspects of forest management. 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 specified aspect of forest management. *Not limited* indicates that the soil has features that are very favorable for the specified aspect of management. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified aspect of management. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected.

Moderately limited indicates that the soil has features that are moderately favorable for the specified aspect of management. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Limited* indicates that the soil has one or more features that are significant limitations for the specified aspect of management. The limitations can be overcome, but overcoming them generally requires special design, special planning, soil reclamation, specialized equipment, or other procedures that may result in additional expense. Fair performance and moderate or high maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified aspect of management. The limitations generally cannot be overcome without major soil reclamation, special design, specialized equipment, or other expensive procedures. Poor performance, unsafe conditions, or high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation class for the component is based on the most severe limitation.

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management factors. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or through the Agency's Website.

In table 8a, ratings in the column *hand 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. Ratings indicate the expected difficulty of hand planting, which includes the proper placement of root systems of tree seedlings to a depth of up to 12 inches, using standard hand planting tools. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *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. Ratings indicate the expected difficulty in using a mechanical planter, which includes proper placement of root systems of tree seedlings to a depth of up to 12 inches. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, depth to a water table, and ponding. Ratings indicate the suitability for operating harvesting equipment for off-road transport or harvest of logs and/or wood products by ground-based wheeled or tracked equipment.

Ratings in the column *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 part of the soil from the surface to a depth of about 12 inches is considered in the ratings. Ratings indicate the suitability of using surface-altering soil tillage equipment to prepare the site for planting or seeding.

Ratings in the column *roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, 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 on which trucks transport logs and other wood products from the site.

In table 8b, ratings in the column *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.

Ratings in the column *off-road or off-trail erosion* are based on slope and on the soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

Ratings in the column *soil rutting* are based on depth to a water table, rock fragments on or below the surface, surface texture, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. Ratings indicate limitations affecting the hazard or risk of ruts in the uppermost layers of the soil. Soil displacement and puddling (soil deformation and compaction) may occur simultaneously with the formation of ruts.

Ratings in the column *log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, depth to a water table, ponding, flooding, and the hazard of soil slippage. Ratings indicate the suitability of the soil at the forest site to serve as a log landing and to allow the efficient and effective use of equipment for the temporary storage and handling of logs.

Ratings in the column *seedling survival* 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. Ratings indicate the impact of soil, physiographic, and climatic conditions on the survivability of newly established tree seedlings.

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Table 9 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in the table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery.

Recreation

Texas County provides many recreational opportunities. The major recreational attractions in the county are the floatable streams and the hunting opportunities.

The Big Piney, Little Piney, Roubidoux, and Jack's Fork Rivers flow out of Texas County. They provide opportunities for swimming, fishing, and canoeing.

Other recreational opportunities are provided by the Paddy Creek Wilderness Area and other Forest Service lands. These areas contain over 40,000 acres of public land in Texas County. Paddy Creek offers hiking and equestrian trails, camping sites, and picnicking facilities. All of the federal lands are open to public hunting. Texas County is usually among the top counties in the state for deer and turkey hunting.

The soils of the survey area are rated in table 10 according to limitations that affect their suitability for recreational uses. Soils are rated for camp areas, picnic areas, playgrounds, and paths and trails.

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 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 recreational site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Moderately 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. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but overcoming them generally requires special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate or high 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 numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation rating for the component is based on the most severe limitation.

The information in table 10 can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The 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, 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, a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, a water table, ponding, flooding, slope, and texture of the surface layer. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to frequent flooding during the period of use. They have moderate slopes and few or no stones or boulders on the surface.

Wildlife Habitat

Bob Schroeppel, wildlife biologist, Missouri Department of Conservation, helped prepare this section.

Texas County is located in the heart of the Missouri Ozark Timber Region in the south-central section of the state. Early records indicated that the county included only 1 square mile in presettlement tall grass prairie, mainly around Licking and along the uplands in the southern part of the county. In the 1919 soil survey (Watkins, 1919), Watkins reported that most of Texas County "was covered with open timber, but there were prairie areas covered with a luxuriant growth of bluestem. The prairies occupied the flatter situations and had only an occasional clump of trees." Examples of such areas are around Dykes and Raymondville. In Marbut's survey in 1911 (Schroeder, 1982), he noted that "It was only in the main areas of Clarksville soil that the original timber growth was heavy, and there is abundant evidence that at least 40 percent of that area

consisted of grass-covered, sparsely timbered rolling upland."

Parts of Texas County fall within the Upper Ozark, Lower Ozark, and White River Sections of the Ozark Natural Division. The Ozark Division is characterized by thin, often stony, residual soils, and loess is very thin or is absent. Only a small portion of the White River Section is found in Texas County. In this area around Dunn and Mountain Grove, dolostone glades can be found. Moko and Gatewood soils are typically associated with this region. The western part of the county is in the Upper Ozark Section. This highly dissected area is characterized by deciduous forests, caves, springs, losing streams, and streams that generally flow north (e.g., the Big Piney). The remainder of the county falls into the Lower Ozark classification and differs from the Upper Section primarily by its river drainages. Rivers in this area generally flow south (e.g., the Jack's Fork of the Current River) (Thom and Wilson, 1980).

As the largest county in Missouri (over 750,000 acres), Texas County has approximately 68 percent of its land area in forestland. The Mark Twain National Forest (48,199 acres) includes the Paddy Creek Wilderness Area (7,020 acres). The Park Service controls over 1,300 acres in the National Scenic Riverways System. The Missouri Department of Conservation also manages numerous areas in Texas County. Some of these public lands include the 754-acre George O. White State Nursery near Licking, Gist Ranch (11,204 acres), Eck Tract (316 acres), Piney River Narrows Natural Area (258 acres), Horseshoe Bend Natural Area (222 acres), Barn Hollow Natural Area (162 acres), and the Barnes Wildlife Area (120 acres). In addition, several river accesses and smaller tracts are found in the county.

Published and/or documented accounts list 260 fish and wildlife species known to occur in Texas County, with another 143 species listed as "likely to occur," according to the Missouri Fish and Wildlife Information System, Missouri Department of Conservation, 1987. Typical nongame species include bleeding shiner, common snapping turtle, Osage copperhead, red-tailed hawk, brown thrasher, red-eyed vireo, eastern wood rat, and eastern chipmunk. The most common game species include white-tailed deer, wild turkey, gray squirrel, eastern cottontail rabbit, smallmouth bass, channel catfish, and bluegill.

Several species found in Texas County maintain special status as State and Federal rare and/or endangered species. A few of these include four-toed salamander, Cooper's hawk, least weasel and black bear. Due in part to successful bear reintroductions in Arkansas during the 1950s and 1960s, black bear sightings have slowly increased in Missouri. A black bear (Ursus americanus) was reported as recently as 1990 in the Raymondville area. Black bears are forest-dwelling animals with approximately 90 percent of their diet being vegetable matter. Insects, mostly ants and termites, comprise the animal portion of their diet. Land use changes that convert forest cover to agriculture or urban developments have caused a decline in suitable habitat for this species.

Furbearer populations are lower in Texas County than in the surrounding counties. The species harvested for fur in 1988 and 1989 were opossum, muskrat, raccoon, mink, red fox, gray fox, coyote, bobcat, and beaver (Missouri Department of Conservation, 1990a). Sightings compiled from the Missouri Department of Conservation cooperative archery hunter survey show that Texas County has a slightly lower occurrence of all furbearer species when compared to the state average. This survey is based on sightings per 1,000 hours of hunter trips (Missouri Department of Conservation, 1990b).

The major woodlands are typically in areas of Bender, Bendavis, Poyner, Mano, and Tick soils. The primary game species in the area are white-tailed deer and wild turkey. Local and noncounty hunting interest is extremely high for these species. Texas County ranked first in the entire state for archery and firearm deer harvest in 1989, with 4,075 animals. In turkey hunting, the county also ranked first in the spring firearm and fall archery seasons and fifth in the fall firearm season. Illegal harvest also plays a major role in limiting deer and turkey populations. There are several factors that affect the quality of the woodland habitat in Texas County. All woodland species suffer greatly from misuse of the timber resource, most notably the grazing of timber and little or no timber management. Grazing of woodlands can lead to tree damage, destruction of wildlife habitat, increased soil erosion, and soil compaction. Wildlife species that suffer from woodland grazing include everything from the eastern bluebird to the American woodcock to the great horned owl. Large expanses of unmanaged woodlands with little or no edge limit the diversity of plants and animals. Lack of proper timber management in these Ozark woodlands usually leads to stands with a closed canopy, thus eliminating understory vegetation, which provides food and cover for many woodland species. In the late 1800s, ruffed grouse was abundant and was hunted commercially. This woodland species has declined over the years due to poor timber management. Efforts are now underway to restore the ruffed grouse (woods pheasant) numbers through

a series of releases in the state, including Texas County. A limited ruffed grouse hunting season occurs in adjoining Shannon County.

Openland wildlife species, such as bobwhite quail and rabbits, suffer from shallow, infertile soils which generally have a low carrying capacity for these species. The shortage of small grains in the county limits the winter food supply for many birds and animals (USDA, 1982). The few areas of crops in the county are in areas of the Branson, Winnipeg, and Bearthicket soils. In addition, nearly 44 percent of the county is in grassland with fescue as the dominant grass. Small game numbers are limited because of fescue's growth characteristics and common management practices (early haying and overgrazing). The increase in the interseeding of legumes (e.g., clover and lespedeza) in fescue could help this situation (74 percent of the county's grasslands have no legumes) (USDA, 1982). Increasing the acreage and improving the management of native warm-season grasses would also improve the quality and diversity of the county's grasslands for wildlife.

Very little wetland habitat occurs in Texas County. Small streams account for nearly all of the wetland habitat. While several waterfowl species, such as northern pintail, hooded merganser, and mallard, have been recorded in the county, the principal species are small resident populations of wood ducks along the many streams. Cedargap and Stultz soils are the main soils along the smaller creek bottoms, while Relfe and Kaintuck soils are along the larger Big Piney and Jack's Fork river bottoms. Four active heron rookeries can be found along these major river bottoms. The largest is on Indian Creek, with 46 individual birds and 39 active nests recorded in 1990. The Big Piney was the site of a river otter release in 1990 by the Missouri Department of Conservation. This native Missouri mammal is being reintroduced in many of the major rivers and streams across the state. Sport-fishing species include largemouth bass, smallmouth bass, rock bass, longear sunfish, bluegill, and various sucker species.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In tables 11a and 11b, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. *Not limited* indicates that the soil has features that are very favorable for the specified use. Habitat is easily established, improved, or maintained. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Habitat can be established, improved, or maintained. *Moderately limited* indicates that the soil has features that are moderately favorable for the specified use. Habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. Habitat is difficult to create, improve, or maintain in most places. Management is difficult and must be very intensive. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. Habitat is usually impractical or impossible to create, improve, or maintain. Management would be very difficult, and unsatisfactory results can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation class for the component is based on the most severe limitation.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and

features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Selection should be made from a list of locally adapted species.

Domestic grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Selection should be made from a list of locally adapted species.

Upland wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Selection should be made from a list of locally adapted species.

Upland shrubs and vines are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs and vines are depth of the root zone, available water capacity, salinity, and soil moisture. Selection should be made from a list of locally adapted species.

Upland deciduous trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees are depth of the root zone, available water capacity, and wetness. Selection should be made from a list of locally adapted species.

Upland mixed deciduous-conifer trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, browse, seeds, and foliage. Soil properties and features that affect the growth of these trees are depth of the root zone, available water capacity, and wetness. Selection should be made from a list of locally adapted species.

Riparian herbaceous plants are annual and perennial native or naturally established grasses and forbs that grow on moist or wet sites. Soil properties and features affecting riparian herbaceous plants are surface texture, wetness, flooding, ponding, and surface stones. Selection should be made from a list of locally adapted species.

Riparian shrubs, vines, and trees are bushy woody plants and trees that grow on moist or wet sites. Soil properties and features affecting these plants are surface texture, wetness, flooding, ponding, and surface stones. Selection should be made from a list of locally adapted species.

Freshwater wetland plants are grasses, forbs, and shrubs that are adapted to wet soil conditions. The soils suitable for this habitat generally occur adjacent to springs, seeps, depressions, areas of bottom land, marshes, or backwater areas on flood plains. Most areas are ponded for some period of time during the year. Soil properties and features affecting these plants are surface texture, wetness, ponding, and soil reaction. Selection should be made from a list of locally adapted species.

Irrigated freshwater wetland plants are grasses, forbs, and shrubs that are adapted to wet soil conditions. The soils suitable for this habitat generally occur in areas of cropland, in previously cropped areas, and in marginal areas associated with cropland and wetlands. These areas may be ponded for some period of time during the year. They are generally suitable for restoring wetland features temporarily or permanently. Soil properties and features affecting these plants are surface texture, permeability, wetness, ponding, and soil reaction. Selection should be made from a list of locally adapted species.

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, water management, and waste 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 within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

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

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

Soil properties, site features, and observed performance were considered in determining the ratings

in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the 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; evaluate sites for agricultural waste management; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

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

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

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 12 shows the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, and lawns 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. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Moderately 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. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but overcoming them generally requires special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate or high 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 numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation rating for the component is based on the most severe limitation.

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 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 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 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, a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, 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, a water table, and ponding.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; 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, a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

The soils of the survey area are rated in table 13 according to limitations that affect their suitability for sanitary facilities. Soils are rated for septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill.

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 sanitary facilities. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Moderately 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. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but overcoming them generally requires special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate or high 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 numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation rating for the component is based on the most severe limitation.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, 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 be contaminated. Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, hillside seepage, and contamination of ground water, can affect public health.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding,

permeability, a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials and Excavating

The soils of the survey area are rated in table 14 as a source of roadfill, sand, gravel, or topsoil. Normal compaction, minor processing, and other standard construction practices are assumed. The soils are also rated according to limitations that affect their suitability for shallow excavations. The ratings in the table are both verbal and numerical.

For sand and gravel, the soils are rated as a *probable, possible,* or *improbable* source. A rating of *probable* indicates that the source material is likely to be in or below the soil. A rating of *possible* indicates that the source material may be in or below the soil and that further investigation is warranted. A rating of *improbable* indicates that the source material is unlikely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. A numerical rating of 1.00 indicates that the soil is an improbable source. A numerical rating of less than 1.00 indicates the degree to which the soil is a possible or probable source of sand or gravel.

Other rating class terms used in this table indicate the extent to which the soils are limited by soil features that affect their use as a source for roadfill or topsoil or their suitability for shallow excavations. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Moderately 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. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but overcoming them generally requires special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate or high 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 for roadfill, topsoil, and shallow excavations indicate the severity of individual limitations. The numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component.

The overall limitation rating for the component is based on the most severe limitation.

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, 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).

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table, 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 lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of the thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

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, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, 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.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, 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.

Water Management

Table 15 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, drainage, irrigation, terraces and diversions, and grassed waterways.

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 the specified use. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Moderately 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. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but overcoming them generally requires special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate or high 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 numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation rating for the component is based on the most severe limitation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Slope can affect the storage capacity of the reservoir area.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, permeability, depth to a water table, ponding, slope, and flooding. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or a cemented pan, large stones, slope, and the likelihood that cutbanks will cave. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. The availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to a water table, ponding, flooding, available water capacity, intake rate, permeability, erodibility, and slope. The construction of a system is affected by large stones and depth to bedrock. The performance of a system is affected by the depth of the root zone, reaction, and the amount of salts, sodium, sulfur, lime, or gypsum.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, a water table, ponding, large stones, and depth to bedrock affect the construction of terraces and diversions. A restricted rooting depth, erodibility, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, a water table, slope, and depth to bedrock affect the construction of grassed waterways. Erodibility, soil moisture regime, available water capacity, restricted rooting depth, restricted permeability, and toxic substances, such as salts and sodium, affect the growth and maintenance of the grass after construction.

Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Table 16 shows the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of this table, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 mg/l. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 mg/l. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the table are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of

wastewater through irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (slow rate treatment of wastewater and rapid infiltration of wastewater).

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 the specified use. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Moderately 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. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but overcoming them generally requires special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate or high 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 numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations 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.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation rating for the component is based on the most severe limitation.

Land application of manure and food-processing waste not only disposes of waste material but also improves crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste.

Land application of municipal sewage sludge not only disposes of waste material but also improves crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant

growth, and microbial activity include permeability, a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also improves crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals.

Treatment of wastewater by slow rate process is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water percolates to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, a water table, ponding, available water capacity, permeability, depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste.

Treatment of wastewater by rapid infiltration process is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil, eventually reaching the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. A water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance.

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 shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

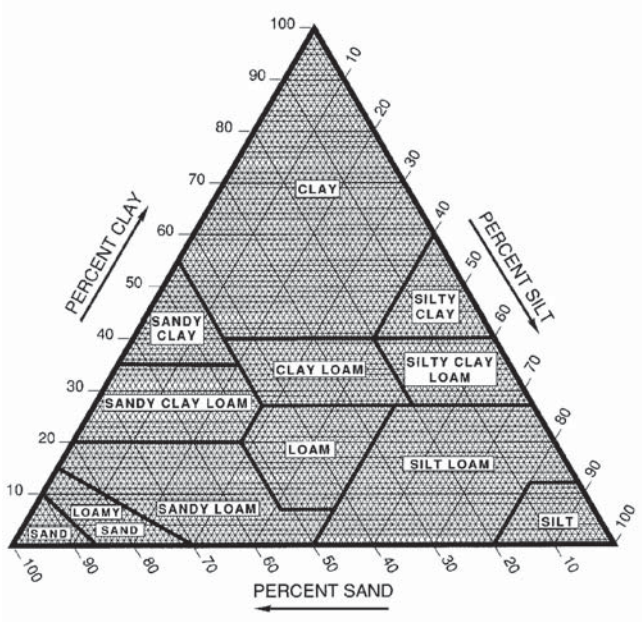

Figure 14.—Percentages of clay, silt, and sand in the basic USDA soil textural classes.

Engineering Index Properties

Table 17 gives the estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under the heading "Soil Series and Their Morphology."

Texture is given in abbreviations of 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 (fig. 14). "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 about 15 percent, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2001) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2000).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, 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 grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of grain-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 18 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

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 the 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 the 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 the 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, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (Ksat). The estimates in the table indicate the rate of water movement, in

micrometers per second (um/sec), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

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

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table J1a, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of 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 permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

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

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

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of rock fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 19 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

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

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

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

Water Features

Table 20 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table K1 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table K1 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very

unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 21 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 thickness and hardness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1998 and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 22 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is very fine, mixed, active, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 1998). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Alred Series

The Alred series consists of very deep, well drained soils on upland side slopes. These soils formed in cherty hillslope sediments and in the underlying clayey residuum. Permeability is moderate in the upper part and slow in the lower part. Slopes range from 15 to 60 percent.

Taxonomic classification: Loamy-skeletal over clayey, siliceous, semiactive, mesic Typic Paleudalfs

Typical Pedon

Alred extremely cobbly loam, in an area of Alred-Bardley-Rock outcrop complex, 15 to 60 percent slopes, very stony; 500 feet south and 50 feet west of the northeast corner of sec. 4, T. 31 N., R. 7 W.; USGS Montauk topographic quadrangle; lat. 37 degrees 25 minutes 19 seconds N. and long. 91 degrees 42 minutes 04 seconds W.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) extremely cobbly loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; many very fine, common fine, and few medium roots; many very fine irregular pores; 40 percent chert gravel and 30 percent chert cobbles; slightly acid (pH 6.4); abrupt smooth boundary.

Bt1—4 to 9 inches; yellowish brown (10YR 5/4) and dark brown (10YR 4/3) extremely gravelly silt loam; moderate fine subangular blocky structure; very friable; many very fine, common fine, and few medium roots; common very fine tubular pores; few distinct clay films on faces of peds; 60 percent chert gravel and 10 percent chert cobbles; slightly acid (pH 6.2); clear smooth boundary.

Bt2—9 to 17 inches; dark yellowish brown (10YR 4/4) and dark brown (10YR 4/3) extremely gravelly silt loam; moderate medium subangular blocky structure; friable; many very fine and common medium roots; common very fine tubular pores; few distinct clay films on faces of peds; 65 percent chert gravel; neutral (pH 6.6); clear smooth boundary.

Bt3—17 to 27 inches; strong brown (7.5YR 5/6) extremely cobbly silty clay loam; weak fine subangular blocky structure; friable; few fine and medium roots; common very fine tubular pores; common distinct clay films on faces of peds; 40 percent chert gravel and 40 percent chert cobbles; neutral (pH 6.8); abrupt wavy boundary.

2Bt4—27 to 44 inches; dark red (2.5YR 3/6) and yellowish red (5YR 4/6) clay; strong very fine angular blocky structure; firm; few medium roots; many very fine tubular pores; many prominent clay films on faces of peds; 10 percent chert gravel; neutral (pH 6.8); clear wavy boundary.

2Bt5—44 to 53 inches; dark red (2.5YR 3/6), yellowish red (5YR 4/6) and brown (7.5YR 5/2) gravelly clay; weak medium subangular blocky structure parting to moderate very fine angular blocky; firm; common very fine tubular pores; many prominent clay films on faces of peds; 20 percent chert gravel; neutral (pH 6.8); gradual smooth boundary.

2Bt6—53 to 80 inches; dark red (2.5YR 3/6), red (2.5YR 4/6), and dark brown (7.5YR 4/4) cobbly clay; moderate fine angular blocky structure; firm; common very fine tubular pores; many prominent clay films on faces of peds and in pores; 20 percent chert cobbles; slightly acid (pH 6.4).

Range in Characteristics

Depth to bedrock: More than 80 inches
Depth to the 2Bt horizon: 15 to 40 inches

A horizon:
- Content of rock fragments—35 to 80 percent gravel; 0 to 50 percent cobbles

Bt horizon:
- Content of rock fragments—35 to 80 percent gravel; 0 to 50 percent cobbles
- Texture of the fine-earth fraction—silt loam, silty clay loam, loam, or clay loam

2Bt horizon:
- Content of rock fragments—0 to 30 percent gravel; 0 to 20 percent cobbles
- Texture of the fine-earth fraction—silty clay or clay

Bardley Series

The Bardley series consists of moderately deep, well drained soils on upland side slopes. These soils formed in cherty hillslope sediments and in the underlying clayey residuum. Permeability is moderate. Slopes range from 15 to 60 percent.

Taxonomic classification: Very fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Bardley extremely cobbly loam, in an area of Alred-Bardley-Rock outcrop complex, 15 to 60 percent slopes, very stony; 50 feet south and 2,400 feet east of the northwest corner of sec. 3, T. 31 N., R. 7 W.; USGS Montauk topographic quadrangle; lat. 37 degrees 25 minutes 22 seconds N. and long. 91 degrees 42 minutes 01 second W.

Oe—1 inch to 0; partially decomposed oak leaf litter.

A—0 to 3 inches; very dark grayish brown (10YR 3/2) extremely cobbly loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; very friable; common fine and very fine roots; many very fine irregular pores; 40 percent chert gravel and 30 percent chert cobbles; neutral (pH 7.2); abrupt wavy boundary.

BE—3 to 6 inches; brown (10YR 5/3) extremely cobbly loam; weak fine subangular blocky structure; very

friable; common very fine and few fine roots; common very fine irregular and tubular pores; 40 percent chert gravel and 30 percent chert cobbles; neutral (pH 6.6); abrupt wavy boundary.

2Bt1—6 to 11 inches; yellowish red (5YR 4/6) and brown (7.5YR 5/3) clay; moderate medium subangular blocky structure parting to strong very fine angular blocky; firm; few fine and medium roots; common very fine tubular pores; many prominent clay films on faces of peds; 10 percent chert gravel; neutral (pH 6.6); clear wavy boundary.

2Bt2—11 to 22 inches; reddish brown (5YR 4/4) clay; weak medium subangular blocky structure parting to weak very fine angular blocky; firm; few fine and medium roots; common very fine tubular pores; many prominent clay films on faces of peds; 5 percent chert gravel; neutral (pH 7.2); abrupt smooth boundary.

3R—22 inches; dolostone.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:

Content of rock fragments—35 to 80 percent gravel; 0 to 30 percent cobbles

BE horizon:

Content of rock fragments—35 to 80 percent gravel; 0 to 30 percent cobbles

2Bt horizon:

Content of rock fragments—5 to 25 percent gravel or cobbles

Bearthicket Series

The Bearthicket series consists of very deep, well drained soils on flood plains. These soils formed in stream alluvium. Permeability is moderate. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine-silty, mixed, active, mesic Ultic Hapludalfs.

Typical Pedon

Bearthicket silt loam, 0 to 3 percent slopes, rarely flooded; 1,900 feet south and 300 feet west of the northeast corner of sec. 32, T. 32 N., R. 11 W.; USGS Roubidoux topographic quadrangle; lat. 37 degrees 26 minutes 19 seconds N. and long. 92 degrees 09 minutes 42 seconds W.

Ap1—0 to 5 inches; dark brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak thin platy structure parting to weak very fine granular; very friable; common fine roots; many very fine irregular pores; neutral (pH 7.0); clear smooth boundary.

Ap2—5 to 9 inches; dark brown (10YR 4/3) silt loam; weak medium platy structure parting to weak very fine subangular blocky; very friable; common fine roots; many very fine irregular pores; neutral (pH 7.0); abrupt smooth boundary.

BA—9 to 21 inches; dark brown (10YR 4/3) silt loam; weak medium subangular blocky structure; friable; common fine roots; many very fine tubular pores; neutral (pH 6.6); gradual smooth boundary.

Bt1—21 to 29 inches; dark brown (10YR 3/3) silty clay loam; weak medium subangular blocky structure; friable; few fine roots; common fine tubular pores; common faint clay films on faces of peds; slightly acid (pH 6.4); gradual smooth boundary.

Bt2—29 to 38 inches; mixed, dark brown (10YR 4/3) and dark yellowish brown (10YR 4/4) silty clay loam; weak medium subangular blocky structure; firm; few fine roots; common fine tubular pores; common faint clay films on faces of peds; neutral (pH 6.6); gradual smooth boundary.

Bt3—38 to 44 inches; dark yellowish brown (10YR 4/4) silty clay loam; few fine faint brown (10YR 5/3) iron depletions; weak medium subangular blocky structure; firm; few fine roots; common fine tubular pores; many distinct clay films on faces of peds; neutral (pH 6.6); gradual smooth boundary.

Bt4—44 to 80 inches; mixed, dark yellowish brown (10YR 4/4) and dark brown (10YR 4/3) silty clay loam; weak fine subangular blocky structure; firm; few fine roots; few very fine tubular pores; common medium distinct grayish brown (10YR 5/2) iron depletions; many distinct clay films on faces of peds; neutral (pH 6.6).

Range in Characteristics

Depth to bedrock: More than 80 inches

Content of rock fragments in the Bt4 horizon: 0 to 30 percent

Bendavis Series

The Bendavis series consists of moderately deep, moderately well drained soils on uplands. These soils formed in hillslope sediments over chert, orthoquartzose, or sandstone bedrock. Permeability is moderate. Slopes range from 1 to 50 percent.

Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Typic Hapludults.

Typical Pedon

Bendavis gravelly silt loam, in an area of Bendavis-Poynor complex, 1 to 8 percent slopes; 2,400 feet east and 2,400 feet south of the northwest corner of sec. 36, T. 29 N., R. 12 W.; USGS Cabool NW topographic quadrangle; lat. 37 degrees 09 minutes 14 seconds N.and long. 92 degrees 12 minutes 16 seconds W.

Ap—0 to 9 inches; dark brown (10YR 3/3) gravelly silt loam, pale brown (10YR 6/3) dry; strong coarse granular structure parting to moderate medium granular; very friable; many fine roots; many fine irregular pores; 20 percent chert gravel; neutral (pH 6.8); clear smooth boundary.

BA—9 to 14 inches; dark brown (10YR 3/3) and dark yellowish brown (10YR 4/6) silt loam; weak fine subangular blocky structure parting to moderate medium granular; very friable; many fine roots; many fine irregular pores; 10 percent chert gravel; slightly acid (pH 6.4); clear smooth boundary.

Bt1—14 to 20 inches; dark yellowish brown (10YR 4/6) gravelly silt loam; moderate fine subangular blocky structure; friable; many fine roots; common fine tubular pores; common faint clay films on faces of peds: 15 percent chert gravel; moderately acid (pH 6.0); clear wavy boundary.

Bt2—20 to 27 inches; dark yellowish brown (10YR 4/4) very gravelly silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; common fine tubular pores; common faint clay films on faces of peds; 40 percent chert gravel; moderately acid (pH 6.0); clear wavy boundary.

Bt3—27 to 34 inches; brown (7.5YR 4/4) and pale brown (10YR 6/3) very gravelly silty clay loam; moderate fine subangular blocky structure; firm; few fine roots; common fine tubular pores; common faint clay films on faces of peds; 50 percent chert gravel; many fine iron-manganese concretions; moderately acid (pH 5.8); abrupt wavy boundary.

2R—34 inches; chert.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:

Content of rock fragments—10 to 70 percent gravel; 0 to 40 percent cobbles

BA horizon:

Content of rock fragments—10 to 70 percent gravel; 0 to 40 percent cobbles

Bt horizon:

Content of rock fragments—25 to 85 percent gravel, 0 to 35 percent cobbles; 0 to 50 percent stones

Texture of the fine-earth fraction—silt loam, loam, silty clay loam, or clay loam

Bender Series

The Bender series consists of moderately deep, somewhat excessively drained soils on uplands. These soils formed in residuum from sandstone. Permeability is moderately rapid. Slopes range from 3 to 60 percent.

Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Typic Hapludults

Typical Pedon

Bender very cobbly fine sandy loam, 3 to 15 percent slopes, stony; 50 feet north and 1,200 feet west of the southeast corner of sec. 23, T. 31 N., R. 10 W.; USGS Prescott topographic quadrangle; lat. 37 degrees 29 minutes 08 seconds N. and long. 91 degrees 53 minutes 43 seconds W.

Oi—1 inch to 0; slightly decomposed oak leaf litter.

A—0 to 4 inches; brown (10YR 4/3) very cobbly fine sandy loam, yellowish brown (10YR 5/4) dry; weak fine granular structure; very friable; many fine and few medium roots; many very fine irregular pores; 20 percent cobbles and 20 percent gravel; moderately acid (pH 6.0); abrupt smooth boundary.

Bt1—4 to 12 inches; brown (10YR 5/3) very cobbly fine sandy loam; weak medium subangular blocky structure; friable; common fine and few medium roots; common fine tubular pores; few distinct clay films on faces of peds; 20 percent cobbles and 30 percent gravel; strongly acid (pH 5.4); clear smooth boundary.

Bt2—12 to 15 inches; mixed, yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4) extremely cobbly loam; moderate medium subangular blocky structure; friable; common fine and few medium roots; common fine tubular pores; few prominent clay films on faces of peds; 40 percent cobbles and 20 percent gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt3—15 to 23 inches; mixed, brown (7.5YR 4/4) and yellowish red (5YR 4/6) extremely gravelly sandy loam; weak fine subangular blocky structure; firm; few fine and medium roots; common fine tubular pores; common prominent clay films on faces of peds and in pores; 70 percent gravel; very strongly acid (pH 4.8); abrupt wavy boundary.

2R—23 inches; sandstone bedrock from the Roubidoux Formation.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Content of rock fragments—0 to 60 percent gravel; 0 to 35 percent cobbles

BA horizon (where present):
Content of rock fragments—0 to 60 percent gravel; 0 to 35 percent cobbles
Texture of the fine-earth fraction—sandy loam, fine sandy loam, or loam

Bt horizon:
Content of rock fragments—25 to 80 percent gravel; 0 to 50 percent cobbles
Texture of the fine-earth fraction—sandy loam, loam, sandy clay loam, or clay loam

2R layer:
Kind of bedrock—chert, orthoquartoze, or sandstone

Branson Series

The Branson series consists of very deep, well drained soils on upland ridges. These soils formed in loess and in the underlying hillslope sediments. Permeability is moderate. Slopes range from 1 to 3 percent.

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Paleudults

Typical Pedon

Typical pedon of Branson silt loam, in an area of Branson-Splitlimb complex, 1 to 3 percent slopes; 2,280 feet north and 1,300 feet east of the southwest corner of sec. 6, T. 32 N., R. 8 W.; USGS Maples topographic quadrangle; lat. 37 degrees 30 minutes 43 seconds N. and long. 91 degrees 52 minutes 15 seconds W.

Ap—0 to 10 inches; brown (10YR 4/3) silt loam, yellowish brown (10YR 5/4) dry; moderate fine subangular blocky structure parting to weak fine granular; friable; common very fine roots; many fine tubular pores; few fine black concretions of iron and manganese oxides; neutral (pH 6.8); clear smooth boundary.

Bt1—10 to 17 inches; mixed, dark brown (7.5YR 4/4) and strong brown (7.5YR 4/6) silt loam; common fine distinct dark yellowish brown (10YR 4/4) mottles; moderate fine subangular blocky structure; friable; few very fine roots; common fine tubular pores; few distinct clay films on faces of peds; common fine black concretions of iron and manganese oxides; moderately acid (pH 5.6); clear smooth boundary.

Bt2—17 to 30 inches; strong brown (7.5YR 4/6) silty clay loam; moderate fine and medium subangular blocky structure; friable; few very fine roots; many fine tubular and vesicular pores; few distinct clay films on faces of peds; many fine black concretions of iron and manganese oxides; few fine black stains of iron and manganese oxides on faces of peds; moderately acid (pH 5.6); clear smooth boundary.

2Bt3—30 to 47 inches; yellowish red (5YR 4/6), dark red (2.5YR 3/6), and reddish yellow (7.5YR 7/6) silty clay loam; moderate medium subangular blocky structure parting to weak fine subangular blocky; friable; common fine vesicular pores; many prominent clay films on faces of peds; many fine black concretions of iron and manganese oxides; few fine black stains of iron and manganese oxides on faces of peds; very strongly acid (pH 5.0); clear smooth boundary.

2Bt4—47 to 80 inches; dark red (2.5YR 3/6) and yellowish red (5YR 4/6) silty clay loam; common medium prominent light brownish gray (10YR 6/2) iron depletions on faces of peds; moderate medium subangular blocky structure; friable; few fine vesicular pores; many prominent clay films on faces of peds; 5 percent gravel; many fine black concretions of iron and manganese oxides; few fine black stains of iron and manganese oxides on faces of peds; very strongly acid (pH 5.0).

Range in Characteristics

Depth to bedrock: More than 80 inches

Ap or A horizon:
Content of rock fragments—0 to 5 percent gravel

Bt horizon:
Content of rock fragments—0 to 5 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

2Bt horizon:
Content of rock fragments—0 to 15 percent gravel
Texture of the fine-earth fraction—silty clay loam or silty clay

Cedargap Series

The Cedargap series consists of very deep, well drained soils on flood plains. These soils formed in stream alluvium. Permeability is moderate. Slopes range from 0 to 3 percent.

Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Cedargap gravelly loam, 0 to 3 percent slopes, frequently flooded; 210 feet north and 2,050 feet east of the southwest corner of sec. 21, T. 29 N., R. 10 W.; USGS Cabool NE topographic quadrangle; lat. 37 degrees 10 minutes 23 seconds N. and long. 92 degrees 02 minutes 42 seconds W.

A1—0 to 10 inches; very dark grayish brown (10YR 3/2) gravelly loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure; friable; many fine roots; many fine tubular pores; 15 percent gravel; neutral (pH 6.8); abrupt wavy boundary.

A2—10 to 15 inches; very dark gray (10YR 3/1) gravelly silt loam, dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure; friable; many fine roots; many fine tubular pores; 15 percent gravel; moderately acid (pH 6.0); abrupt wavy boundary.

A3—15 to 22 inches; black (10YR 2/1) gravelly silt loam, very dark gray (10YR 3/1) dry; moderate medium subangular blocky structure; very friable; many fine roots; many fine tubular pores; 15 percent gravel; slightly acid (pH 6.2); abrupt wavy boundary.

2C1—22 to 30 inches; very dark brown (10YR 2/2) extremely gravelly loam, very dark grayish brown (10YR 3/2) dry; massive; very friable; many fine roots; many fine irregular pores; 60 percent gravel; slightly acid (pH 6.4); abrupt wavy boundary.

2C2—30 to 39 inches; very dark grayish brown (10YR 3/2) extremely gravelly loam, dark brown (10YR 4/3) dry; massive; very friable; many fine roots; many fine and medium irregular pores; 70 percent gravel; neutral (pH 6.8); abrupt wavy boundary.

2C3—39 to 80 inches; dark brown (10YR 3/3) and very dark grayish brown (10YR 3/2) extremely gravelly clay loam; massive; firm; few fine roots; many fine irregular pores; many fine black concretions of iron and manganese oxides; 70 percent gravel; neutral (pH 7.0).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:

Content of rock fragments—10 to 35 percent gravel

Texture of the fine-earth fraction—silt loam, loam, or clay loam

2C horizon:

Content of rock fragments—45 to 80 percent gravel or cobbles (fewer below a depth of 40 inches in some pedons)

Texture of the fine-earth fraction—loam or clay loam

Celt Series

The Celt series consists of very deep, somewhat poorly drained soils on concave upland ridges. These soils formed in loess, hillslope sediments, and the underlying clayey sediments or residuum. They have a fragipan. Permeability is moderately slow above the fragipan, very slow in the fragipan, and moderate below the fragipan. Slopes range from 1 to 3 percent.

Taxonomic classification: Fine, mixed, active, mesic Aquic Fragiudults

Typical Pedon

Celt silt loam, 1 to 3 percent slopes; 430 feet south and 180 feet west of the northeast corner of sec. 12, T. 30 N., R. 11 W.; USGS Bucyrus topographic quadrangle; lat. 37 degrees 20 minutes 25 seconds N. and long. 92 degrees 05 minutes 18 seconds W.

A—0 to 5 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; weak fine and medium subangular blocky structure parting to weak very fine granular; very friable; common coarse roots; common very fine irregular and tubular pores; 2 percent chert gravel; strongly acid (pH 5.4); abrupt smooth boundary.

Bt1—5 to 11 inches; yellowish brown (10YR 5/6) silt loam; few fine prominent light brownish gray (10YR 6/2) iron depletions on faces of peds; weak fine and medium subangular blocky structure; very friable; common medium roots; common very fine tubular pores; few fine distinct clay films on faces of peds; 3 percent chert gravel; very strongly acid (pH 4.5); clear smooth boundary.

Bt2—11 to 18 inches; strong brown (7.5YR 4/6) silty clay; common fine prominent red (2.5YR 4/6) iron masses and grayish brown (10YR 5/2) iron depletions on faces of peds; strong fine angular blocky structure; firm; few fine and medium roots; common very fine irregular pores; common prominent clay films on faces of peds; 3 percent chert gravel; extremely acid (pH 4.4); gradual smooth boundary.

Bt3—18 to 24 inches; light brownish gray (10YR 6/2) and grayish brown (10YR 5/2) silty clay loam; common fine prominent yellowish brown (10YR 5/6) and red (2.5YR 4/8) iron masses on faces of peds; weak medium platy structure parting to weak medium angular blocky; very firm; few coarse and fine roots; few very fine irregular pores; common

distinct clay films on faces of peds; extremely acid (pH 4.4); clear wavy boundary.
2Btx1—24 to 29 inches; brownish yellow (10YR 6/8) and light brownish gray (10YR 6/2) gravelly silt loam; moderate very coarse prismatic structure parting to moderate medium platy; very firm; few fine roots; few very fine irregular pores; few prominent clay films on faces of peds; 15 percent chert gravel; brittle; extremely acid (pH 4.2); abrupt wavy boundary.
2Btx2—29 to 39 inches; light yellowish brown (10YR 6/4) and light brownish gray (10YR 6/2) gravelly silty clay loam; few fine prominent red (2.5YR 4/6) iron masses on faces of peds; moderate very coarse prismatic structure parting to moderate medium platy; very firm; few medium roots; few very fine irregular pores; few prominent clay films on faces of peds; 20 percent chert gravel; brittle; extremely acid (pH 4.4); clear wavy boundary.
3Bt1—39 to 53 inches; yellowish brown (10YR 5/8) very gravelly silty clay; few fine prominent pale brown (10YR 6/3) mottles; few fine prominent red (2.5YR 4/6) iron masses on faces of peds; weak fine angular and subangular blocky structure; firm; few fine roots; few very fine irregular pores; common prominent dark gray clay seams between peds; 40 percent chert gravel; very strongly acid (pH 4.8); gradual wavy boundary.
3Bt2—53 to 80 inches; yellowish brown (10YR 5/8) and red (2.5YR 4/6) gravelly silty clay; moderate very fine angular blocky structure; firm; few fine roots; few very fine irregular pores; common prominent dark gray clay seams between peds; 30 percent chert gravel; very strongly acid (pH 4.7).

Range in Characteristics

Depth to bedrock: 60 inches or more

A horizon:
Content of rock fragments—0 to 5 percent gravel

Bt horizon:
Content of rock fragments—0 to 15 percent gravel
Texture of the fine-earth fraction—silty clay loam or silty clay

2Btx horizon:
Content of rock fragments—15 to 35 percent gravel
Texture of the fine-earth fraction—silty clay loam or silt loam

3Bt horizon:
Content of rock fragments—10 to 80 percent gravel; 0 to 5 percent cobbles
Texture of the fine-earth fraction—silty clay or clay

Coulstone Series

The Coulstone series consists of very deep, somewhat excessively drained soils in the uplands. These soils formed in colluvium and residuum from acid sandstone with lenses of cherty limestone or cherty dolostone. Permeability is moderately rapid. Slopes range from 15 to 50 percent.

Taxonomic classification: Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Coulstone very gravelly sandy loam, in an area of Coulstone-Bender complex, 15 to 50 percent slopes, very stony; 1,300 feet south and 2,500 feet east of the northwest corner of sec. 17, T. 25 N., R. 10 W.; USGS Siloam Springs topographic quadrangle; lat. 36 degrees 50 minutes 40 seconds N. and long. 92 degrees 04 minutes 11 seconds W.; Howell County, Missouri.

Oe—0 to 1 inch; partially decomposed organic material.
A—1 to 4 inches; dark grayish brown (10YR 4/2) very gravelly sandy loam; weak very fine granular structure; very friable; many very fine and fine roots; many very fine irregular pores; 5 percent distinct discontinuous light gray (10YR 6/1) silt coats throughout; 40 percent angular chert gravel; strongly acid (pH 5.3); clear wavy boundary.
AE—4 to 11 inches; brown (10YR 4/3) gravelly sandy loam; weak fine subangular blocky structure; friable; many fine to coarse roots; many fine irregular and tubular pores; 15 percent faint discontinuous dark grayish brown (10YR 4/2) organic coats on faces of peds; 30 percent angular chert gravel; strongly acid (pH 5.4); gradual wavy boundary.
Bt1—11 to 20 inches; yellowish brown (10YR 5/4) very gravelly sandy loam; weak fine subangular blocky structure; friable; common fine and few medium roots; many fine irregular and tubular pores; 15 percent faint discontinuous dark yellowish brown (10YR 4/4) clay films on faces of peds and 5 percent distinct continuous dark grayish brown (10YR 4/2) organic stains on vertical faces of peds; 35 percent angular chert gravel; moderately acid (pH 5.7); clear wavy boundary.
2Bt2—20 to 31 inches; yellowish brown (10YR 5/4) very gravelly sandy loam; weak fine subangular blocky structure; friable; common fine and few coarse roots; many fine irregular and tubular pores; 15 percent distinct discontinuous strong brown (7.5YR 5/6) clay films on rock fragments and 5

percent distinct discontinuous black (N 2/0) iron stains on rock fragments; 45 percent angular chert gravel; strongly acid (pH 5.5); clear wavy boundary.

2Bt3—31 to 39 inches; yellowish red (5YR 4/6) extremely gravelly loam; moderate fine subangular blocky structure; friable; common fine roots; many fine irregular and tubular pores; 35 percent distinct continuous reddish brown (5YR 4/4) clay films throughout, 35 percent prominent continuous yellowish brown (10YR 5/4) silt coats throughout, and 35 percent prominent continuous black (N 2/0) iron stains throughout; 65 percent angular chert gravel; strongly acid (pH 5.4); gradual smooth boundary.

3Bt4—39 to 53 inches; red (2.5YR 4/6) very cobbly loam; moderate fine and medium subangular blocky structure; firm; common very fine and fine roots; many fine irregular and tubular pores; 75 percent distinct continuous yellowish red (5YR 4/6) clay films throughout, 35 percent prominent continuous brown (7.5YR 5/4) silt coats throughout, and 15 percent prominent discontinuous black (N 2/0) iron stains throughout; 30 percent chert gravel, 20 percent chert cobbles; moderately acid (pH 5.6); abrupt wavy boundary.

3Bt5—53 to 80 inches; red (2.5YR 4/8) cobbly sandy clay loam; moderate fine and medium subangular blocky structure; firm; few fine to coarse roots; many fine irregular and tubular pores; 75 percent prominent continuous red (2.5YR 4/6) clay films throughout, 35 percent prominent discontinuous reddish brown (2.5YR 4/4) silt coats on vertical faces of peds, 15 percent prominent discontinuous brown (10YR 4/3) organic coats on vertical faces of peds, and 15 percent prominent discontinuous black (N 2/0) iron stains on faces of peds; 10 percent angular chert gravel, 20 percent angular sandstone cobbles; strongly acid (pH 5.4).

Range in Characteristics

Depth to bedrock: 80 inches or more

A horizon:

Content of rock fragments—35 to 60 percent gravel or cobbles

AE horizon:

Content of rock fragments—30 to 65 percent gravel

Texture of the fine-earth fraction—loam or sandy clay

Bt horizon:

Content of rock fragments—25 to 75 percent gravel or cobbles

Texture of the fine-earth fraction—clay loam, loam, or sandy loam

Deible Series

The Deible series consists of very deep, poorly drained soils on stream terraces. These soils formed in stream alluvium. Permeability is very slow. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine, mixed, active, mesic Typic Albaqualfs

Typical Pedon

Deible silt loam, 0 to 3 percent slopes, rarely flooded; 9,050 feet north and 2,450 feet west of the southeast corner of sec. 6, T. 29 N., R. 8 W.; USGS Eunice topographic quadrangle; lat. 37 degrees 14 minutes 14 seconds N. and long. 91 degrees 51 minutes 39 seconds W.

Ap1—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; many fine roots; many fine irregular pores; few fine prominent yellowish brown (10YR 5/6) iron masses on faces of peds; slightly acid (pH 6.2); clear smooth boundary.

Ap2—4 to 10 inches; grayish brown (10YR 5/2) silt loam, light brownish gray (10YR 6/2) dry; moderate medium subangular blocky structure; friable; common fine roots; many very fine tubular pores; few fine distinct yellowish brown (10YR 5/6) iron masses on faces of peds; strongly acid (pH 5.2); abrupt smooth boundary.

E1—10 to 16 inches; mottled, light brownish gray (10YR 6/2) silt loam; moderate fine subangular blocky structure; firm; few very fine roots; common very fine tubular pores; few fine prominent yellowish brown (10YR 5/6) iron masses on faces of peds; very strongly acid (pH 4.8); clear smooth boundary.

E2—16 to 22 inches; light brownish gray (10YR 6/2) and grayish brown (10YR 5/2) silt loam; moderate fine angular blocky structure; firm; few very fine roots; many very fine tubular pores; common medium prominent yellowish brown (10YR 5/6) iron masses on faces of peds and few fine faint light gray (2.5Y N7/0) iron depletions on faces of peds; very strongly acid (pH 4.8); abrupt smooth boundary.

2Btg1—22 to 34 inches; dark grayish brown (2.5Y 4/2) silty clay; strong very fine angular blocky structure; very firm; few very fine roots; common very fine tubular pores; common prominent clay films on

faces of peds; common prominent light gray silt coats on faces of peds; common fine prominent dark yellowish brown (10YR 3/6) iron masses on faces of peds; moderately acid (pH 5.6); clear smooth boundary.

2Btg2—34 to 50 inches; dark grayish brown (2.5Y 4/2) silty clay; strong fine angular blocky structure; very firm; few very fine roots; common very fine tubular pores; common prominent clay films on faces of peds; common fine prominent dark yellowish brown (10YR 3/6) iron masses on faces of peds; moderately acid (pH 6.0); clear smooth boundary.

2Btg3—50 to 80 inches; dark grayish brown (2.5Y 4/2) silty clay; strong fine angular blocky structure; very firm; many very fine tubular pores; common fine prominent clay films on faces of peds; common fine prominent dark yellowish brown (10YR 3/6) iron masses on faces of peds; neutral (pH 7.2).

Range in Characteristics

Depth to bedrock: More than 80 inches

E horizon:

Texture of the fine-earth fraction—silt loam

Btg horizon:

Content of rock fragments—less than 10 percent gravel

Texture of the fine-earth fraction—silty clay loam, silty clay, or clay

Dunning Series

The Dunning series consists of very deep, poorly drained soils on flood plains. These soils formed in stream alluvium. Permeability is slow. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine, mixed, active, mesic Fluvaquentic Endoaquolls

Typical Pedon

Dunning silt loam, in an area of Dunning-Hercules complex, 0 to 3 percent slopes, frequently flooded; 2,600 feet north and 250 feet west of the southeast corner of sec. 8, T. 28 N., R. 10 W.; USGS Cabool SE topographic quadrangle; lat. 37 degrees 07 minutes 17 seconds N. and long. 92 degrees 03 minutes 13 seconds W.

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; firm; many fine roots; common fine irregular pores; common fine black concretions of iron and manganese; neutral (pH 7.2); abrupt smooth boundary.

A1—8 to 13 inches; very dark gray (10YR 3/1) silty clay loam, very dark grayish brown (10YR 3/2) dry; weak medium prismatic structure parting to strong very fine subangular blocky; firm; many fine roots; common fine tubular pores; common prominent black masses of iron and manganese on faces of peds; neutral (pH 7.2); abrupt smooth boundary.

A2—13 to 20 inches; very dark grayish brown (10YR 3/2) silty clay, dark grayish brown (10YR 4/2) dry; weak medium prismatic structure parting to strong very fine subangular blocky; firm; common fine roots; common fine tubular pores; common prominent black masses of iron and manganese on faces of peds; neutral (pH 7.2); gradual wavy boundary.

Bg1—20 to 25 inches; gray (5Y 5/1) silty clay; few fine prominent yellowish brown (10YR 5/6) iron masses on faces of peds; weak medium prismatic structure parting to strong very fine subangular blocky; firm; common fine roots; common fine tubular pores; many prominent black masses of iron and manganese on faces of peds; slightly alkaline (pH 7.4); gradual wavy boundary.

Bg2—25 to 35 inches; olive gray (5Y 5/2) silty clay; common fine prominent yellowish brown (10YR 5/6) iron masses and common fine faint gray (5YR 5/1) iron depletions on faces of peds; weak medium prismatic structure parting to strong very fine subangular blocky; firm; common fine roots; common fine tubular pores; many prominent black masses of iron and manganese on faces of peds; slightly alkaline (pH 7.4); gradual smooth boundary.

Cg1—35 to 46 inches; gray (5Y 5/1) silty clay; many fine distinct yellowish brown (10YR 5/6) iron masses lining pores; massive; firm; few fine tubular pores; many prominent black masses of iron and manganese lining pores; slightly alkaline (pH 7.4); gradual wavy boundary.

Cg2—46 to 80 inches; gray (5Y 5/1) gravelly silty clay; many fine prominent yellowish brown (10YR 5/6) iron masses lining pores; massive; firm; few fine tubular pores; many prominent black masses of iron and manganese lining pores; 30 percent gravel; slightly alkaline (pH 7.4).

Range in Characteristics

Depth to bedrock: More than 80 inches
Thickness of the mollic epipedon: 12 to 24 inches

Bg horizon:

Texture of the fine-earth fraction—silty clay or clay

Cg horizon:
Content of tock fragments—0 to 30 percent gravel
Texture of the fine-earth fraction—silty clay or clay

Eudy Series

The Eudy series consists of moderately deep, somewhat poorly drained soils on upland ridgetops and toeslopes. These soils formed in loess and the underlying clayey residuum. Permeability is slow. Slopes range from 1 to 8 percent.

Taxonomic classification: Fine, mixed, active, mesic Aquic Hapludalfs

Typical Pedon

Eudy silt loam, 1 to 8 percent slopes; 650 feet north and 2,300 feet west of the southeast corner of sec. 26, T. 30 N., R. 9 W.; USGS Houston topographic quadrangle; lat. 37 degrees 16 minutes 07 seconds N. and long. 91 degrees 53 minutes 35 seconds W.

Ap—0 to 7 inches; mixed very dark grayish brown (10YR 3/2) and dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; strong fine and very fine granular structure; very friable; common fine roots; many very fine irregular pores; 10 percent chert gravel; neutral (pH 7.1); abrupt smooth boundary.
Bt1—7 to 10 inches; mixed dark brown (10YR 3/3) and yellowish brown (10YR 5/4) silt loam; weak fine and medium subangular blocky structure; friable; common fine roots; common very fine tubular pores; few distinct clay films on faces of peds; 10 percent chert gravel; neutral (pH 7.3); clear smooth boundary.
2Bt2—10 to 14 inches; mixed dark brown (10YR 3/3) and yellowish brown (10YR 5/6) gravelly silty clay loam; strong fine angular blocky structure; very firm; common fine roots; many very fine tubular pores; few fine faint dark grayish brown (10YR 4/2) iron depletions; few fine black (N 2/0) iron and manganese oxide concretions; few prominent black (N 2/0) masses in which iron and manganese oxide have accumulated; common distinct clay films on faces of peds; 15 percent chert gravel; neutral (pH 7.3); clear wavy boundary.
2Bt3—14 to 21 inches; brown (10YR 4/3) gravelly silty clay; weak coarse prismatic structure parting to weak coarse and fine angular blocky; very firm; common fine roots; many very fine tubular pores; common distinct clay films on faces of peds and in pores; few fine faint dark grayish brown (10YR 4/2) iron depletions; few fine prominent red (2.5YR 4/6) masses in which iron has accumulated; common fine black (N 2/0) iron and manganese oxide concretions; 25 percent chert gravel; slightly alkaline (pH 7.6); abrupt wavy boundary.
2Bt4—21 to 25 inches; mixed yellowish brown (10YR 5/6) and olive brown (2.5Y 4/4) gravelly clay; moderate coarse subangular blocky structure parting to weak fine angular blocky; very firm; many fine roots; common prominent clay films on faces of peds and in pores; common fine prominent gray (10YR 5/1) iron depletions; common fine prominent black (N 2/0) masses of iron and manganese oxide concretions; 20 percent chert gravel; slightly alkaline (pH 7.7); abrupt wavy boundary.
3R—25 inches; dolostone.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Content of rock fragments—0 to 10 percent gravel

Bt horizon:
Content of rock fragments—0 to 10 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

2Bt horizon:
Content of rock fragments—0 to 30 percent gravel or cobbles
Texture of the fine-earth fraction—clay or silty clay

Gatewood Series

The Gatewood series consists of moderately deep, moderately well drained soils on uplands. These soils formed in hillslope sediments and in the underlying clayey residuum. Permeability is slow. Slopes range from 3 to 35 percent.

Taxonomic classification: Very fine, mixed, active, mesic Oxyaquic Hapludalfs

Typical Pedon

Gatewood very gravelly silt loam, 3 to 15 percent slopes, stony; 400 feet north and 1,200 feet east of the southwest corner of sec. 27, T. 28 N., R. 12 W.; USGS Cabool SW topographic quadrangle; lat. 37 degrees 04 minutes 30 seconds N. and long. 92 degrees 14 minutes 45 seconds W.

Oe—0 to 1 inch; partially decomposed oak leaves.
A—1 to 4 inches; very dark grayish brown (10YR 3/2) very gravelly silt loam, brown (10YR 5/3) dry; weak very fine granular structure; very friable; many fine roots; many medium vesicular pores; 55 percent chert gravel; slightly acid (pH 6.4); abrupt smooth boundary.

E—4 to 10 inches; brown (10YR 5/3) very gravelly silt loam; weak very fine subangular blocky structure; very friable; few coarse and common fine roots; many fine vesicular pores; 50 percent chert gravel; moderately acid (pH 5.8); clear smooth boundary.
2Bt1—10 to 21 inches; yellowish brown (10YR 5/6) clay; common prominent red (2.5YR 4/8) mottles; strong fine angular blocky structure; firm; few coarse and fine roots; many very fine vesicular pores; common faint clay films on faces of peds; 5 percent chert gravel; moderately acid (pH 6.0); gradual smooth boundary.
2Bt2—21 to 28 inches; yellowish brown (10YR 5/4) clay; few fine prominent yellowish red (5YR 5/8) and few fine faint olive brown (2.5Y 4/4) mottles; strong very fine angular blocky structure; firm; few coarse and medium roots; many very fine vesicular pores; common prominent clay films on faces of peds; 5 percent chert gravel; neutral (pH 7.0); abrupt smooth boundary.
3R—28 inches; dolostone.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Content of rock fragments—35 to 70 percent gravel; 0 to 20 percent cobbles

E horizon:
Content of rock fragments—35 to 70 percent gravel; 0 to 20 percent cobbles

2Bt horizon:
Content of rock fragments—5 to 25 percent gravel or cobbles

Gressy Series

The Gressy series consists of very deep, well drained soils on upland ridgetops. These soils formed in silty sediments and in the underlying pedisediment and residuum. Permeability is moderate. Slopes range from 3 to 8 percent.

Taxonomic classification: Fine-loamy, siliceous, semiactive, mesic Typic Paleudalfs

Typical Pedon

Gressy silt loam, in an area of Gressy-Viraton complex, 3 to 8 percent slopes; 1,200 feet east and 2,100 feet north of the southwest corner of sec. 23, T. 26 N., R. 24 W.; USGS Caulfield topographic quadrangle; lat. 36 degrees 30 minutes 57 seconds N. and long. 92 degrees 02 minutes 16 seconds W.; Howell County, Missouri.

Ap—0 to 7 inches; brown (10YR 4/3) silt loam; moderate medium granular structure; friable; many very fine and fine and few medium and coarse roots throughout; many fine to coarse irregular pores; 1 percent mixed subangular gravel; neutral (pH 6.7); clear smooth boundary.
Bt1—7 to 13 inches; brown (7.5YR 4/4) silt loam; moderate medium subangular blocky structure parting to weak fine subangular blocky; friable; common very fine and fine and few medium and coarse roots throughout; common fine and medium tubular and irregular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds; neutral (pH 6.9); clear smooth boundary.
Bt2—13 to 20 inches; strong brown (7.5YR 4/6) silt loam; weak fine subangular blocky structure; friable; common very fine and fine and few medium roots throughout; common fine and medium irregular and tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds; few fine rounded black (N 2/0) soft iron-manganese concretions; 1 percent subangular mixed gravel; neutral (pH 6.9); clear smooth boundary.
Bt3—20 to 31 inches; strong brown (7.5YR 4/6) silt loam; moderate fine subangular blocky structure; firm; few very fine and fine roots throughout; common very fine and fine tubular and few medium vesicular pores; common prominent reddish brown (5YR 4/4) clay films on faces of peds; few distinct light yellowish brown (10YR 6/4) silt coats on faces of peds; few fine rounded black (N 2/0) soft iron-manganese concretions; 10 percent subangular mixed gravel; neutral (pH 6.8); clear wavy boundary.
2Bt4—31 to 49 inches; red (2.5YR 4/8) very gravelly clay loam; weak very coarse prismatic structure parting to moderate medium platy and moderate fine subangular; firm; few very fine and fine roots throughout; few prominent reddish brown (5YR 4/4) clay films on faces of peds; few prominent red (2.5YR 4/6) iron stains on faces of peds; 45 percent subangular mixed gravel; moderately acid (pH 5.9); gradual irregular boundary.
3Bt5—49 to 80 inches; red (2.5YR 4/8) gravelly clay; weak medium angular blocky structure parting to moderate fine angular blocky; firm; few very fine vesicular tubular pores; common distinct red (2.5YR 4/6) and few brown (7.5YR 4/4) clay films on faces of peds; 25 percent subangular mixed gravel; strongly acid (pH 5.4).

Range in Characteristics

Depth to bedrock: 80 inches or more

Ap horizon:
Content of rock fragments—0 to 35 percent gravel

Bt horizon:
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—silt loam, loam, or silty clay loam

2Bt horizon:
Content of rock fragments—0 to 50 percent gravel; 0 to 25 percent cobbles
Texture of the fine-earth fraction—loam, silty clay loam, or clay loam

3Bt horizon:
Content of rock fragments—0 to 35 percent gravel; 0 to 20 percent cobbles
Texture of the fine-earth fraction—silty clay or clay

Gunlock Series

The Gunlock series consists of very deep, moderately well drained soils on footslopes. These soils formed in hillslope sediments and in the underlying clayey sediments or residuum. Permeability is slow. Slopes range from 1 to 8 percent.

Taxonomic classification: Fine, mixed, active, mesic Fragic Oxyaquic Hapludalfs

Typical Pedon

Gunlock silt loam, 1 to 8 percent slopes; 1,300 feet south and 850 feet east of the northwest corner of sec. 4, T. 29 N., R. 10 W.; USGS Cabool NE topographic quadrangle; lat. 37 degrees 14 minutes 47 seconds N. and long. 92 degrees 02 minutes 54 seconds W.

Ap—0 to 8 inches; dark brown (10YR 4/3) silt loam, very pale brown (10YR 7/3) dry; weak thin platy structure parting to moderate very fine granular; friable; many very fine roots; many very fine irregular pores; 10 percent chert gravel; neutral (pH 7.0); abrupt smooth boundary.

Bt1—8 to 16 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure parting to moderate very fine subangular blocky; firm; common very fine roots; common very fine tubular pores; few faint brown (10YR 4/4) clay films on faces of peds; 12 percent chert gravel; slightly acid (pH 6.2); clear smooth boundary.

Bt2—16 to 21 inches; yellowish brown (10YR 5/6) gravelly silty clay loam; moderate fine subangular blocky structure parting to moderate very fine subangular blocky; firm; common very fine roots; many very fine tubular pores; few distinct discontinuous brown (7.5YR 4/4) clay films on faces of peds; 25 percent chert gravel; moderately acid (pH 5.8); clear smooth boundary.

2Btx1—21 to 26 inches; yellowish brown (10YR 5/6) gravelly silty clay; common fine prominent light brownish gray (10YR 6/2) iron depletions on faces of peds; strong very fine subangular blocky structure; firm; common very fine roots; common very fine tubular pores; few distinct discontinuous brown (7.5YR 4/4) clay films on faces of peds; 30 percent chert gravel; strongly acid (pH 5.4); clear smooth boundary.

2Btx2—26 to 33 inches; mixed, brown (10YR 5/3) and yellowish brown (10YR 5/4) gravelly silty clay; common medium distinct light brownish gray (10YR 6/2) and common fine distinct dark gray (10YR 4/1) iron depletions on faces of peds; strong medium platy structure parting to strong very fine subangular blocky; firm; common very fine roots; common very fine tubular pores; few prominent discontinuous strong brown (7.5YR 4/6) clay films on faces of peds; 30 percent chert gravel; very strongly acid (pH 5.0); clear smooth boundary.

3Bt1—33 to 39 inches; yellowish brown (10YR 5/8) gravelly clay; common medium prominent light brownish gray (10YR 6/2) and common medium prominent dark gray (10YR 4/1) iron depletions on faces of peds; common fine prominent yellowish red (5YR 5/6) iron masses on faces of peds; moderate very fine angular blocky structure; very firm; few very fine roots; common very fine tubular pores; few prominent strong brown (7.5YR 4/6) clay films on faces of peds; 25 percent chert gravel; very strongly acid (pH 4.8); clear smooth boundary.

3Bt2—39 to 80 inches; yellowish brown (10YR 5/6) gravelly clay; common medium prominent light brownish gray (10YR 6/2) iron depletions on faces of peds; common fine prominent red (10R 5/8) iron depletions on faces of peds; moderate fine angular blocky structure parting to moderate very fine angular blocky; very firm; few very fine roots; common very fine tubular pores; common distinct clay films on faces of peds; 20 percent chert gravel; very strongly acid (pH 4.8).

Range in Characteristics

Depth to bedrock: More than 80 inches

Bt horizon:
Content of rock fragments—0 to 25 percent gravel

2Btx horizon:
Content of rock fragments—5 to 35 percent gravel
Texture of the fine-earth fraction—silty clay loam or silty clay

3Bt horizon:
Content of rock fragments—5 to 30 percent gravel
Texture of the fine-earth fraction—clay or silty clay

Hartville Series

The Hartville series consists of very deep, somewhat poorly drained soils on stream terraces. These soils formed in alluvium. Permeability is slow. Slopes range from 1 to 3 percent.

Taxonomic classification: Fine, mixed, active, mesic Aquic Hapludalfs

Typical Pedon

Hartville silt loam, 1 to 3 percent slopes, rarely flooded; 1,900 feet north and 50 feet east of the southwest corner of sec. 26, T. 30 N., R. 9 W.; USGS Houston topographic quadrangle; lat. 37 degrees 16 minutes 20 seconds N. and long. 91 degrees 54 minutes 10 seconds W.

A—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; strong coarse granular structure; friable; common fine roots; common very fine irregular pores; common fine black concretions of iron and manganese oxides; neutral (pH 7.0); gradual smooth boundary.

Bt1—7 to 12 inches; yellowish brown (10YR 5/4) silty clay; few prominent grayish brown (2.5Y 5/2) iron depletions on faces of peds; moderate medium subangular blocky structure parting to moderate very fine subangular blocky; firm; common fine roots; many very fine tubular pores; few prominent clay films on faces of peds; few fine black concretions of iron and manganese oxides; many medium pressure faces; very strongly acid (pH 4.5); gradual smooth boundary.

Bt2—12 to 22 inches; yellowish brown (10YR 5/4) silty clay; common prominent grayish brown (2.5Y 5/2) iron depletions on faces of peds; strong very fine angular blocky structure; very firm; few fine and coarse roots; common very fine tubular pores; many distinct clay films on faces of peds and in pores; few fine black concretions of iron and manganese oxides; many medium pressure faces; very strongly acid (pH 4.6); gradual smooth boundary.

Bt3—22 to 34 inches; dark yellowish brown (10YR 4/4) clay; many distinct grayish brown (2.5Y 5/2) iron depletions on faces of peds; moderate very fine subangular blocky structure; very firm; few fine roots; common very fine tubular pores; many distinct clay films on faces of peds and in pores; common fine black concretions of iron and manganese oxides; many medium pressure faces; moderately alkaline (pH 8.0); clear smooth boundary.

2Bt4—34 to 40 inches; gray (10YR 5/1) and yellowish brown (10YR 5/6) silty clay; moderate very fine subangular and angular blocky structure; very firm; few fine roots; common very fine tubular pores; many distinct clay films on faces of peds and in pores; many fine black concretions of iron and manganese oxides; few prominent black stains of iron and manganese oxides on faces of peds; 5 percent gravel; moderately alkaline (pH 8.2); gradual smooth boundary.

2Bt5—40 to 80 inches; gray (10YR 5/1) silty clay; yellowish brown (10YR 5/6) and brown (10YR 5/3) iron masses; strong very fine angular and subangular blocky structure; very firm; few very fine tubular pores; many distinct clay films on faces of peds and in pores; many fine black concretions of iron and manganese oxides; many prominent black stains of iron and manganese oxides on faces of peds; moderately alkaline (pH 8.2); 10 percent gravel.

Range in Characteristics

Depth to bedrock: 60 inches or more

A horizon:
Content of rock fragments—0 to 10 percent gravel

E horizon (where present):
Content of rock fragments—0 to 10 percent gravel

Bt horizon (upper part):
Content of rock fragments—0 to 10 percent gravel
Texture of the fine-earth fraction—silt loam, silty clay loam, or silty clay

Bt horizon (lower part):
Content of rock fragments—0 to 10 percent gravel
Texture of the fine-earth fraction—silty clay loam, silty clay, or clay

Hercules Series

The Hercules series consists of very deep, moderately well drained soils on flood plains. These soils formed in stream alluvium. Permeability is moderately slow. Slopes range from 0 to 3 percent.

Taxonomic classification: Clayey-skeletal, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Hercules gravelly loam, in an area of Dunning-Hercules complex, 0 to 3 percent slopes, frequently flooded; 1,200 feet south and 50 feet east of the northwest corner of sec. 26, T. 30 N., R. 9 W.; USGS Houston topographic quadrangle; lat. 37 degrees 16 minutes 41 seconds N. and long. 91 degrees 54 minutes 10 seconds W.

Ap—0 to 5 inches; very dark gray (10YR 3/1) gravelly loam, gray (10YR 5/1) dry; strong fine granular structure; very friable; common fine and very fine roots; many very fine irregular pores; 20 percent chert gravel; neutral (pH 6.8); abrupt smooth boundary.

A1—5 to 11 inches; black (10YR 2/1) gravelly loam, very dark gray (10YR 3/1) dry; moderate coarse granular structure parting to moderate fine granular; very friable; common fine and very fine roots; many very fine irregular pores; 15 percent chert gravel; neutral (pH 6.8); clear smooth boundary.

A2—11 to 21 inches; black (10YR 2/1) very gravelly clay loam, very dark gray (10YR 3/1) dry; moderate medium granular structure; friable; common fine and very fine roots; common very fine irregular pores; 55 percent chert gravel; neutral (pH 6.8); clear smooth boundary.

Bw1—21 to 31 inches; very dark gray (10YR 3/1) very gravelly clay, dark gray (10YR 4/1) dry; weak very fine subangular blocky structure; firm; few very fine roots; common very fine tubular pores; few fine prominent dark yellowish brown (10YR 4/6) masses in which iron has accumulated; 35 percent chert gravel; neutral (pH 7.0); clear smooth boundary.

Bw2—31 to 41 inches; mixed very dark gray (10YR 3/1) and very dark grayish brown (10YR 3/2) very gravelly clay, dark grayish brown (10YR 4/2) dry; weak very fine subangular blocky structure; firm; few very fine roots; many very fine tubular pores; few fine distinct dark yellowish brown (10YR 4/4) masses in which iron has accumulated; 55 percent chert gravel; neutral (pH 7.0); clear smooth boundary.

Bw3—41 to 50 inches; dark yellowish brown (10YR 4/6) extremely gravelly clay; weak fine angular blocky structure; firm; few very fine roots; many very fine tubular pores; many medium prominent dark gray (10YR 4/1) and gray (10YR 5/1) iron depletions on faces of peds; few fine black iron and manganese concretions; few prominent black iron and manganese oxide stains on faces of peds; 65 percent chert gravel; neutral (pH 7.2); clear smooth boundary.

Bw4—50 to 80 inches; dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/6) extremely gravelly clay; weak fine angular blocky structure; very firm; few very fine tubular pores; 70 percent chert gravel; common medium prominent gray (10YR 5/1) iron depletions and few fine prominent dark reddish brown (2.5YR 3/4) masses in which iron has accumulated on faces of peds; neutral (pH 7.2).

Range in Characteristics

Depth to bedrock: More than 80 inches

Ap horizon:
Content of rock fragments—10 to 50 percent gravel

Subsurface horizon:
Content of rock fragments—10 to 50 percent gravel
Texture of the fine-earth fraction—silt loam, loam, clay loam, or clay

Bw horizon:
Content of rock fragments—35 to 75 percent gravel or cobbles
Texture of the fine-earth fraction—clay, silty clay, clay loam, or sandy clay loam

Higdon Series

The Higdon series consists of very deep, somewhat poorly drained soils on low stream terraces. These soils formed in stream alluvium. Permeability is moderate. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Hapludalfs

Typical Pedon

Higdon silt loam, 0 to 3 percent slopes, rarely flooded; 400 feet north and 1,100 feet west of the southeast corner of sec. 29, T. 29 N., R. 7 W.; USGS Summersville topographic quadrangle; lat. 37 degrees 09 minutes 09 seconds N. and long. 91 degrees 43 minutes 49 seconds W.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; few fine faint dark yellowish brown (10YR 4/4) mottles; moderate fine granular structure; very friable; many very fine roots; many very fine irregular pores; few prominent black stains of iron and manganese oxides on faces of peds; neutral (pH 7.2); abrupt smooth boundary.

AE—4 to 9 inches; grayish brown (2.5Y 5/2) silt loam;

common fine prominent dark yellowish brown (10YR 4/4) iron masses and common fine faint light brownish gray (2.5Y 6/2) iron depletions on faces of peds; moderate medium subangular blocky structure; very friable; common fine and very fine roots; common very fine tubular pores; few prominent black stains of iron and manganese oxides on faces of peds; neutral (pH 7.2); abrupt smooth boundary.

Bt—9 to 17 inches; yellowish brown (10YR 5/4) silt loam; few fine faint grayish brown (10YR 5/2) iron depletions and few fine prominent strong brown (7.5YR 5/6) iron masses on faces of peds; weak medium subangular blocky structure; very friable; common very fine roots; common very fine tubular pores; common faint clay films on faces of peds; few prominent black stains of iron and manganese oxides on faces of peds; slightly acid (pH 6.4); clear smooth boundary.

Btg1—17 to 23 inches; light brownish gray (10YR 6/2) silt loam; common medium prominent yellowish brown (10YR 5/6) iron masses and common fine faint light gray (10YR 7/1) iron depletions on faces of peds; moderate medium subangular blocky structure; friable; few very fine roots; many very fine tubular pores; common distinct clay films on faces of peds; few prominent black stains of iron and manganese oxides on faces of peds; moderately acid (pH 5.8); clear smooth boundary.

Btg2—23 to 44 inches; light brownish gray (10YR 6/2) silt loam; few fine prominent yellowish brown (10YR 5/6) iron masses and common fine faint gray (10YR 6/1) iron depletions on faces of peds; moderate fine angular blocky structure; friable; few very fine tubular and few medium vesicular pores; common distinct clay films on faces of peds; many prominent black stains of iron and manganese oxides on faces of peds; moderately acid (pH 5.6); clear smooth boundary.

2Btg3—44 to 80 inches; light brownish gray (10YR 6/2) silt loam; many coarse prominent brown (10YR 4/3) iron masses on faces of peds; moderate fine subangular blocky structure; firm; common very fine tubular and few medium vesicular pores; common prominent dark gray clay seams on faces of peds; many prominent black stains of iron and manganese oxides on faces of peds; 10 percent chert gravel; moderately acid (pH 5.6).

Range in Characteristics

Depth to bedrock: More than 80 inches

Bt horizon:
Content of rock fragments—0 to 5 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

Btg horizon:
Content of rock fragments—0 to 40 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

Hogcreek Series

The Hogcreek series consists of moderately deep, moderately well drained soils on uplands. These soils formed in hillslope sediments and pedisediment over chert, orthoquartzose, or sandstone bedrock. They have a fragipan. Permeability is moderate above the fragipan and very slow in the fragipan. Slopes range from 1 to 8 percent.

Taxonomic classification: Fine-loamy, siliceous, active, mesic Typic Fragiudults

Typical Pedon

Hogcreek silt loam, 1 to 3 percent slopes; 500 feet south and 2,050 feet east of the northwest corner of sec. 16, T. 33 N., R. 10 W.; USGS Slabtown Spring topographic quadrangle; lat. 37 degrees 34 minutes 21 seconds N. and long. 92 degrees 02 minutes 25 seconds W.

Ap—0 to 4 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; very friable; many fine roots; many very fine irregular pores; 5 percent chert gravel; slightly acid (pH 6.4); abrupt smooth boundary.

Bt1—4 to 9 inches; yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; common fine and few medium roots; common fine irregular and few fine tubular pores; common faint clay films on faces of peds; common distinct pale brown (10YR 6/3) clay depletions on faces of peds; 7 percent chert gravel; slightly acid (pH 6.2); clear smooth boundary.

Bt2—9 to 19 inches; strong brown (7.5YR 5/6) silt loam; moderate fine subangular blocky structure; friable; few fine roots; many fine tubular pores; common faint clay films on faces of peds; 10 percent chert gravel; strongly acid (pH 5.3); clear smooth boundary.

Bt3—19 to 27 inches; yellowish brown (10YR 5/6) silt loam; moderate fine subangular blocky structure; friable; few fine roots; many very fine tubular pores; common faint clay films on faces of peds; few fine distinct yellowish brown (10YR 5/4) masses in which iron has accumulated; 7 percent chert

gravel; very strongly acid (pH 5.0); clear smooth boundary.

Bt4—27 to 32 inches; light brownish gray (10YR 6/2) gravelly silt loam; moderate medium angular blocky structure; friable; few fine roots; common very fine tubular and few medium vesicular pores; common distinct clay films on faces of peds and in pores; common medium distinct yellowish brown (10YR 5/4) masses in which iron has accumulated; 30 percent gravel; very strongly acid (pH 4.8); clear wavy boundary.

2Btx—32 to 39 inches; light brownish gray (10YR 6/2) and brown (10YR 5/3) extremely gravelly silt loam; strong medium angular blocky structure; very firm; common medium tubular and few medium vesicular pores; common prominent clay films on faces of peds; 70 percent gravel; 75 percent brittleness; very strongly acid (pH 4.9); abrupt wavy boundary.

3R—39 inches; chert bedrock from the Roubidoux Formation.

Range in Characteristics

Depth to bedrock: 20 to 40 inches
Depth to a fragipan: 16 to 26 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel

Bt horizon:
Content of rock fragments—5 to 35 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

2Btx horizon:
Content of rock fragments—10 to 80 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

Jerktail Series

The Jerktail series consists of very deep, somewhat poorly drained soils on uplands. These soils formed in silty colluvium and in the underlying clayey pedisediment. Permeability is slow. Slopes range from 1 to 3 percent.

Taxonomic classification: Fine, mixed, active, mesic Aquic Hapludalfs

Typical Pedon

Jerktail silt loam, 1 to 3 percent slopes; 25 feet south and 1,250 feet west of the northeast corner of sec. 12, T. 31 N., R. 11 W.; USGS Success topographic quadrangle; lat. 37 degrees 24 minutes 51 seconds N. and long. 92 degrees 05 minutes 29 seconds W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; many fine and very fine roots; many fine tubular pores; common very fine black (10YR 2/1) iron and manganese concretions; 5 percent chert gravel; slightly acid (pH 6.1); clear smooth boundary.

Bt1—5 to 10 inches; yellowish brown (10YR 5/4) silt loam; moderate fine subangular blocky structure; friable; many fine and very fine roots; many fine tubular pores; few fine faint clay films on faces of peds; common very fine prominent light gray (10YR 7/1) clay depletions on faces of peds; common very fine black (10YR 2/1) iron and manganese concretions; 5 percent chert gravel; slightly acid (pH 6.5); clear smooth boundary.

Bt2—10 to 17 inches; yellowish brown (10YR 5/4 and 5/6) silty clay loam; moderate fine subangular blocky structure; firm; common fine and very fine roots; common very fine and fine tubular pores; few fine faint clay films on faces of peds; few fine distinct grayish brown (10YR 5/2) iron depletions; common very fine black (10YR 2/1) iron and manganese concretions; 5 percent chert gravel; strongly acid (pH 5.1); clear smooth boundary.

2Bt3—17 to 22 inches; yellowish brown (10YR 5/4) gravelly clay; moderate fine subangular blocky structure; firm; common fine and very fine roots; common fine tubular pores; common fine distinct clay films on faces of peds; common fine distinct grayish brown (10YR 5/2) iron depletions; common fine prominent yellowish brown (10YR 5/8) soft masses of iron accumulation; common very fine black (10YR 2/1) iron and manganese concretions; 20 percent chert gravel; very strongly acid (pH 5.0); clear smooth boundary.

2Bt4—22 to 34 inches; yellowish brown (10YR 5/4) clay; moderate fine subangular blocky structure; firm; common fine and very fine roots; common very fine tubular pores; common fine distinct clay films on faces of peds; common fine prominent grayish brown (2.5Y 5/2) iron depletions; many fine prominent strong brown (7.5YR 5/6) masses in which iron has accumulated; few fine pressure faces; 10 percent chert gravel; very strongly acid (pH 5.0); gradual smooth boundary.

2Bt5—34 to 52 inches; dark yellowish brown (10YR 4/4) clay; weak very coarse prismatic structure parting to moderate very fine subangular blocky; firm; few fine and very fine roots; common very fine irregular and tubular pores; many prominent clay films on faces of peds; few fine prominent strong brown (7.5YR 5/6) masses in which iron has

accumulated; common fine pressure faces; 5 percent chert gravel; very strongly acid (pH 4.8); clear smooth boundary.
2Bt6—52 to 62 inches; brownish yellow (10YR 6/6) clay; weak thin platy structure parting to weak fine subangular blocky; firm; few very fine roots; common very fine irregular and tubular pores; many prominent clay films on faces of peds; few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation; common fine black (10YR 2/1) iron and manganese concretions; common prominent black (10YR 2/1) masses in which iron and manganese have accumulated; 5 percent dolostone gravel; neutral (pH 6.7); clear smooth boundary.
3R—62 inches; unweathered dolostone of the Jefferson City Formation.

Range in Characteristics

Depth to bedrock: 60 to 80 inches

Ap horizon:
Content of rock fragments—0 to 15 percent gravel

Bt horizon (upper part):
Content of rock fragments—0 to 25 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

Bt horizon (lower part):
Content of rock fragments—0 to 25 percent gravel
Texture of the fine-earth fraction—silty clay or clay

Kaintuck Series

The Kaintuck series consists of very deep, well drained soils on flood plains. These soils formed in stream alluvium. Permeability is moderately rapid. Slopes range from 0 to 3 percent.

Taxonomic classification: Coarse-loamy, siliceous, superactive, nonacid, mesic Typic Udifluvents

Typical Pedon

Kaintuck sandy loam, in an area of Kaintuck-Relfe complex, 0 to 3 percent slopes, frequently flooded; 900 feet south and 200 feet west of the northeast corner of sec. 4, T. 30 N., R. 7 W.; USGS Hartshorn topographic quadrangle; lat. 37 degrees 19 minutes 59 seconds N. and long. 91 degrees 42 minutes 08 seconds W.

A—0 to 6 inches; stratified, dark yellowish brown (10YR 4/4) and dark brown (10YR 3/3) sandy loam, pale brown (10YR 6/3) dry; massive; very friable; common fine roots; common fine irregular pores; moderately acid (pH 6.0); clear wavy boundary.
C1—6 to 30 inches; dark brown (10YR 3/3) sandy loam; massive with thin bedding planes; very friable; common medium roots; common fine irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.
C2—30 to 36 inches; very dark grayish brown (10YR 3/2) gravelly loam; massive; friable; common medium roots; common fine tubular pores; 30 percent chert gravel; slightly acid (pH 6.2); abrupt wavy boundary.
2C3—36 to 41 inches; dark brown (10YR 3/3) extremely gravelly loamy coarse sand; massive with thin bedding planes; very friable; few medium roots; many very fine irregular pores; 70 percent chert gravel; slightly acid (pH 6.2); abrupt wavy boundary.
2C4—41 to 48 inches; dark brown (10YR 3/3) gravelly coarse sand; massive with thin bedding planes; very friable; few very fine roots; many very fine irregular pores; 20 percent chert gravel; moderately acid (pH 6.0); clear wavy boundary.
2C5—48 to 80 inches; dark brown (10YR 4/3) loamy coarse sand; single grain with thin bedding planes; loose; few very fine roots; many very fine irregular pores; 10 percent chert gravel; strongly acid (pH 5.4).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
Content of rock fragments—0 to 35 percent gravel

C horizon (upper part):
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—stratified fine sandy loam, sandy loam, or loam

C horizon (lower part):
Content of rock fragments—0 to 80 percent gravel and cobbles
Texture of the fine-earth fraction—stratified fine sandy loam, sandy loam, loam, loamy sand, or sand

Lecoma Series

The Lecoma series consists of very deep, well drained soils on footslopes. These soils formed in colluvium and in the underlying hillslope sediments. Permeability is moderate. Slopes range from 3 to 15 percent.

Taxonomic classification: Fine-loamy, siliceous, active, mesic Typic Paleudalfs

Typical Pedon

Lecoma loam, 8 to 15 percent slopes; 1,050 feet north and 2,200 feet east of the southwest corner of sec. 26, T. 32 N., R. 10 W.; USGS Success topographic quadrangle; lat. 37 degrees 26 minutes 42 seconds N. and long. 92 degrees 00 minutes 15 seconds W.

Ap—0 to 8 inches; mixed, dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4) loam, light yellowish brown (10YR 6/4) and pale brown (10YR 6/3) dry; moderate fine subangular blocky structure parting to weak fine granular; very friable; many very fine and common medium roots; many very fine irregular pores; 5 percent chert gravel; moderately acid (pH 5.8); abrupt smooth boundary.

Bt1—8 to 13 inches; mixed, yellowish brown (10YR 5/6) and brown (10YR 5/3) loam; moderate fine and medium subangular blocky structure; friable; common fine and few medium roots; common very fine tubular pores; common distinct clay films on faces of peds; 5 percent chert gravel; moderately acid (pH 5.6); clear smooth boundary.

Bt2—13 to 24 inches; mixed, strong brown (7.5YR 5/6) and brown (10YR 4/3) clay loam; moderate fine and medium subangular and angular blocky structure; friable; common very fine roots; common very fine tubular pores; common distinct clay films on faces of peds; few prominent black iron-manganese stains on faces of peds; 10 percent chert gravel; moderately acid (pH 5.6); clear smooth boundary.

2Bt3—24 to 33 inches; mixed, red (2.5YR 4/6), strong brown (7.5YR 5/6), and brown (10YR 4/3) clay loam; weak fine and medium subangular blocky structure; friable; common very fine roots; common very fine tubular pores; common prominent clay films on faces of peds; common prominent black stains of iron and manganese oxides on faces of peds; 10 percent chert gravel; moderately acid (pH 5.8); clear smooth boundary.

2Bt4—33 to 50 inches; mixed, red (2.5YR 4/6) and dark yellowish brown (10YR 4/4) clay loam; weak medium subangular blocky structure; friable; few very fine roots; common fine tubular pores; common prominent clay films on faces of peds; common prominent black stains of iron and manganese oxides on faces of peds; 10 percent chert gravel; moderately acid (pH 6.0); gradual smooth boundary.

2Bt5—50 to 80 inches; mixed, red (2.5YR 4/6), dark yellowish brown (10YR 4/4), and light yellowish brown (10YR 6/4) sandy clay loam; weak medium and coarse subangular blocky structure; friable; few very fine roots; common fine tubular pores; many prominent clay films on faces of peds; common prominent black stains of iron and manganese oxides on faces of peds; 10 percent chert gravel; moderately acid (pH 6.0).

Range in Characteristics

Depth to bedrock: More than 80 inches

Bt horizon:

Texture of the fine-earth fraction—clay loam, loam, silt loam, or silty clay loam

2Bt horizon:

Content of rock fragments—0 to 10 percent gravel
Texture of the fine-earth fraction—loam, clay loam, or sandy clay loam

Lily Series

The Lily series consists of moderately deep, well drained soils on uplands. These soils formed in residuum from sandstone. Permeability is moderately rapid. Slopes range from 3 to 15 percent.

Taxonomic classification: Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Lily loam, 3 to 8 percent slopes; 2,200 feet south and 700 feet west of the northeast corner of sec. 5, T. 33 N., R. 8 W.; USGS Maples topographic quadrangle; lat. 37 degrees 35 minutes 34 seconds N. and long. 91 degrees 49 minutes 47 seconds W.

Ap—0 to 10 inches; brown (10YR 5/3) loam, very pale brown (10YR 7/3) dry; weak very fine granular structure; very friable; common very fine roots; many very fine irregular pores; 5 percent sandstone gravel; neutral (pH 6.6); clear smooth boundary.

Bt1—10 to 16 inches; yellowish brown (10YR 5/6) loam; weak very fine subangular blocky structure; friable; common very fine roots; many fine tubular pores; few faint clay films on faces of peds; 5 percent sandstone gravel; slightly acid (pH 6.4); clear smooth boundary.

Bt2—16 to 20 inches; strong brown (7.5YR 5/6) loam; moderate fine subangular blocky structure; friable; common very fine roots; common fine tubular pores; few faint clay films on faces of peds; 5 percent sandstone gravel; moderately acid (pH 6.0); clear smooth boundary.

Bt3—20 to 27 inches; strong brown (7.5YR 4/6) loam; moderate fine subangular blocky structure; firm; common very fine roots; common very fine tubular pores; common faint clay films on faces of peds; 5 percent sandstone gravel; strongly acid (pH 5.4); clear smooth boundary.

Bt4—27 to 38 inches; strong brown (7.5YR 4/6) gravelly sandy loam; many medium prominent brown (10YR 5/3) mottles; weak medium angular blocky structure; firm; few very fine roots; common very fine irregular pores; 30 percent sandstone gravel; very strongly acid (pH 4.8); abrupt wavy boundary.
2R—38 inches; sandstone bedrock of the Roubidoux Formation.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel
Texture of the fine-earth fraction—loam or fine sandy loam

Bt horizon (upper part):
Content of rock fragments—0 to 30 percent gravel
Texture of the fine-earth fraction—loam, clay loam, or fine sandy loam

Bt horizon (lower part):
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—loam, sandy clay loam, or sandy loam

Lowassie Series

The Lowassie series consists of very deep, poorly drained soils in concave areas on uplands and within sinkholes. These soils formed in loess and in the underlying hillslope sediments. Permeability is slow. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine, smectitic, mesic Vertic Epiaquults

Typical Pedon

Lowassie silt loam, 0 to 3 percent slopes, frequently ponded; 300 feet west and 900 feet south of the northeast corner of sec. 5, T. 30 N., R. 8 W.; USGS Raymondville topographic quadrangle; lat. 37 degrees 25 minutes 19 seconds N. and long. 91 degrees 49 minutes 44 seconds W.

Ap—0 to 10 inches; brown (10YR 4/3) silt loam, light gray (10YR 7/2) dry; weak fine granular structure; very friable; many fine roots; many fine tubular pores; many fine iron-manganese concretions; slightly acid (pH 6.5); abrupt smooth boundary.
BE—10 to 18 inches; grayish brown (2.5Y 5/2) silty clay loam: weak very fine subangular blocky structure; very friable; common very fine roots; many very fine tubular pores; common fine distinct light gray (2.5Y 7/2) silt coats; few very fine iron-manganese concretions; moderately acid (pH 5.9); abrupt smooth boundary.
Btg1—18 to 21 inches; grayish brown (2.5Y 5/2) silty clay; moderate fine subangular blocky structure; firm; few very fine roots; common very fine tubular pores; common prominent clay films on faces of peds; common fine prominent light olive brown (2.5Y 5/6) masses in which iron has accumulated; few very fine iron-manganese concretions; very strongly acid (pH 4.7); abrupt smooth boundary.
Btg2—21 to 36 inches; dark grayish brown (2.5Y 4/2) and olive brown (2.5Y 4/4) clay; moderate medium subangular blocky structure parting to strong very fine angular blocky; very firm; common very fine tubular and few medium vesicular pores; common prominent clay films on faces of peds; common prominent light gray (2.5Y 7/2) silt coats; common fine prominent yellowish brown (10YR 5/6) masses in which iron has accumulated; common medium iron-manganese concretions; very strongly acid (pH 4.5); clear smooth boundary.
2Btg3—36 to 41 inches; light brownish gray (2.5Y 6/2), light yellowish brown (2.5Y 6/4), and light olive brown (2.5Y 5/6) silt loam; moderate fine subangular blocky structure; friable; common very fine tubular and few medium vesicular pores; few distinct clay films on faces of peds; common very fine iron-manganese concretions; very strongly acid (pH 4.9); clear wavy boundary.
2Btg4—41 to 80 inches; light yellowish brown (2.5Y 6/4), light brownish gray (2.5Y 6/2), and light olive brown (2.5Y 5/6) silt loam; weak very fine subangular blocky structure; friable; common very fine tubular and few medium vesicular pores; few faint clay films on faces of peds; 1 percent fine chert gravel; common very fine iron-manganese concretions; very strongly acid (pH 4.9).

Range in Characteristics

Depth to bedrock: More than 80 inches

Btg horizon:
Texture of the fine-earth fraction—silty clay or clay

2Btg horizon:
Texture of the fine-earth fraction—silty clay loam, silt loam, silty clay, or clay

Mano Series

The Mano series consists of very deep, moderately well drained soils on uplands. These soils formed in loess, hillslope sediments, and the underlying clayey sediments and residuum. Permeability is slow. Slopes range from 1 to 35 percent.

Taxonomic classification: Loamy-skeletal over clayey, mixed, semiactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Mano very gravelly silt loam, in an area of Mano-Ocie complex, 8 to 15 percent slopes, stony; 2,200 feet north and 2,200 feet east of the southwest corner of sec. 3, T. 31 N., R. 12 W.; USGS Roubidoux topographic quadrangle; lat. 37 degrees 25 minutes 19 seconds N. and long. 92 degrees 14 minutes 32 seconds W.

Oe—0 to 1 inch; partially decomposed oak leaves.

A—1 to 9 inches; brown (10YR 5/3) very gravelly silt loam, light brownish gray (10YR 6/2) dry; weak fine subangular blocky structure; very friable; common medium roots; many very fine irregular pores; 45 percent chert gravel and 10 percent chert cobbles; strongly acid (pH 5.2); clear smooth boundary.

E—9 to 20 inches; light yellowish brown (10YR 6/4) very gravelly silt loam; weak fine subangular blocky structure; very friable; common medium roots; common very fine tubular pores; 50 percent chert gravel; moderately acid (pH 5.8); clear smooth boundary.

Bt1—20 to 27 inches; strong brown (7.5YR 5/6) and light yellowish brown (10YR 6/4) very gravelly silty clay loam; few fine faint yellowish red (5YR 5/6) mottles; weak medium subangular blocky structure; friable; few medium roots; many very fine tubular pores; common faint clay films on faces of peds; 55 percent chert gravel; moderately acid (pH 5.8); abrupt smooth boundary.

2Bt2—27 to 42 inches; mixed, brown (10YR 5/3) and yellowish brown (10YR 5/8) clay; many medium prominent yellowish red (5YR 5/6) mottles; strong medium angular blocky structure; very firm; few fine and medium roots; common very fine tubular pores; common faint clay films on faces of peds and in pores; many prominent black stains of iron and manganese oxides on faces of peds; 10 percent chert and sandstone gravel; moderately acid (pH 6.0); clear smooth boundary.

2Bt3—42 to 80 inches; brownish yellow (10YR 6/6) clay; few fine prominent yellowish red (5YR 5/6) mottles; few fine prominent light gray (10YR 7/2) iron depletions on faces of peds; strong medium subangular blocky structure; very firm; few fine roots; few very fine tubular pores; common faint clay films on faces of peds; few prominent black stains of iron and manganese oxides on faces of peds; 10 percent chert and sandstone gravel; slightly alkaline (pH 7.6).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
- Content of rock fragments—35 to 80 percent gravel; 0 to 30 percent cobbles

E horizon:
- Content of rock fragments—35 to 80 percent gravel; 0 to 30 percent cobbles
- Texture of the fine-earth fraction—silt loam or loam

Bt horizon:
- Content of rock fragments—35 to 80 percent gravel; 0 to 30 percent cobbles
- Texture of the fine-earth fraction—silt loam or silty clay loam

2Bt horizon:
- Content of rock fragments—0 to 30 percent gravel
- Texture of the fine-earth fraction—silty clay or clay

Moko Series

The Moko series consists of shallow and very shallow, somewhat excessively drained soils on uplands. These soils formed in hillslope sediments and residuum. Permeability is moderate. Slopes range from 3 to 35 percent.

Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Lithic Hapludolls

Typical Pedon

Moko extremely flaggy silt loam, in an area of Moko-Rock outcrop complex, 15 to 35 percent slopes, extremely flaggy; 450 feet north and 1,650 feet east of the southwest corner of sec. 19, T. 28 N., R. 11 W.; USGS Cabool SW topographic quadrangle; lat. 37 degrees 05 minutes 19 seconds N. and long. 92 degrees 11 minutes 24 seconds W.

A—0 to 5 inches; black (10YR 2/1) extremely flaggy loam, very dark brown (10YR 2/2) dry; weak fine granular structure; very friable; many fine roots; many very fine irregular pores; 40 percent dolostone flagstones, 20 percent chert gravel, and 10 percent chert cobbles; moderately alkaline (pH 8.2); clear wavy boundary.

Bw—5 to 12 inches; very dark grayish brown (10YR 3/2) extremely flaggy loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure; friable; many fine roots; many fine tubular pores; 40 percent dolostone flagstones, 15

percent chert gravel, and 5 percent chert cobbles; slightly alkaline (pH 7.8); abrupt smooth boundary.
2R—12 inches; dolostone.

Range in Characteristics

Depth to bedrock: 6 to 20 inches

A horizon:
Content of rock fragments—40 to 80 percent gravel, cobbles, and flagstones

Bw horizon:
Content of rock fragments—40 to 80 percent gravel, cobbles, and flagstones
Texture of the fine-earth fraction—silt loam, loam, silty clay loam, or clay loam

Ocie Series

The Ocie series consists of deep, moderately well drained soils on uplands. These soils formed in hillslope sediments and in the underlying clayey sediments and residuum. Permeability is slow. Slopes range from 1 to 35 percent.

Taxonomic classification: Loamy-skeletal over clayey, mixed, semiactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Ocie extremely gravelly silt loam, in an area of Mano-Ocie complex, 15 to 35 percent slopes, stony; 2,900 feet north and 100 feet west of the southeast corner of sec. 7, T. 28 N., R. 11 W.; USGS Cabool SW topographic quadrangle; lat. 37 degrees 07 minutes 25 seconds N. and long. 92 degrees 10 minutes 40 seconds W.

A—0 to 4 inches; dark brown (10YR 4/3) extremely gravelly silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; very friable; few coarse roots; many fine pores; 65 percent chert gravel; moderately acid (pH 5.8); abrupt smooth boundary.
E—4 to 17 inches; yellowish brown (10YR 5/4) extremely gravelly silt loam; weak medium subangular blocky structure; friable; common fine roots; many fine pores; 70 percent chert gravel; strongly acid (pH 5.4); clear smooth boundary.
Bt1—17 to 25 inches; strong brown (7.5YR 5/6) extremely gravelly silty clay loam; moderate medium subangular blocky structure; friable; few medium roots; many fine pores; few distinct clay films on faces of peds; 65 percent chert gravel; strongly acid (pH 5.2); clear wavy boundary.
2Bt2—25 to 33 inches; strong brown (7.5YR 5/8) clay; moderate coarse subangular blocky structure; firm; few medium roots; common fine pores; few distinct clay films on faces of peds; 10 percent chert gravel; very strongly acid (pH 5.0); clear wavy boundary.
2Bt3—33 to 50 inches; strong brown (7.5YR 5/8) clay; common fine faint yellowish red (5YR 5/8) and common fine prominent brown (10YR 5/3) mottles; strong coarse subangular blocky structure; firm; few fine roots; few fine pores; common distinct clay films on faces of peds; 5 percent chert gravel; moderately acid (pH 5.8); abrupt wavy boundary.
3R—50 inches; dolostone.

Range in Characteristics

Depth to bedrock: 40 to 60 inches

A horizon:
Content of rock fragments—35 to 70 percent gravel; 0 to 10 percent cobbles

E horizon:
Content of rock fragments—35 to 80 percent gravel; 0 to 30 percent cobbles
Texture of the fine-earth fraction—silt loam or loam

Bt horizon:
Content of rock fragments—35 to 80 percent gravel; 0 to 20 percent cobbles
Texture of the fine-earth fraction—silt loam, silty clay loam, loam, or clay loam

2Bt horizon:
Content of rock fragments—0 to 30 percent gravel and cobbles

Perche Series

The Perche series consists of very deep, moderately well drained soils on flood plains. These soils formed in stream alluvium. Permeability is moderate. Slopes range from 0 to 3 percent.

Taxonomic classification: Coarse-loamy, mixed, superactive, nonacid, mesic Aquic Udifluvents

Typical Pedon

Perche loam, 0 to 3 percent slopes, occasionally flooded; 900 feet south and 2,100 feet east of the northwest corner of sec. 1, T. 33 N., R. 8 W.; USGS Maples topographic quadrangle; lat. 37 degrees 35 minutes 47 seconds N. and long. 91 degrees 45 minutes 54 seconds W.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) loam, pale brown (10YR 6/3) dry; moderate medium granular structure; very friable; many fine

and few medium roots; many very fine irregular pores; neutral (pH 7.0); abrupt smooth boundary.

A—6 to 10 inches; very dark grayish brown (10YR 3/2) loam, pale brown (10YR 6/3) dry; moderate coarse granular structure; very friable; many fine roots; many very fine irregular pores; neutral (pH 6.8); clear smooth boundary.

C1—10 to 16 inches; dark brown (10YR 3/3) and brown (10YR 5/3) loam; massive with weak thin bedding planes; very friable; many fine roots; common fine tubular pores; few distinct black stains of iron and manganese lining pores and between beds; moderately acid (pH 6.0); clear wavy boundary.

C2—16 to 21 inches; brown (10YR 5/3) loam; massive with weak thin bedding planes; very friable; many fine roots; many fine tubular pores; many coarse prominent light brownish gray (10YR 6/2) iron depletions and few fine prominent dark yellowish brown (10YR 4/6) iron masses lining pores; few distinct black masses of iron and manganese lining pores and between beds; moderately acid (pH 5.8); gradual smooth boundary.

Cg1—21 to 30 inches; light brownish gray (10YR 6/2) sandy loam; massive with weak thin bedding planes; very friable; few fine roots; many fine tubular pores; common fine faint yellowish brown (10YR 5/6) iron masses lining pores; few distinct black masses of iron and manganese lining pores and between beds; strongly acid (pH 5.4); gradual smooth boundary.

Cg2—30 to 48 inches; light brownish gray (10YR 6/2) and yellowish brown (10YR 5/6) sandy loam; massive with weak thin bedding planes; very friable; few fine roots; common fine tubular pores; few distinct black masses of iron and manganese lining pores and between beds; strongly acid (pH 5.4); gradual wavy boundary.

2Cg3—48 to 80 inches; light brownish gray (10YR 6/2) gravelly loamy sand; single grain; loose; common fine irregular pores; few distinct black masses of iron and manganese lining pores; 30 percent chert gravel; strongly acid (pH 5.4).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel

C horizon:
Content of rock fragments—0 to 15 percent gravel
Texture of the fine-earth fraction—loam, silt loam, or fine sandy loam

2C horizon:
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—sandy loam, loam, loamy sand, or fine sandy loam

Pomme Series

The Pomme series consists of very deep, well drained soils on structural benches and strath terraces. These soils formed in a mixture of loess and the underlying hillslope sediments and alluvium. Permeability is moderate. Slopes range from 3 to 8 percent.

Taxonomic classification: Fine-loamy, mixed, semiactive, mesic Typic Paleudalfs

Typical Pedon

Pomme silt loam, 3 to 8 percent slopes; 1,500 feet north and 2,300 feet east of the southwest corner of sec. 35, T. 28 N., R. 9 W.; USGS Willow Springs North topographic quadrangle; lat. 37 degrees 03 minutes 21 seconds N. and long. 91 degrees 54 minutes 02 seconds W.

Ap—0 to 7 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure parting to moderate fine granular; very friable; common fine roots; many very fine tubular pores; 14 percent chert gravel; neutral (pH 6.8); clear smooth boundary.

Bt1—7 to 12 inches; mixed, strong brown (7.5YR 5/6) and dark brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; few fine roots; common very fine tubular pores; few prominent clay films on faces of peds; many fine prominent dark yellowish brown silt coats on faces of peds; 10 percent chert gravel; slightly acid (pH 6.3); clear smooth boundary.

Bt2—12 to 18 inches; mixed, strong brown (7.5YR 4/6) and dark yellowish brown (10YR 4/4) gravelly silty clay loam; weak fine subangular blocky structure; friable; few fine roots; common very fine tubular pores; few prominent clay films on faces of peds; many fine prominent dark yellowish brown silt coats on faces of peds; common very fine black concretions of iron and manganese oxides; common very fine black stains of iron and manganese oxides on faces of peds; 15 percent chert gravel; moderately acid (pH 6.0); clear smooth boundary.

2Bt3—18 to 39 inches; mixed, red (2.5YR 4/6) and reddish brown (5YR 4/4) very gravelly clay loam; moderate fine angular blocky structure; firm; few very fine roots; few fine tubular and few coarse vesicular pores; common medium prominent clay films on faces of peds and on gravel; 55 percent

chert gravel; moderately acid (pH 5.8); gradual smooth boundary.
2Bt4—39 to 80 inches; red (2.5YR 4/6) extremely gravelly clay; moderate fine angular blocky structure; firm; common coarse vesicular pores; common medium prominent clay films on faces of peds and on gravel; 65 percent chert gravel; strongly acid (pH 5.2).

Range in Characteristics

Depth to bedrock: More than 80 inches

Ap or A horizon:
Content of rock fragments—0 to 15 percent gravel

Bt horizon:
Content of rock fragments—5 to 45 percent gravel; 0 to 20 percent cobbles
Texture of the fine-earth fraction—silt loam, silty clay loam, or clay loam

2Bt horizon:
Content of rock fragments—35 to 70 percent gravel; 0 to 30 percent cobbles
Texture of the fine-earth fraction—clay or clay loam

Possumtrot Series

The Possumtrot series consists of very deep, well drained soils on low stream terraces. These soils formed in stream alluvium. Permeability is moderately rapid. Slopes range from 0 to 3 percent.

Taxonomic classification: Coarse-loamy, siliceous, superactive, mesic Fluventic Dystrudepts

Typical Pedon

Possumtrot fine sandy loam, 0 to 3 percent slopes, occasionally flooded; 800 feet south and 200 feet east of the northwest corner of sec. 10, T. 31 N., R. 7 W.; USGS Montauk topographic quadrangle; lat. 37 degrees 24 minutes 21 seconds N. and long. 91 degrees 39 minutes 02 seconds W.

Ap—0 to 9 inches; dark brown (10YR 3/3) fine sandy loam, yellowish brown (10YR 5/4) dry; weak very fine granular structure; very friable; many fine roots; many fine pores; 5 percent gravel; slightly acid (pH 6.5); abrupt smooth boundary.
Bw1—9 to 22 inches; dark yellowish brown (10YR 3/6) fine sandy loam; weak fine subangular blocky structure; friable; many fine roots; many fine pores; 5 percent gravel; slightly acid (pH 6.5); clear wavy boundary.
Bw2—22 to 31 inches; strong brown (7.5YR 4/6) fine sandy loam; weak fine subangular blocky structure; friable; common fine roots; many fine pores; 5 percent gravel; slightly acid (pH 6.5); clear wavy boundary.
Bw3—31 to 40 inches; strong brown (7.5YR 4/6) fine sandy loam; weak fine subangular blocky structure; friable; few fine roots; many fine pores; very strongly acid (pH 5.0); abrupt smooth boundary.
2C1—40 to 45 inches; brown (7.5YR 4/4) extremely gravelly loamy sand; massive; friable; many fine pores; 70 percent gravel; very strongly acid (pH 5.0); abrupt smooth boundary.
2C2—45 to 58 inches; strong brown (7.5YR 4/6) gravelly loamy sand; massive; friable; many fine pores; 25 percent gravel; very strongly acid (pH 5.0); abrupt smooth boundary.
2C3—58 to 80 inches; yellowish brown (10YR 5/6) gravelly coarse sand; single grain; loose; many fine pores; 15 percent gravel; moderately acid (pH 6.0).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel

Bw horizon:
Content of rock fragments—0 to 30 percent gravel
Texture of the fine-earth fraction—sandy loam, fine sandy loam, or loam

C horizon:
Content of rock fragments—0 to 75 percent gravel
Texture of the fine-earth fraction—loamy sand, sand, or sandy loam

Poynor Series

The Poynor series consists of very deep, well drained soils on uplands. These soils formed in hillslope sediments and in the underlying clayey sediments and residuum. Permeability is moderate. Slopes range from 1 to 50 percent.

Taxonomic classification: Loamy-skeletal over clayey, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Poynor very gravelly silt loam, in an area of Bendavis-Poynor complex, 8 to 15 percent slopes, stony; 2,600 feet north of the southeast corner of sec. 16, T. 29 N., R. 7 W.; USGS Summersville topographic quadrangle; lat. 37 degrees 11 minutes 15 seconds N. and long. 91 degrees 42 minutes 27 seconds W.

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2)

very gravelly silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; very friable; many fine and medium roots; many very fine irregular pores; 45 percent chert gravel; moderately acid (pH 5.8); abrupt smooth boundary.

E—7 to 14 inches; light brownish gray (10YR 6/2) extremely gravelly silt loam; weak fine subangular blocky structure; friable; common fine and medium roots; many very fine irregular pores; 65 percent chert gravel; strongly acid (pH 5.4); clear wavy boundary.

Bt1—14 to 21 inches; yellowish brown (10YR 5/4) very gravelly silt loam; moderate medium angular blocky structure parting to strong fine angular blocky; firm; few fine roots; many very fine tubular pores; few faint clay films on faces of peds; many pale brown silt coats on faces of peds; 40 percent chert gravel; moderately acid (pH 5.8); clear wavy boundary.

Bt2—21 to 29 inches; strong brown (7.5YR 5/6) and dark brown (7.5YR 4/4) extremely gravelly silty clay loam; moderate medium angular blocky structure parting to strong fine angular blocky; firm; few fine roots; common medium tubular pores; common distinct clay films on faces of peds; 65 percent chert gravel; very strongly acid (pH 4.6); clear wavy boundary.

2Bt3—29 to 37 inches; yellowish red (5YR 4/6) and yellowish brown (10YR 5/6) clay; strong fine angular blocky structure; very firm; few fine roots; few fine tubular pores; many distinct clay films on faces of peds; 5 percent chert gravel; extremely acid (pH 4.4); clear wavy boundary.

2Bt4—37 to 80 inches; red (2.5YR 4/6), grayish brown (10YR 5/2), and light brownish gray (10YR 6/2) clay; strong fine angular blocky structure; very firm; few fine vesicular pores; many prominent clay films on faces of peds; 10 percent chert gravel; extremely acid (pH 4.0).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
- Content of rock fragments—35 to 80 percent gravel; 0 to 35 percent cobbles

E horizon:
- Content of rock fragments—35 to 80 percent gravel; 0 to 30 percent cobbles
- Texture of the fine-earth fraction—silt loam or loam

Bt horizon:
- Content of rock fragments—35 to 80 percent chert gravel; 0 to 30 percent chert cobbles
- Texture of the fine-earth fraction—silt loam, silty clay loam, loam, or clay loam

2Bt horizon:
- Content of rock fragments—0 to 35 percent chert gravel or chert cobbles
- Texture of the fine-earth fraction—clay or silty clay

Racket Series

The Racket series consists of very deep, well drained soils on flood plains. These soils formed in stream alluvium. Permeability is moderate. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Racket loam, 0 to 3 percent slopes, frequently flooded; 1,900 feet south and 200 feet west of the northeast corner of sec. 10, T. 30 N., R. 10 W.; USGS Bucyrus topographic quadrangle; lat. 37 degrees 19 minutes 19 seconds N. and long. 92 degrees 00 minutes 51 seconds W.

Ap—0 to 9 inches; very dark gray (10YR 3/1) loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; very friable; common medium roots; many very fine irregular pores; 1 percent chert gravel; neutral (pH 7.0); abrupt smooth boundary.

A—9 to 25 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; moderate medium granular structure; very friable; few coarse and medium roots; many very fine irregular pores; 2 percent chert gravel; neutral (pH 7.2); clear smooth boundary.

Bw1—25 to 36 inches; very dark grayish brown (10YR 3/2) silt loam, brown (10YR 5/3) dry; moderate very fine subangular blocky structure; very friable; few coarse and fine roots; common fine tubular pores; 2 percent chert gravel; neutral (pH 7.2); clear smooth boundary.

Bw2—36 to 48 inches; very dark grayish brown (10YR 3/2) silt loam; moderate very fine subangular blocky structure; very friable; few fine roots; common very fine tubular pores; 3 percent chert gravel; neutral (pH 7.2); clear smooth boundary.

2BC—48 to 53 inches; brown (10YR 4/3) very gravelly sandy loam; weak very fine subangular blocky structure; very friable; many fine irregular pores; 40 percent chert gravel; neutral (pH 7.2); abrupt smooth boundary.

2C—53 to 80 inches; brownish yellow (10YR 6/6) extremely gravelly coarse sand; single grain; loose; many medium irregular pores; 80 percent chert gravel; neutral (pH 7.2).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel
Texture of the fine-earth fraction—loam or silt loam

Bw horizon:
Content of rock fragments—0 to 15 percent gravel
Texture of the fine-earth fraction—loam or silt loam

2BC and 2C horizons:
Content of rock fragments—0 to 80 percent gravel
Texture of the fine-earth fraction—stratified silt loam, loam, clay loam, sandy clay loam, loamy fine sand, or loamy sand

Raftville Series

The Raftville series consists of moderately deep, well drained soils on strath terraces. These soils formed in alluvium deposited over chert or sandstone. Permeability is moderately rapid. Slopes range from 1 to 8 percent.

Taxonomic classification: Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Raftville loam, 1 to 8 percent slopes, rarely flooded; 200 feet south and 150 feet west of the northeast corner of sec. 6, T. 29 N., R. 11 W.; USGS Bucyrus topographic quadrangle; lat. 37 degrees 14 minutes 58 seconds N. and long. 92 degrees 10 minutes 38 seconds W.

Ap—0 to 10 inches; dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; weak thin platy structure parting to weak fine granular; friable; common very fine roots; many fine irregular pores; 5 percent chert gravel; moderately acid (pH 5.9); abrupt smooth boundary.
Bt1—10 to 22 inches; strong brown (7.5YR 4/6) loam; weak fine subangular blocky structure; friable; few fine roots; many fine tubular pores; few faint clay films on faces of peds; 5 percent chert gravel; strongly acid (pH 5.5); abrupt smooth boundary.
2Bt2—22 to 29 inches; strong brown (7.5YR 5/6) very gravelly loam; weak very fine subangular blocky structure; firm; few fine roots; few fine tubular pores; few faint clay films on faces of peds; 60 percent chert gravel; strongly acid (pH 5.1); clear smooth boundary.
2BC—29 to 37 inches; reddish brown (5YR 4/4) extremely gravelly loam; massive; loose; few fine roots; common very fine irregular pores; 70 percent chert gravel; strongly acid (pH 5.2); abrupt wavy boundary.
3R—37 inches; sandstone.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel

Bt horizon:
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—silt loam, silty clay loam, loam, or clay loam

2Bt horizon:
Content of rock fragments—35 to 80 percent gravel
Texture of the fine-earth fraction—loam or clay loam

Razort Series

The Razort series consists of very deep, well drained soils on stream terraces. These soils formed in stream alluvium. Permeability is moderate. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine-loamy, mixed, active, mesic Mollic Hapludalfs

Typical Pedon

Razort silt loam, 0 to 3 percent slopes, rarely flooded; 2,200 feet north and 2,500 feet east of the southwest corner of sec. 2, T. 32 N., R. 12 W.; USGS Roby topographic quadrangle; lat. 37 degrees 30 minutes 33 seconds N. and long. 92 degrees 13 minutes 26 seconds W.

Ap1—0 to 4 inches; dark brown (10YR 3/3) silt loam, dark brown (10YR 4/3) dry; moderate medium granular structure; very friable; many fine roots; many fine irregular pores; neutral (pH 6.8); clear smooth boundary.
Ap2—4 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, dark brown (10YR 4/3) dry; moderate medium granular structure; very friable; many fine roots; many fine irregular pores; neutral (pH 6.6); clear smooth boundary.
Bt1—8 to 11 inches; brown (10YR 5/3) silt loam; weak fine subangular blocky structure; very friable; common very fine roots; many very fine tubular pores; dark grayish brown coatings on faces of peds and in vertical pores; few fine black concretions of iron and manganese oxides; neutral (pH 6.6); clear smooth boundary.
Bt2—11 to 17 inches; dark yellowish brown (10YR 4/4)

clay loam; moderate medium subangular blocky structure; friable; few fine roots; common fine tubular pores; common faint clay films on faces of peds and in pores; slightly acid (pH 6.4); gradual smooth boundary.

Bt3—17 to 27 inches; mixed, dark yellowish brown (10YR 3/4) and yellowish brown (10YR 5/4) loam; moderate medium subangular blocky structure; friable; few fine roots; common fine tubular pores; common faint clay films on faces of peds and in pores; neutral (pH 6.6); gradual smooth boundary.

Bt4—27 to 42 inches; dark yellowish brown (10YR 4/4) gravelly loam; weak medium subangular blocky structure; friable; few fine roots; common fine tubular pores; common faint clay films on faces of peds and in pores; 15 percent chert gravel; neutral (pH 6.8); gradual smooth boundary.

BC—42 to 80 inches; dark yellowish brown (10YR 4/4) loam; weak medium subangular blocky structure; friable; few fine roots; few very fine tubular pores; common medium faint brown (10YR 5/3) silt coats; 5 percent chert gravel; neutral (pH 6.8).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel

Bt horizon:
Content of rock fragments—0 to 15 percent gravel
Texture of the fine-earth fraction—silt loam, loam, or clay loam

BC or C horizon:
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—loam, clay loam, silty clay loam, or loamy sand

Relfe Series

The Relfe series consists of very deep, excessively drained soils on flood plains. These soils formed in stream alluvium. Permeability is rapid. Slopes range from 0 to 3 percent.

Taxonomic classification: Sandy-skeletal, siliceous, mesic Mollic Udifluvents

Typical Pedon

Relfe very gravelly sandy loam, in an area of Kaintuck-Relfe complex, 0 to 3 percent slopes, frequently flooded; 375 feet north and 200 feet west of the southeast corner of sec. 33, T. 32 N., R. 7 W.; USGS Montauk topographic quadrangle; lat. 37 degrees 25 minutes 26 seconds N. and long. 91 degrees 42 minutes 05 seconds W.

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) very gravelly sandy loam, brown (10YR 5/3) dry; weak fine granular structure; very friable; many very fine roots; many very fine irregular pores; 35 percent chert gravel and 10 percent chert cobbles; moderately acid (pH 6.0); clear smooth boundary.

AC—6 to 12 inches; dark brown (10YR 3/3) very gravelly sandy loam, pale brown (10YR 6/3) dry; weak fine granular structure; very friable; common very fine and few fine roots; many very fine irregular and few fine tubular pores; 35 percent chert gravel and 10 percent chert cobbles; slightly acid (pH 6.3); clear wavy boundary.

C1—12 to 34 inches; dark yellowish brown (10YR 4/4) very cobbly loamy sand; massive; very friable; few fine and very fine roots; many very fine irregular pores; 20 percent chert gravel and 20 percent chert cobbles; medium acid (pH 5.9); clear smooth boundary.

C2—34 to 47 inches; dark yellowish brown (10YR 4/4) loamy sand; massive; very friable; few fine roots; many very fine irregular pores; 10 percent chert gravel; neutral (pH 6.9); abrupt smooth boundary.

C3—47 to 80 inches; yellowish brown (10YR 5/4) extremely gravelly loamy sand; single grain; loose; few fine roots; many very fine irregular pores; 60 percent chert gravel and 20 percent chert cobbles; neutral (pH 7.2).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
Content of rock fragments—20 to 80 percent gravel or cobbles

C horizon:
Content of rock fragments—20 to 80 percent gravel or cobbles
Texture of the fine-earth fraction—stratified sandy loam, loamy sand, or sand

Sandbur Series

The Sandbur series consists of very deep, somewhat excessively drained, rapidly permeable soils formed in loamy alluvium on flood plains. Slopes range from 0 to 3 percent.

Taxonomic classification: Coarse-loamy, siliceous, superactive, nonacid, mesic Mollic Udifluvents

Typical Pedon

Sandbur sandy loam, in an area of Relfe-Sandbur complex, 0 to 3 percent slopes, frequently flooded; 900 feet south and 800 feet west of the northeast corner of sec. 26, T. 25 N., R. 7 W.; USGS Peace Valley topographic quadrangle; Howell County, Missouri.

A—0 to 6 inches; dark brown (10YR 3/3) sandy loam, brown (10YR 4/3) dry; weak fine granular structure; very friable; many fine to coarse roots; many fine and very fine irregular and tubular pores; strongly acid (pH 5.5); gradual smooth boundary.

C1—6 to 16 inches; dark yellowish brown (10YR 3/4) loam; massive; very friable; many very fine to coarse roots; many fine and very fine irregular and tubular pores; common distinct discontinuous very dark grayish brown (10YR 3/2) organic stains; massive; slightly acid (pH 6.1); gradual smooth boundary.

C2—16 to 26 inches; dark yellowish brown (10YR 3/4) loam; massive; very friable; few fine to coarse roots; common fine and very fine irregular and tubular pores; common distinct discontinuous very dark gray (10YR 3/1) organic stains; moderately acid (pH 5.9); gradual smooth boundary.

2Btb1—26 to 37 inches; brown (10YR 4/3) very gravelly loam; weak fine subangular blocky structure; friable; few fine and medium roots; many very fine irregular and tubular pores; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common prominent black (N 2/0) iron-manganese stains; 10 percent sandstone gravel, 20 percent sandstone cobbles, and 25 percent sandstone stones; strongly acid (pH 5.5); gradual wavy boundary.

2Btb2—37 to 48 inches; brown (10YR 4/3) extremely cobbly loam; weak fine granular structure; friable; few fine and medium roots; many fine and medium irregular pores; few faint brown (10YR 4/3) clay films on faces of peds; 30 percent sandstone gravel, 20 percent sandstone cobbles, and 10 percent sandstone stones; slightly acid (pH 6.4); gradual wavy boundary.

2Btb3—48 to 80 inches; yellowish brown (10YR 5/4) extremely cobbly sandy clay loam; weak fine granular structure; friable; few fine and very fine roots; many fine and medium irregular pores; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common prominent very pale brown (10YR 7/3) redoximorphic depletions; few prominent strong brown (7.5YR 5/8) redoximorphic concentrations; 50 percent sandstone gravel, 20 percent sandstone cobbles, and 10 percent sandstone stones; neutral (pH 6.9).

Range in Characteristics

A horizon:
Content of rock fragments—0 to 15 percent gravel

C horizon:
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—fine sandy loam, sandy loam, or loam

2Btb horizon:
Content of rock fragments—0 to 80 percent gravel, cobbles, or stones
Texture of the fine-earth fraction—sandy clay loam, sandy loam, loam, loamy sand, or sand

Scholten Series

The Scholten series consists of very deep, moderately well drained soils on side slopes of hills. These soils formed in hillslope sediments and in the underlying clayey sediments and residuum. They have a fragipan. Permeability is moderate above the fragipan, very slow in the fragipan, and moderately rapid below the fragipan. Slopes range from 8 to 15 percent.

Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Typic Fragiudults

Typical Pedon

Scholten very gravelly silt loam, in an area of Scholten-Poynor complex, 8 to 15 percent slopes; 1,000 feet north and 2,300 feet east of the southwest corner of sec. 22, T. 30 N., R. 11 W.; USGS Huggins topographic quadrangle; lat. 37 degrees 17 minutes 10 seconds N. and long. 92 degrees 08 minutes 05 seconds W.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) very gravelly silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; very friable; many fine roots; many fine pores; 40 percent chert gravel; slightly acid (pH 6.2); abrupt smooth boundary.

Bt1—8 to 13 inches; yellowish brown (10YR 5/4) very gravelly silt loam; moderate fine subangular blocky structure; friable; many fine roots; many fine pores; few faint clay films on faces of peds; 50 percent chert gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt2—13 to 19 inches; yellowish brown (10YR 5/6) extremely gravelly silt loam; moderate fine subangular blocky structure; friable; many fine roots; many fine pores; common faint clay films on faces of peds and in pores; 65 percent chert gravel; very strongly acid (pH 4.6); clear wavy boundary.

2Btx1—19 to 28 inches; brown (10YR 5/3) extremely gravelly silt loam; moderate coarse prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between prisms; few fine pores; few distinct clay films on faces of prisms; 85 percent chert gravel; brittle; very strongly acid (pH 4.6); clear wavy boundary.

2Btx2—28 to 33 inches; mottled, light brownish gray (10YR 6/2) and brown (10YR 5/3) extremely gravelly silt loam; moderate coarse prismatic structure parting to moderate medium subangular blocky; firm; few fine pores; few distinct clay films on faces of prisms; 80 percent chert gravel; brittle; very strongly acid (pH 4.6); clear wavy boundary.

3Bt—33 to 80 inches; red (2.5YR 4/8) extremely gravelly clay; common medium prominent light yellowish brown (10YR 6/4) mottles; strong medium subangular blocky structure; firm; few fine pores; common distinct clay films on faces of peds; 65 percent chert gravel; very strongly acid (pH 4.8).

Range in Characteristics

Depth to bedrock: More than 80 inches
Depth to fragipan: 16 to 24 inches

A horizon:
Content of rock fragments—15 to 55 percent gravel

E horizon:
Content of rock fragments—15 to 55 percent gravel

Bt horizon:
Content of rock fragments—35 to 65 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

2Btx horizon:
Content of rock fragments—60 to 80 percent gravel or cobbles
Texture of the fine-earth fraction—silt loam or silty clay loam

3Bt horizon:
Content of rock fragments—15 to 80 percent gravel or cobbles
Texture of the fine-earth fraction—silty clay loam or silty clay, clay

Secesh Series

The Secesh series consists of very deep, well drained soils on flood plains. These soils formed in stream alluvium. Permeability is moderate. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine-loamy, siliceous, active, mesic Ultic Hapludalfs

Typical Pedon

Secesh silt loam, in an area of Secesh-Tilk complex, 0 to 3 percent slopes, occasionally flooded; 2,200 feet north and 220 feet east of the southwest corner of sec. 17, T. 29 N., R. 7 W; USGS Summersville topographic quadrangle; lat. 37 degrees 11 minutes 12 seconds N. and long. 91 degrees 44 minutes 35 seconds W.

Ap—0 to 10 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) and light yellowish brown (10YR 6/4) dry; weak fine subangular blocky structure parting to weak medium granular; very friable; many fine roots; common very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

Bt1—10 to 17 inches; brown (10YR 4/3) and yellowish brown (10YR 5/6) silt loam; weak fine subangular blocky structure; friable; common fine roots; few coarse and common very fine tubular pores; few faint clay films on faces of peds; neutral (pH 6.8); gradual smooth boundary.

Bt2—17 to 31 inches; yellowish brown (10YR 5/6) silty clay loam; moderate fine subangular blocky structure; firm; common fine roots; common very fine tubular pores; common distinct clay films on faces of peds; few distinct pale brown silt coats on faces of peds; few prominent black stains of iron and manganese oxides on faces of peds; neutral (pH 6.6); gradual smooth boundary.

2Bt3—31 to 36 inches; brown (10YR 4/3) and yellowish brown (10YR 5/6) gravelly clay loam; moderate fine and medium angular blocky structure; firm; few very fine roots; common very fine tubular and irregular pores; common distinct clay films on faces of peds; few distinct pale brown silt coats on faces of peds; few prominent black stains of iron and manganese oxides on faces of peds; 15 percent chert gravel; moderately acid (pH 6.0); gradual smooth boundary.

2Bt4—36 to 42 inches; yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4) very gravelly clay loam; moderate medium angular blocky structure; firm; few very fine roots; common very fine tubular pores; common distinct clay films on faces of peds; few distinct pale brown silt coats on faces of peds; many very fine black concretions of iron and manganese oxides; common prominent black stains of iron and manganese oxides on faces of peds; 30 percent chert gravel and 10 percent chert cobbles; moderately acid (pH 6.0); gradual wavy boundary.

2Bt5—42 to 80 inches; brown (10YR 4/3) very cobbly clay loam; moderate very fine subangular blocky structure; friable; common very fine irregular pores; common distinct clay films on faces of peds; few distinct pale brown silt coats on faces of peds; many very fine black concretions of iron and manganese oxides; common prominent black stains of iron and manganese oxides on faces of peds; 40 percent chert gravel and 20 percent chert cobbles; strongly acid (pH 5.2).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel

Bt horizon (upper part):
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—loam, silt loam, or silty clay loam

Bt horizon (lower part):
Content of rock fragments—15 to 60 percent gravel; 0 to 20 percent cobbles
Texture of the fine-earth fraction—loam, sandy loam, or clay loam

Splitlimb Series

The Splitlimb series consists of very deep, somewhat poorly drained soils on upland ridges and within sinkholes. These soils formed in loess and in the underlying hillslope sediments. Permeability is moderate. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Paleudults

Typical Pedon

Splitlimb silt loam, 0 to 3 percent slopes, frequently ponded; 2,200 feet north and 1,200 feet east of the southwest corner of sec. 33, T. 33 N., R. 8 W.; USGS Maples topographic quadrangle; lat. 37 degrees 31 minutes 04 seconds N. and long. 91 degrees 49 minutes 24 seconds W.

Ap—0 to 10 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; moderate very fine granular structure; very friable; many fine roots; many fine irregular and common fine tubular pores; moderately acid (pH 5.7); abrupt smooth boundary.

Bt1—10 to 15 inches; dark yellowish brown (10YR 4/4) silt loam; moderate very fine subangular blocky structure; very friable; common very fine roots; many fine tubular pores; few distinct clay films on faces of peds; few fine faint brown (10YR 5/3) masses in which iron has accumulated; strongly acid (pH 5.1); clear smooth boundary.

Bt2—15 to 20 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine subangular blocky structure; friable; common very fine roots; many fine tubular pores; few distinct clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions; common medium prominent strong brown (7.5YR 4/6) masses in which iron has accumulated; very strongly acid (pH 4.8); clear smooth boundary.

Bt3—20 to 25 inches; light brownish gray (10YR 6/2) silt loam; strong medium platy structure; firm; few very fine roots; common fine tubular and few medium vesicular pores; common distinct clay films on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation; common prominent black (N 2/0) masses that have accumulated iron and manganese oxides and are on faces of peds; very strongly acid (pH 4.8); clear smooth boundary.

Bt4—25 to 34 inches; brown (7.5YR 4/4 and 10YR 5/3) silty clay loam; moderate medium platy structure; firm; few very fine roots; many very fine tubular pores; common prominent clay films on faces of peds; common fine prominent gray (10YR 6/1) iron depletions; common prominent black (N 2/0) masses that have accumulated iron and manganese oxide and are on faces of peds; very strongly acid (pH 4.7); gradual smooth boundary.

2Bt5—34 to 60 inches; yellowish red (5YR 4/6) and yellowish brown (10YR 5/4) silty clay loam; weak medium platy structure parting to moderate fine angular blocky; firm; many very fine tubular pores; common prominent clay films on faces of peds; common fine prominent gray (10YR 6/1) iron depletions; very strongly acid (pH 4.7).

Range in Characteristics

Depth to bedrock: More than 80 inches

Bt horizon:
Content of rock fragments—0 to 5 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

2Bt horizon:
Content of rock fragments—0 to 5 percent gravel
Texture of the fine-earth fraction—silt loam, silty clay loam, or silty clay

Stultz Series

The Stultz series consists of deep, somewhat poorly drained soils on flood plains. These soils formed in stream alluvium. Permeability is moderately slow. Slopes range from 0 to 3 percent.

Taxonomic classification: Clayey-skeletal, mixed, superactive, mesic Fluvaquentic Hapludolls

Typical Pedon

Stultz very cobbly loam, 0 to 3 percent slopes, frequently flooded; 800 feet south and 1,100 feet east of the northwest corner of sec. 9, T. 29 N., R. 9 W.; USGS Elk Creek topographic quadrangle; lat. 37 degrees 12 minutes 45 seconds N. and long. 91 degrees 56 minutes 20 seconds W.

Ap—0 to 8 inches; very dark gray (10YR 3/1) very cobbly loam, dark gray (10YR 4/1) dry; weak fine granular structure; friable; many fine roots; many very fine irregular pores; few fine black iron-manganese concretions; 30 percent chert gravel and 20 percent chert cobbles; slightly acid (pH 6.4); clear smooth boundary.

A—8 to 13 inches; black (10YR 2/1) gravelly clay loam, very dark grayish brown (10YR 3/2) dry; weak fine subangular blocky structure parting to moderate fine and medium granular; firm; few fine roots; many very fine irregular pores; common fine black iron-manganese concretions; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; 15 percent chert gravel; neutral (pH 6.8); clear smooth boundary.

AC—13 to 20 inches; mixed, very dark grayish brown (10YR 3/2) and very dark gray (10YR 3/1) gravelly clay loam, very dark grayish brown (10YR 3/2) and dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure; firm; common fine, common very fine and few medium roots; common very fine tubular pores; 20 percent chert gravel; neutral (pH 6.6); abrupt smooth boundary.

Cg1—20 to 38 inches; dark grayish brown (2.5Y 4/2) and olive brown (2.5Y 4/4) extremely gravelly clay; massive; firm; few fine and medium roots; common very fine tubular pores; many fine black (N 2/0) iron and manganese oxide concretions; 50 percent chert gravel and 10 percent chert cobbles; neutral (pH 7.0); clear smooth boundary.

Cg2—38 to 44 inches; dark grayish brown (2.5Y 4/2) and olive brown (2.5Y 4/4) extremely gravelly clay; massive; very firm; few very fine roots; common very fine irregular pores; common fine black (N 2/0) iron and manganese oxide concretions; common medium black (N 2/0) masses in which iron and manganese oxide have accumulated; 60 percent chert gravel and 10 percent chert cobbles; neutral (pH 7.0); clear smooth boundary.

Cg3—44 to 51 inches; olive brown (2.5Y 4/4) and dark grayish brown (2.5Y 4/2) extremely gravelly clay; massive; firm; few very fine roots; common very fine irregular pores; many very fine black (N 2/0) iron and manganese oxide concretions; few prominent black (N 2/0) masses in which iron and manganese oxide have accumulated; 70 percent chert gravel; slightly alkaline (pH 7.4); abrupt wavy boundary.

2R—51 inches; dolostone.

Range in Characteristics

Depth to bedrock: 40 to 60 inches
Thickness of the mollic epipedon: 10 to 24 inches

A or Ap horizon:
- Content of rock fragments—0 to 60 percent gravel; 0 to 30 percent cobbles

Subsurface horizon:
- Content of rock fragments—15 to 85 percent gravel; 0 to 30 percent cobbles
- Texture of the fine-earth fraction—silt loam, loam, or clay loam

C horizon:
- Content of rock fragments—35 to 85 percent gravel; 0 to 30 percent cobbles
- Texture of the fine-earth fraction—clay loam, silty clay, clay, or sandy clay

Tanglenook Series

The Tanglenook series consists of very deep, poorly drained soils on footslopes. These soils formed in alluvium. Permeability is slow. Slopes range from 0 to 3 percent.

Taxonomic classification: Fine, mixed, superactive, mesic Typic Argiaquolls

Typical Pedon

Tanglenook silt loam, 0 to 3 percent slopes, rarely flooded; 5,000 feet south and 200 feet east of the northwest corner of sec. 2, T. 29 N., R. 10 W.; USGS Cabool NE topographic quadrangle; lat. 37 degrees 14 minutes 10 seconds N. and long. 92 degrees 00 minutes 48 seconds W.

Ap—0 to 10 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate

medium granular structure; very friable; many fine roots; many very fine irregular pores; neutral (pH 6.6); abrupt smooth boundary.
A—10 to 16 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; many very fine and common fine roots; many very fine tubular pores; neutral (pH 6.8); abrupt smooth boundary.
Btg1—16 to 31 inches; very dark gray (10YR 3/1) silty clay; moderate medium subangular blocky structure parting to moderate very fine angular blocky; very firm; common fine roots; common very fine tubular pores; many faint clay films on faces of peds; common fine prominent yellowish red (5YR 4/6) iron masses on faces of peds; slightly acid (pH 6.4); clear irregular boundary.
Btg2—31 to 40 inches; grayish brown (10YR 5/2) silty clay; moderate very fine angular blocky structure; very firm; few very fine roots; few very fine tubular pores; common prominent clay films on faces of peds; common fine prominent dark yellowish brown (10YR 4/6) iron masses and few fine faint dark grayish brown (10YR 4/2) iron depletions on faces of peds; neutral (pH 6.6); clear smooth boundary.
Btg3—40 to 48 inches; grayish brown (10YR 5/2) silty clay; moderate very fine angular blocky structure; very firm; few very fine roots; few very fine tubular pores; many prominent clay films on faces of peds; few fine faint dark gray (10YR 4/1) iron depletions and many medium prominent dark yellowish brown (10YR 4/6) iron masses on faces of peds; neutral (pH 6.6); clear smooth boundary.
Btg4—48 to 80 inches; yellowish brown (10YR 5/4) silty clay; weak very fine angular blocky structure; firm; few very fine roots; common medium tubular pores; common prominent clay films on faces of peds and in pores; few medium distinct dark grayish brown (10YR 4/2) iron depletions and many medium distinct dark yellowish brown (10YR 4/6) iron masses on faces of peds; neutral (pH 6.6).

Range in Characteristics

Depth to bedrock: More than 80 inches

Btg horizon (upper part):
Content of rock fragments—0 to 5 percent gravel
Texture of the fine-earth fraction—silty clay loam or silty clay

Btg horizon (middle part):
Content of rock fragments—0 to 5 percent gravel
Texture of the fine-earth fraction—silty clay or clay

Btg horizon (lower part):
Content of rock fragments—0 to 5 percent gravel
Texture of the fine-earth fraction—silty clay, clay, or clay loam

Tick Series

The Tick series consists of deep, well drained soils on uplands. These soils formed in residuum from dense, clayey sediments. Permeability is moderately slow. Slopes range from 3 to 50 percent.

Taxonomic classification: Fine, mixed, subactive, mesic Typic Hapludults

Typical Pedon

Tick very gravelly silt loam, 3 to 15 percent slopes, stony; 960 feet north and 320 feet west of the southeast corner of sec. 29, T. 28 N., R. 9 W.; USGS Willow Springs North topographic quadrangle; lat. 37 degrees 04 minutes 16 seconds N. and long. 91 degrees 56 minutes 45 seconds W.

Oi—1 to 0 inch; slightly decomposed oak leaf litter.
A—0 to 5 inches; brown (10YR 5/3) very gravelly silt loam, light yellowish brown (10YR 6/4) dry; moderate medium granular structure; very friable; common coarse roots; many fine tubular pores; 35 percent chert gravel; strongly acid (pH 5.2); clear smooth boundary.
E—5 to 10 inches; light yellowish brown (10YR 6/4) gravelly silt loam; weak fine subangular blocky structure; very friable; few coarse roots; common very fine tubular and many very fine irregular pores; 15 percent chert gravel; very strongly acid (pH 4.8); clear smooth boundary.
Bt1—10 to 18 inches; brownish yellow (10YR 6/6) silty clay loam; weak medium platy structure parting to weak medium subangular blocky; friable; few coarse roots; common very fine tubular pores; common distinct clay films on faces of peds; common fine black (N 2/0) iron and manganese oxide concretions; 5 percent soft mudstone paragravel; very strongly acid (pH 4.8); clear smooth boundary.
Bt2—18 to 27 inches; mixed, yellow (10YR 7/6 and 7/8) and very pale brown (10YR 8/2) gravelly silty clay loam; moderate medium platy structure parting to moderate very fine angular blocky; friable; few medium roots; few very fine tubular pores; common distinct clay films on faces of peds; 30 percent soft mudstone paragravel; very strongly acid (pH 4.6); gradual wavy boundary.
Bt3—27 to 41 inches; mixed, yellow (10YR 7/6 and 7/8) very gravelly silty clay; strong thick platy structure parting to strong medium platy and strong fine angular blocky; firm; few fine roots; few very

fine tubular pores; common fine distinct clay films on faces of peds; 40 percent soft mudstone paragravel; very strongly acid (pH 4.6); clear wavy boundary.

2Cd—41 to 80 inches; soft, dense, clayey stratified mudstone.

Range in Characteristics

Depth to 2Cd horizon: 40 to 60 inches

A horizon:
Content of rock fragments—35 to 70 percent gravel

E horizon:
Content of rock fragments—5 to 50 percent gravel
Texture of the fine-earth fraction—silt loam or loam

Bt horizon (upper part):
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—silt loam, silty clay loam, or silty clay

Bt horizon (lower part):
Content of rock fragments—0 to 60 percent gravel
Texture of the fine-earth fraction—silty clay or clay

Tilk Series

The Tilk series consists of very deep, well drained soils on stream terraces and alluvial fans. These soils formed in stream alluvium. Permeability is moderately rapid. Slopes range from 0 to 3 percent.

Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Ultic Hapludalfs

Typical Pedon

Tilk very gravelly loam, 0 to 3 percent slopes, rarely flooded; 800 feet south and 300 feet west of the northeast corner of sec. 29, T. 29 N., R. 11 W.; USGS Cabool NE topographic quadrangle; lat. 37 degrees 10 minutes 24 seconds N. and long. 92 degrees 09 minutes 49 seconds W.

Ap—0 to 5 inches; dark brown (10YR 4/3) very gravelly loam, pale brown (10YR 6/3) dry; weak very fine granular structure; very friable; many very fine roots; many very fine irregular pores; 55 percent chert gravel; moderately acid (pH 6.0); abrupt smooth boundary.

Bt1—5 to 10 inches; yellowish brown (10YR 5/6) very gravelly loam; weak medium subangular blocky structure parting to weak very fine subangular blocky; very friable; common very fine and few fine roots; many very fine tubular pores; very few faint clay films on faces of peds; 40 percent chert gravel; strongly acid (pH 5.1); clear wavy boundary.

Bt2—10 to 17 inches; dark yellowish brown (10YR 4/6) extremely gravelly loam; moderate fine subangular blocky structure; very friable; common fine and few medium roots; many very fine tubular pores; very few faint clay films on faces of peds; 65 percent chert gravel; strongly acid (pH 5.1); abrupt wavy boundary.

Bt3—17 to 31 inches; strong brown (7.5YR 4/6) extremely gravelly fine sandy loam; moderate medium subangular blocky structure; very friable; few fine and medium roots; common fine tubular pores; common distinct clay films on faces of peds; 70 percent chert gravel; strongly acid (pH 5.1); clear wavy boundary.

Bt4—31 to 44 inches; strong brown (7.5YR 5/6) very gravelly fine sandy loam; moderate medium subangular blocky structure; very friable; few fine and medium roots; many very fine tubular pores; common prominent clay films on faces of peds; 45 percent chert gravel; strongly acid (pH 5.1); clear wavy boundary.

BC—44 to 80 inches; yellowish brown (10YR 5/6) extremely gravelly loamy coarse sand; weak fine granular structure; very friable; few fine roots; many very fine tubular pores; few distinct clay films bridging sand grains; 85 percent chert gravel; moderately acid (pH 5.6).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
Content of rock fragments—35 to 60 percent gravel

Bt horizon:
Content of rock fragments—35 to 75 percent gravel
Texture of the fine-earth fraction—loam, clay loam, sandy loam, or fine sandy loam

BC horizon:
Content of rock fragments—35 to 75 percent gravel or cobbles
Texture of the fine-earth fraction—loamy sand, sandy loam, or sand

Tonti Series

The Tonti series consists of very deep, moderately well drained soils on uplands. These soils formed in a mixture of silty material and hillslope sediments and the underlying clayey sediments or residuum. They have a fragipan. Permeability is moderate above the

fragipan and very slow in the fragipan. Slopes range from 1 to 8 percent.

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Fragiudults

Typical Pedon

Tonti silt loam, 1 to 3 percent slopes; 2,200 feet north and 2,200 feet west of the southeast corner of sec. 11, T. 33 N., R. 8 W.; USGS Maples topographic quadrangle; lat. 37 degrees 34 minutes 32 seconds N. and long. 91 degrees 46 minutes 48 seconds W.

Ap—0 to 8 inches; dark brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine subangular blocky and moderate fine granular structure; very friable; many very fine roots; many very fine irregular pores; 10 percent chert gravel; slightly acid (pH 6.2); abrupt smooth boundary.

Bt1—8 to 16 inches; strong brown (7.5YR 4/6) gravelly silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; many very fine tubular pores; common faint clay films on faces of peds; few fine black concretions of iron and manganese oxides; 15 percent chert gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt2—16 to 21 inches; brown (10YR 5/3) gravelly silty clay loam; few fine prominent strong brown (7.5YR 4/6) mottles; moderate medium subangular blocky structure; firm; few very fine roots; many very fine tubular pores; common faint clay films on faces of peds; few fine black concretions of iron and manganese oxides; 25 percent chert gravel; very strongly acid (pH 4.8); abrupt wavy boundary.

2Btx1—21 to 27 inches; grayish brown (10YR 5/2) very gravelly silt loam; common fine prominent yellowish brown (10YR 5/8) iron masses on faces of peds; moderate very coarse prismatic structure parting to moderate medium subangular blocky; very firm; few very fine roots; common very fine tubular pores; common distinct clay films on faces of peds; few fine black concretions of iron and manganese oxides; 55 percent chert gravel; brittle; very strongly acid (pH 4.6); clear smooth boundary.

2Btx2—27 to 40 inches; pale brown (10YR 6/3) extremely gravelly silty clay loam; common fine prominent yellowish red (5YR 4/6) iron masses on faces of peds; moderate very coarse prismatic structure parting to moderate fine angular blocky; very firm; few very fine tubular pores; common distinct clay films on faces of peds; few fine black concretions of iron and manganese oxides; 60 percent chert gravel; brittle; very strongly acid (pH 4.6); clear wavy boundary.

3Bt1—40 to 54 inches; mixed, red (2.5YR 4/8), yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4) gravelly clay; moderate medium subangular blocky structure; firm; few fine and many very fine tubular pores; many prominent clay films on faces of peds; 20 percent chert gravel; very strongly acid (pH 4.8); gradual smooth boundary.

3Bt2—54 to 80 inches; mixed, red (10R 4/8) and dark yellowish brown (10YR 4/6) extremely gravelly clay; weak medium subangular blocky structure; firm; few very fine tubular pores; few prominent clay films on faces of peds; 70 percent chert and sandstone gravel; very strongly acid (pH 4.8).

Range in Characteristics

Depth to bedrock: More than 80 inches
Depth to a fragipan: 18 to 32 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel

Bt horizon:
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

2Btx horizon:
Content of rock fragments—35 to 60 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

3Bt horizon:
Content of rock fragments—20 to 80 percent gravel and cobbles
Texture of the fine-earth fraction—silty clay or clay

Viburnum Series

The Viburnum series consists of very deep, moderately well drained soils on uplands. These soils formed in loess, hillslope sediments, and the underlying residuum from cherty Jefferson City dolostone. Permeability is moderately slow. Slopes range from 1 to 15 percent.

Taxonomic classification: Fine, mixed, active, mesic Aquic Paleudults

Typical Pedon

Viburnum silt loam, 1 to 3 percent slopes; 300 feet south and 300 feet east of the northwest corner of sec. 36, T. 32 N., R. 8 W.; USGS Licking topographic quadrangle; lat. 37 degrees 26 minutes 07 seconds N. and long. 91 degrees 46 minutes 06 seconds W.

A—0 to 4 inches; brown (10YR 5/3) silt loam, pale brown (10YR 6/3) dry; weak very fine subangular

blocky structure; very friable; many medium roots; many very fine vesicular pores; 5 percent chert gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt1—4 to 10 inches; mixed, dark yellowish brown (10YR 4/4) and brown (10YR 5/3) silt loam; weak very fine and fine subangular blocky structure; friable; common medium roots; many very fine vesicular pores; few faint clay films on faces of peds; 10 percent chert gravel; very strongly acid (pH 4.8); clear smooth boundary.

Bt2—10 to 17 inches; brown (7.5YR 4/4) gravelly silty clay loam; moderate fine subangular blocky structure; firm; common medium roots; many very fine vesicular pores; common faint clay films on faces of peds; 10 percent chert gravel and 5 percent chert cobbles; very strongly acid (pH 4.8); clear wavy boundary.

2Bt3—17 to 21 inches; mixed, brown (7.5YR 4/4) and yellowish brown (10YR 5/4) silty clay; few fine prominent light brownish gray (10YR 6/2) iron depletions and brown (10YR 5/3) iron masses on faces of peds; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few medium roots; few very fine tubular pores; common prominent clay films on faces of peds; 10 percent chert gravel; very strongly acid (pH 4.8); clear wavy boundary.

3Bt4—21 to 39 inches; mixed, red (2.5YR 5/6) and dark brown (10YR 4/3) very gravelly clay; common fine prominent dark grayish brown (10YR 4/2) iron depletions on faces of peds; strong medium subangular blocky structure parting to strong very fine subangular blocky; firm; common medium roots; few very fine tubular pores; many faint clay films on faces of peds; 30 percent chert gravel and 10 percent chert cobbles; very strongly acid (pH 4.7); clear smooth boundary.

3Bt5—39 to 56 inches; mixed, red (2.5YR 4/6) and yellowish brown (10YR 5/6) gravelly clay; weak medium prismatic structure parting to strong fine subangular blocky; firm; few medium roots; common very fine vesicular and tubular pores; common prominent clay films in root channels and pores; 15 percent chert gravel; very strongly acid (pH 4.6); abrupt wavy boundary.

3Bt6—56 to 80 inches; mixed, dark yellowish brown (10YR 3/6), light gray (10YR 6/1), and yellowish brown (10YR 5/6) extremely gravelly clay; moderate medium subangular blocky structure parting to moderate very fine subangular blocky; firm; very few fine roots; common very fine vesicular pores; common distinct clay films on faces of peds; 45 percent chert gravel and 15 percent chert cobbles; very strongly acid (pH 4.5).

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:
- Content of rock fragments—0 to 60 percent gravel

Bt and 2Bt horizons:
- Content of rock fragments—0 to 35 percent gravel; 0 to 15 percent cobbles
- Texture of the fine-earth fraction—silt loam, silty clay loam, or silty clay

3Bt horizon:
- Content of rock fragments—15 to 65 percent gravel; 0 to 20 percent cobbles
- Texture of the fine-earth fraction—silty clay or clay

Viraton Series

The Viraton series consists of very deep, moderately well drained soils on uplands. These soils formed in a mixture of loess and hillslope sediments and the underlying clayey sediments or residuum. They have a fragipan. Permeability is moderate above and below the fragipan and very slow in the fragipan. Slopes range from 3 to 8 percent.

Taxonomic classification: Fine-loamy, siliceous, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Viraton silt loam, in an area of Gressy-Viraton complex, 3 to 8 percent slopes; 400 feet north and 1,300 feet east of the southwest corner of sec. 7, T. 21 N., R. 10 W.; USGS Caulfield topographic quadrangle; lat. 36 degrees 29 minutes 57 seconds N. and long. 92 degrees 06 minutes 52 seconds W.; Howell County, Missouri.

Ap—0 to 6 inches; dark yellowish brown (10YR 4/4) silt loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure; very friable; common very fine and fine roots; common very fine and fine tubular pores; 2 percent chert gravel; strongly acid (pH 5.5); clear smooth boundary.

Bt1—6 to 11 inches; brown (7.5YR 5/4) silt loam; strong fine subangular blocky structure; friable; few very fine and fine roots; common fine and medium tubular pores; common distinct clay films on faces of peds; 5 percent chert gravel; moderately acid (pH 5.6); clear smooth boundary.

Bt2—11 to 16 inches; strong brown (7.5YR 4/6) gravelly

silt loam; strong fine subangular blocky structure; firm; few very fine and fine roots; many fine, medium, and coarse vesicular and tubular pores; common distinct clay films on faces of peds; many prominent brown (10YR 5/3) iron depletions throughout; 25 percent chert gravel; strongly acid (pH 5.5); clear smooth boundary.

2Btx—16 to 26 inches; strong brown (7.5YR 5/6) extremely gravelly clay loam; weak very coarse prismatic structure parting to strong medium subangular blocky; very firm; 70 percent brittle; very few very fine roots between prisms; common fine, medium, and coarse vesicular and tubular pores; common distinct clay films on faces of peds; many prominent brown (10YR 5/3) iron depletions throughout; 65 percent chert gravel; strongly acid (pH 5.4); clear wavy boundary.

3Bt1—26 to 36 inches; dark red (2.5YR 3/6) extremely gravelly clay; strong very fine angular blocky structure; very firm; very few very fine roots; common fine and medium vesicular and tubular pores; many distinct clay films on faces of peds; few prominent brown (10YR 5/3) iron depletions throughout; 60 percent chert gravel and 5 percent sandstone flagstones; strongly acid (pH 5.4); clear wavy boundary.

3Bt2—36 to 58 inches; red (2.5YR 4/6) and strong brown (7.5YR 5/6) clay; strong fine angular blocky structure; very firm; very few very fine tubular pores; common distinct clay films on faces of peds; 2 percent chert gravel; strongly acid (pH 5.4); clear wavy boundary.

3Bt3—58 to 80 inches; red (2.5YR 4/8) and yellow (10YR 7/8) clay; strong fine angular blocky structure; very firm; very few very fine tubular pores; common distinct clay films on faces of peds; 2 percent chert gravel; strongly acid (pH 5.4).

Range in Characteristics

Depth to bedrock: More than 80 inches
Depth to a fragipan: 16 to 32 inches

A horizon:
Content of rock fragments—0 to 15 percent gravel

Bt horizon:
Content of rock fragments—0 to 35 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

2Btx horizon:
Content of rock fragments—35 to 70 percent gravel
Texture of the fine-earth fraction—silt loam, silty clay loam, or clay loam

3Bt horizon:
Content of rock fragments—0 to 70 percent gravel and cobbles
Texture of the fine-earth fraction—silty clay or clay

Winnipeg Series

The Winnipeg series consists of very deep, well drained soils on structural benches and strath terraces. These soils formed in loess and in the underlying hillslope sediments. Permeability is moderately slow. Slopes range from 2 to 5 percent.

Taxonomic classification: Fine-silty mixed, active, mesic Typic Paleudalfs

Typical Pedon

Winnipeg silt loam, 2 to 5 percent slopes; 1,000 feet north and 200 feet west of the southeast corner of sec. 31, T. 30 N., R. 10 W.; USGS Bucyrus topographic quadrangle; lat. 37 degrees 15 minutes 24 seconds N. and long. 92 degrees 04 minutes 18 seconds W.

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, light yellowish brown (10YR 6/4) dry; weak fine granular structure; very friable; many very fine roots; many very fine irregular pores; neutral (pH 6.6); 1 percent chert gravel; clear smooth boundary.

Bt1—6 to 11 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; common fine roots; many very fine tubular pores; few faint patchy brown (7.5YR 4/4) clay films on faces of peds; neutral (pH 7.0); clear smooth boundary.

Bt2—11 to 16 inches; 50 percent yellowish brown (10YR 5/4) and 50 percent strong brown (7.5YR 5/8) silty clay loam; moderate medium subangular blocky structure; friable; common fine roots; many very fine tubular pores; few prominent discontinuous brown (7.5YR 4/4) clay films on faces of peds; few very fine prominent black (10YR 2/1) stains of iron and manganese oxides on faces of peds; neutral (pH 7.0); clear smooth boundary.

2Bt3—16 to 30 inches; 40 percent red (2.5YR 4/8), 30 percent strong brown (7.5YR 4/6), and 30 percent pale brown (10YR 6/3) silty clay loam; strong medium subangular blocky structure; firm; few fine roots; many very fine tubular pores; common prominent discontinuous yellowish red (5YR 4/6) clay films on faces of peds; common medium prominent black (10YR 2/1) stains of iron and manganese oxides on faces of peds; slightly acid (pH 6.2); clear smooth boundary.

2Bt4—30 to 38 inches; 50 percent red (2.5YR 4/8), 30 percent strong brown (7.5YR 5/6), and 20 percent pale brown (10YR 6/3) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; common fine tubular pores; many prominent discontinuous yellowish red (5YR 4/6) clay films on faces of peds and in pores; common fine prominent black (10YR 2/1) stains of iron and manganese oxides on faces of peds; many fine black (10YR 2/1) concretions of iron and manganese oxides; strongly acid (pH 5.2); clear wavy boundary.

2Bt5—38 to 44 inches; 50 percent red (2.5YR 4/8), 40 percent strong brown (7.5YR 5/6), and 10 percent pale brown (10YR 6/3) clay loam; strong fine subangular blocky structure; firm; many very fine tubular pores; many prominent discontinuous yellowish red (5YR 4/6) clay films on faces of peds and in pores; few fine prominent black (10YR 2/1) stains of iron and manganese oxides on faces of peds; 10 percent chert gravel; moderately acid (pH 5.6); abrupt smooth boundary.

3Bt6—44 to 80 inches; 70 percent red (2.5YR 4/8), 20 percent strong brown (7.5YR 5/6), and 10 percent pale brown (10YR 6/3) clay; moderate medium subangular blocky structure; firm; many very fine tubular pores; many prominent discontinous yellowish red (5YR 4/6) clay films on faces of peds and in pores; many medium prominent black (10YR 2/1) stains of iron and manganese oxides on faces of peds; 5 percent chert gravel; neutral (pH 6.6).

Range in Characteristics

Depth to bedrock: More than 80 inches

Bt horizon:

Content of rock fragments—0 to 10 percent gravel
Texture of the fine-earth fraction—silt loam or silty clay loam

2Bt horizon:

Content of rock fragments—0 to 15 percent gravel
Texture of the fine-earth fraction—silty clay loam or silty clay

Yelton Series

The Yelton series consists of very deep, moderately well drained soils on toeslopes. These soils formed in loess and in the underlying hillslope sediments. They have a fragipan. Permeability is moderate above the fragipan, slow in the fragipan, and moderate below the fragipan. Slopes range from 3 to 8 percent.

Taxonomic classification: Fine-loamy, siliceous, active, mesic Typic Fragiudults

Typical Pedon

Yelton silt loam, 3 to 8 percent slopes; 50 feet north and 2,250 feet west of the southeast corner of sec. 16, T. 33 N., R. 10 W.; USGS Slabtown Springs topographic quadrangle; lat. 37 degrees 33 minutes 34 seconds N. and long. 92 degrees 02 minutes 11 seconds W.

Ap1—0 to 4 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 7/3) dry; moderate fine subangular blocky structure; very friable; common very fine roots; many very fine irregular pores; 2 percent chert gravel; neutral (pH 7.0); clear smooth boundary.

Ap2—4 to 9 inches; dark brown (10YR 4/3) loam; weak medium angular blocky structure; friable; common very fine roots; many very fine irregular and few very fine tubular pores; 5 percent chert gravel; slightly acid (pH 6.4); clear wavy boundary.

Bt1—9 to 13 inches; dark yellowish brown (10YR 4/6) clay loam; weak fine angular and subangular blocky structure; friable; common very fine roots; common very fine tubular and few fine vesicular pores; few distinct clay films on faces of peds; 5 percent chert gravel; very strongly acid (pH 4.8); gradual smooth boundary.

Bt2—13 to 21 inches; dark yellowish brown (10YR 4/6) clay loam; moderate medium subangular blocky structure; friable; few fine roots; common fine tubular pores; common prominent clay films on faces of peds; 5 percent chert gravel; very strongly acid (pH 4.6); abrupt smooth boundary.

2Btx1—21 to 25 inches; mixed, dark yellowish brown (10YR 4/6) and grayish brown (10YR 5/2) loam; many medium prominent brown (7.5YR 4/4) iron masses and common fine distinct light gray (10YR 7/1) iron depletions on faces of peds; moderate very coarse prismatic structure parting to strong thin platy; very firm; few very fine roots; many very fine tubular pores; common prominent clay films on faces of peds; brittle; 10 percent chert gravel; very strongly acid (pH 4.6); abrupt smooth boundary.

2Btx2—25 to 32 inches; light gray (10YR 7/2) loam; common medium prominent light yellowish brown (10YR 6/4) iron masses on faces of peds; moderate very coarse prismatic structure parting to strong thin platy; very firm; few very fine roots;

many very fine tubular pores; common prominent clay films on faces of peds; brittle; 10 percent chert gravel; very strongly acid (pH 4.6); abrupt smooth boundary.

2Btx3—32 to 41 inches; light gray (10YR 7/2) extremely gravelly loam; common medium faint white (10YR 8/2) iron depletions and many medium prominent dark yellowish brown (10YR 4/4) iron masses on faces of peds; moderate very coarse prismatic structure parting to weak fine subangular blocky; very firm; few very fine roots; many very fine tubular and few medium vesicular pores; few distinct clay films on faces of peds; many prominent black stains of iron and manganese oxides on faces of peds; 60 percent chert gravel and 5 percent sandstone cobbles; very strongly acid (pH 4.5); abrupt smooth boundary.

3Bt—41 to 80 inches; brownish yellow (10YR 6/6) clay loam; common medium prominent red (2.5YR 4/8) iron masses and many fine prominent white (10YR 7/2) iron depletions on faces of peds; moderate coarse prismatic structure parting to moderate thin platy; very firm; common fine tubular pores; common distinct clay films on faces of peds; 5 percent chert gravel; very strongly acid (pH 5.0).

Range in Characteristics

Depth to bedrock: More than 80 inches
Depth to a fragipan: 18 to 28 inches

Bt horizon:
- Content of rock fragments—0 to 10 percent gravel
- Texture of the fine-earth fraction—clay loam, loam, or sandy clay loam

2Btx horizon:
- Content of rock fragments—0 to 75 percent gravel; 0 to 20 percent cobbles
- Texture of the fine-earth fraction—fine sandy loam, loam, or clay loam

3Bt horizon:
- Content of rock fragments—0 to 35 percent gravel or cobbles
- Texture of the fine-earth fraction—clay loam, loam, sandy clay loam, or clay

Formation of the Soils

This section relates the soils in the survey area to the major factors of soil formation. It also describes the geology, physiography, and hydrology of the survey area.

Factors of Soil Formation

Soil is the product of soil-forming processes acting on accumulated or deposited geologic material. The characteristics of the soil are determined by the type of parent material; the plant and animal life on and in the soil; the climate under which the soil-forming factors were active; topography, or lay of the land; and the length of time these forces have been active.

The parent material affects the kind of soil profile that is formed and in extreme cases determines it almost entirely. Plant and animal life are the active factors of soil formation. The climate determines the amount of water available for leaching and the amount of heat for physical and chemical changes. Together, climate and plant and animal life act on the parent material and slowly change it to a natural body that has genetically related horizons. Topography commonly modifies these other factors. Finally, time is required for changes in the parent material to result in the formation of a soil. Generally, a long time is required for the development of distinct soil horizons.

These factors of soil formation are all so closely interrelated in their effects on the soil that few generalizations can be made about the effect of any one factor unless conditions are specified for the others. Soil formation is complex, and many processes of soil development are still unknown.

Parent Material

Parent material is the unconsolidated mass from which soil is formed. The formation or deposition of this material is the first step in the development of a soil profile. The characteristics of the parent material determine the chemical and mineralogical composition of the soil.

Living Organisms

Plants and animals living on or in the soil are active in the soil-forming process. Plants furnish organic material to the soil and bring up plant nutrients from underlying layers to the surface layer. As plants die and decay, they contribute organic matter to the soil. Bacteria and fungi decompose the plant remains and help to incorporate the organic matter into the soil.

The kind of native vegetation has greatly influenced soil formation in Texas County. The basic kinds of native vegetation were prairie grasses and forest vegetation. Additions of organic matter to soils that formed under prairie grasses are largely a result of the yearly decomposition of plant materials. Plant tops decompose at the surface, and the roots decompose at various depths in the soil. As a result, soils that formed under prairie grasses have a thick, dark surface layer.

Additions of organic matter to soils that formed under forest vegetation are mostly the result of leaves and twigs that decompose on the surface. These soils have a thin, dark surface layer.

Insects, worms, humans, and other animals affect soil formation. Bacteria and fungi promote the decay of organic material, fix nitrogen, and improve tilth. Burrowing animals and insects loosen and mix various soil horizons.

In a relatively short time, human activities have greatly affected the processes of soil formation. The major alterations include changes in the type of vegetation, drainage of wet areas, and accelerated erosion. Row crops have replaced native grasses and many of the forested areas. Nearly all of the flood plains and much of the upland areas are now farmed. These changes have increased food production but have had an adverse effect in terms of sustained productivity. Accelerated erosion continues to reduce the potential of many upland soils, and the loss of cropland to urban development is virtually irreversible.

Climate

Climate has been and still is an important factor of soil formation. Geologic erosion, plant and animal life, and, in more recent times, accelerated erosion all have varied with the climate.

High temperatures and adequate rainfall encourage rapid chemical and physical changes. When calcium carbonate and other soluble salts are removed by leaching, soil fertility declines. This type of climate is conducive to the breakdown of minerals and the relocation of clay within the soil. The clay is moved downward into the soil profile, and this downward movement results in the formation of the subsoil. Nearly all of the upland soils in the county show evidence of this illuviation.

Topography

Topography, or relief, affects soil formation through its influence on drainage, runoff, the rate of water infiltration, and geologic erosion. Topography is characterized by the length, shape, aspect, and degree of slope. It is important in determining the pattern and distribution of soils.

The amount of water entering the soil depends on slope, permeability, and the intensity of rainfall. Because runoff is rapid in steep areas, very little water passes through the soil and soil formation is slow. Geologic erosion almost keeps pace with the soil-forming processes. In gently sloping areas, runoff is slow, erosion is minimal, and most of the water passes through the soil. Leaching, the translocation of clay, and other soil-forming processes are intensified in these areas. Soils in these areas generally show maximum profile development.

Soils on steep, south-facing slopes receive more direct sunlight and are drier than similar soils on north-facing slopes. Drier conditions influence soil formation by affecting the kind of vegetation, the susceptibility to erosion, and the cycles of freezing and thawing.

Time

The degree of profile development is dependent on the length of time that the parent material has been in place and subject to the soil-forming processes. Older soils show the effects of leaching and clay movement and have developed distinct horizons. Young soils show little profile development.

Geology, Physiography, and Hydrology

Curt Wiersema, soil scientist, Texas County Soil and Water Conservation District, helped prepare this section.

The bedrock in Texas County consists of sedimentary rocks, dominantly of Ordivician age. There are no major structural features in the county, but a few inactive northwest-southeast trending faults occur in the north-central part of the county, where the Roubidoux Formation is folded and faulted. There are areas on higher elevations and stream divides where some Mississippian and Pennsylvanian materials remain. On the broad, gentle uplands there are minor amounts of Pleistocene loess, generally 2 to 6 feet thick or less. In the stream bottoms there are recent alluvial deposits of clayey, loamy, and gravelly materials (Koenig, 1995).

From oldest to youngest, the bedrock formations are the Gasconade Formation, the Roubidoux Formation, the Jefferson City-Cotter Formation, all of Ordovician age; the Mississippian Compton Formation; and possibly the Pennsylvanian Cheltenham Formation.

The Gasconade Formation is a light brownish gray, massively bedded, cherty dolostone. Many of the nearly vertical bluffs and cliffs along the streams in Texas County are formed by the Gasconade. Caves and springs are common in the formation. The average thickness of this formation is 250 to 300 feet, two-thirds of which is exposed in Texas County. The elevation of the top of the Gasconade Formation ranges from 960 feet above sea level in the southeastern part of the county to 1,160 feet in the northern part.

The Roubidoux Formation consists of sandstone, dolomitic sandstone, and cherty dolostone. Gray and brown colors are predominant on weathered surfaces, but the color of the fresh sandstone is commonly light yellow, tan, or red at the surface and white in the subsurface. The dolostone in the Roubidoux Formation is finely crystalline, light gray to brown, and thinly to thickly bedded. Individual beds contain brown to gray, banded, oolitic, and sandy chert. The average thickness of this formation is 100 to 150 feet. The elevation of the top of the Roubidoux Formation ranges from 1,100 feet to 1,300 feet above sea level in the county.

The Jefferson City and Cotter Formations are mapped as one geologic unit because of the similarity of lithology. They are composed principally of light

brown to brown, medium to finely crystalline dolostone, argillaceous dolostone, and cherty dolostone. In places, a massive layer of crystalline dolostone near the base of the formation at an elevation of 1,180 feet to 1,240 feet above sea level (called the "Quarry Ledge") crops out as small bluffs on upland hillsides. Also, small glades that have a very thin soil layer because of the resistance of this dolostone to weathering are common. Thin beds of orthoquartzite and shale are locally present throughout the formation. In this county there are several 5- to 10-foot beds of orthoquartzite sandstone at elevations of about 1,320, 1,360, and 1,400 feet above sea level that are more resistant to weathering than the dolostone. These beds form long flat-topped ridges in the western part of the county. Overall thickness of the Jefferson City-Cotter Formations ranges from 250 to 350 feet. The top of the Jefferson City-Cotter Formation is an erosional unconformity, so the elevations vary considerably, but the base is generally around 1,200 feet above sea level.

The Mississippian Compton Formation is a finely crystalline to sublithographic, finely crinoidal limestone. It is very thinly bedded, and beds are separated by thin green shale partings that break down readily when weathered; thus, weathered exposures of the formation are characteristically slabby or hackly in appearance. The thickness of the formation in this county is only 10 to 20 feet, and the formation only occurs on one or two of the higher hilltops in the county at about 1,480 feet above sea level.

The Pennsylvanian Cheltenham Formation, which is composed of clays and associated clastics, lies above beds whose ages range from Ordovician to Mississippian. The clays are mostly white to light or medium gray to purplish or red. At the base, and intergrading with the lowest part of the clay in many places, are sandstones, chert conglomerates, and chert rubble or residuum. The clays appear to be more or less like bedded deposits laid down on a solution surface. The area north of Willow Springs and southeast of Cabool along the major stream divide between the Big Piney, Jack's Fork, Eleven Point, and White Rivers is the dominant place where this formation occurs. The formation ranges in thickness from 50 to 200 feet. It occurs at elevations from 1,350 feet up to 1,620 feet above sea level. Local people refer to "hilltop gravel," as well rounded chert pebbles are found on many hilltops in the southern part of the county.

All bedrock units will yield water to some degree. Wells drilled for private water supplies are typically 150 to 400 feet deep and yield 10 to 15 gallons per minute. Wells drilled for public water supplies are generally 500 to 1,000 feet deep and yield up to 250 gallons per minute.

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Glossary

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

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

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.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

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

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

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

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

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

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

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.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

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.

Bedrock-floored plain. An extensive nearly level to gently rolling or moderately sloping area that is underlain by hard bedrock and has a slope of 0 to 8 percent.

Board foot. A unit of measure of the wood in lumber, logs, or trees. The amount of wood in a board 1 foot wide, 1 foot long, and 1 inch thick before finishing.

Bottom land. The normal flood plain of a stream, subject to flooding.

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

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

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

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

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.

Catsteps. Very small, irregular terraces on steep hillsides, especially in pasture, formed by the trampling of cattle or the slippage of saturated soil.

Cement rock. Shaly limestone used in the manufacture of cement.

Channeled. Refers to a drainage area in which natural meandering or repeated branching and convergence of a streambed have created deeply incised cuts, either active or abandoned, in alluvial material.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

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

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

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.

Clayey soil. Silty clay, sandy clay, or clay.

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

Clearcut. A method of forest harvesting that removes the entire stand of trees in one cutting. Reproduction is achieved artificially or by natural seeding from the adjacent stands.

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

Closed depression. A low area completely surrounded by higher ground and having no natural outlet.

Coarse fragments. Mineral or rock particles larger than 2 millimeters in diameter.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded 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.

Codominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above but comparatively little from the sides.

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.

Commercial forest. Forestland capable of producing 20 cubic feet or more per acre per year at the culmination of the mean annual increment.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

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.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

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

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

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

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.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

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

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

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

Deep soil. A soil that is 40 to 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Deep to water (in tables). Deep to permanent water during the dry season.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

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

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

Depth to bedrock (in tables). Bedrock is too near the surface for the specified use.

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

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Dolomite (mineral). A common rock-forming rhombohedral carbonate mineral: $CaMg(CO_3)_2$.

Dolostone. A carbonate sedimentary rock consisting chiefly (more than 50 percent by weight or by areal percentages under the microscope) of the mineral dolomite.

Dominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above and from the sides.

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

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

Drainageway. An area of ground at a lower elevation than the surrounding ground and in which water collects and is drained to a closed depression or lake or to a drainageway at a lower elevation. A drainageway may or may not have distinctly incised channels at its upper reaches or throughout its course.

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

Droughty (in tables). The soil holds an insufficient amount of water for plants during dry periods.

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 properties 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.

Erodes easily (in tables). The soil is easily eroded by water.

Erosion. The wearing away of the land surface by

water, wind, ice, or other geologic agents and by such processes as gravitational creep.
Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.
Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

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

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

Even aged. Refers to a stand of trees in which only small differences in age occur between individual trees. A range of 20 years is allowed.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fast intake (in tables). The rapid movement of water into the soil.

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

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

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

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

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

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that 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.

Flooding (in tables. Soil flooded by moving water from stream overflow or runoff.

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.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

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

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

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

Hard to pack (in tables). Difficult to compact using regular earthwork construction equipment.

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.

Heavy metal. Inorganic substances that are solid at ordinary temperatures and are not soluble in water. They form oxides and hydroxides that are basic. Examples are copper, iron, cadmium, zinc, manganese, lead, and arsenic.

Highly erodible (in tables). The soil has a wind erodibility index greater than 8 and is very susceptible to erosion by water.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

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

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

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

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

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

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

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

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

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

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

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

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 more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Infrequent flooding (in tables). Flooding occurs at an interval that limits riparian plant species.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

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.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

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.

Lake plain. A surface marking the floor of an extinct lake, filled in by well sorted, stratified sediments.

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

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

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

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

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

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

Loamy soil. Coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, silt, clay loam, sandy clay loam, or silty clay loam.

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

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mean annual increment (MAI). The average annual increase in volume of a tree during the entire life of the tree.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

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

Merchantable trees. Trees that are of sufficient size to be economically processed into wood products.

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.

Micro-high. An area that is 2 to 12 inches higher than the adjacent micro-low.

Micro-low. An area that is 2 to 12 inches lower than the adjacent micro-high.

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

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

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

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

Moderately deep soil. A soil that is 20 to 40 inches deep over bedrock or to other material that restricts the penetration of plant roots.

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

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

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

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

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

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

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

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

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

Overstory. The trees in a forest that form the upper crown cover.

Oxbow. The horseshoe-shaped channel of a former meander, remaining after the stream formed a cutoff across a narrow meander neck.

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

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

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

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.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow	0.0 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

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

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

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

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.

Poor filter (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

Poor outlets (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

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.

Quartzite, metamorphic. Rock consisting mainly of quartz that formed through recrystallization of quartz-rich sandstone or chert.

Quartzite, sedimentary. Very hard but unmetamorphosed sandstone consisting chiefly of quartz grains.

Range condition. The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

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

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
Ultra 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.

Relict stream terrace. One of a series of platforms in or adjacent to a stream valley that formed prior to the current stream system.

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

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

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

Riser. The relatively short, steeply sloping area below a

terrace tread that grades to a lower terrace tread or base level.

Riverwash. Unstable areas of sandy, silty, clayey, or gravelly sediments. These areas are flooded, washed, and reworked by rivers so frequently that they support little or no vegetation.

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

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

Rock outcrop. Exposures of bare bedrock other than lava flows and rock-lined pits.

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

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts 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.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sandy soil. Sand or loamy sand.

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

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

Sawlogs. Logs of suitable size and quality for the production of lumber.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Scribner's log rule. A method of estimating the number of board feet that can be cut from a log of a given diameter and length.

Seasonal wetness (in tables). The soil may be wet during the period of desired use. The wetness usually occurs during the winter and early spring.

Seasonally ponded (in tables). Standing water on soils in closed depressions that is removed only by percolation or evapotranspiration. Generally occurs during the winter and early spring.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary plain. An extensive nearly level to gently rolling or moderately sloping area that is underlain by sedimentary bedrock and that has slopes of 0 to 8 percent.

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.

Sedimentary uplands. Land areas of bedrock formed from water- or wind-deposited sediments. These areas are higher on the landscape than the flood plain.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Semiconsolidated sedimentary beds. Soft geologic sediments that disperse when fragments are placed in water. The fragments are hard or very hard when dry. Determining the texture by the usual field method is difficult.

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

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

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

Shallow soil. A soil that is 10 to 20 inches deep over bedrock or to other material that restricts the penetration of plant roots.

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

Shelterwood system. A forest management system requiring the removal of a stand in a series of cuts so that regeneration occurs under a partial canopy. After regeneration, a final cut removes the shelterwood and allows the stand to develop in the open as an even-aged stand. The system is well suited to sites where shelter is needed for regeneration, and it can aid regeneration of the more intolerant tree species in a stand.

Shoulder. 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.

Shoulder slope. The uppermost inclined surface at the top of a hillside. It is the transition zone from the backslope to the summit of a hill or mountain. The surface is dominantly convex in profile and erosional in origin.

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

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

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

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

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

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site class. A grouping of site indexes into five to seven production capability levels. Each level can be represented by a site curve.

Site curve (50-year). A set of related curves on a graph that shows the average height of dominant or dominant and codominant trees for a range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and codominant trees that are 50 years old or are 50 years old at breast height.

Site curve (100-year). A set of related curves on a graph that shows the average height of dominant or dominant and codominant trees for a range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and codominant trees that are 100 years old or are 100 years old at breast height.

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

Skid trails. Pathways along which logs are dragged to a common site for loading onto a logging truck.

Slash. The branches, treetops, reject logs, and broken or uprooted trees left on the ground after logging.

Slick spot. A small area of soil having a puddle, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slippage (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Level	0 to 2 percent
Nearly level	0 to 3 percent
Very gently sloping	1 to 3 percent
Gently sloping	3 to 8 percent
Moderately sloping	3 to 15 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 35 percent
Steep	35 to 50 percent
Very steep	50 percent and higher

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slope alluvium. Sediment gradually transported on slopes or mountains or hills primarily by alluvial processes and characterized by particle sorting. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Sorting of rounded or subrounded pebbles or cobbles and burnished peds distinguish these materials from unsorted colluvial deposits.

Slope/erodibility (in tables). A combination of slope and susceptibility to water erosion may restrict the specified use.

Small stones (in tables). Rock fragments less than 3

inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

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 and by the passage of time.

Soil reaction (in tables). The soil reaction is either too high or too low for the specified use.

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

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

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

Species. A single, distinct kind of plant or animal having certain distinguishing characteristics.

Stickiness (surface) (in tables). The soil is slippery and sticky when wet and slow to dry.

Stone line. A concentration of rock fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

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

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

Strath terrace. A surface cut formed by the erosion of hard or semiconsolidated bedrock and thinly mantled with stream deposits.

Stream channel. The hollow bed where a natural stream of surface water flows or may flow; the deepest or central part of the bed, formed by the main current and covered more or less continuously by water.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel. It originally formed near the level of the stream and is the dissected remnants of an abandoned flood plain, streambed, or valley floor produced during a former stage of erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

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

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

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

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

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

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

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

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

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

Tailwater. The water directly downstream from a structure.

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." The abbreviations (see table 17) are *C—clay, CL—clay loam, COS—coarse sand, COSL—coarse sandy loam, FS—fine sand, FSL—fine sandy loam, L—loam, LCOS—loamy coarse sand, LFS—loamy fine sand, LS—loamy sand, LVFS—loamy very fine sand, S—sand, SC—sandy clay, SCL—sandy clay loam, SI—silt, SIC—silty clay, SICL—silty clay loam, SIL—silt loam, SL—sandy loam, VFS—very fine sand,* and *VFSL—very fine sandy loam.* Terms used in lieu of texture descriptions are *BR— bedrock*, *MPM—moderately decomposed plant material, and* VAR—variable. The texture modifiers that may apply to textural classes are *BY—bouldery, BYV—very bouldery, BYX—extremely bouldery, CB—cobbly, CBV—very cobbly, CBX—extremely cobbly, CN—channery, CNV—very channery, CNX—extremely channery, FL—flaggy, FLV—very flaggy, FLX—extremely flaggy, GR—gravelly, GRV—very gravelly, GRX—extremely gravelly, SR—stratified, ST—stony, STV—very stony,* and *STX—extremely stony.*

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

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

Too acid (in tables). The soil is so acid that growth of plants is restricted.

Too clayey (in tables). The soil is slippery and sticky when wet and slow to dry.

Too sandy (in tables). The soil is soft and loose, droughty, and low in fertility or is too fine to be used as gravel.

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

Toxicity (in tables). Excessive amounts of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

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

Trafficability. The degree to which a soil is capable of supporting vehicular traffic across a wide range in soil moisture conditions.

Tread. The relatively flat surface of a terrace that was cut or built by stream or wave action.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley. An elongated depressional area primarily developed by stream action.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Very deep soil. A soil that is more than 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Very shallow soil. A soil that is less than 10 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Water-spreading. Diverting runoff from natural channels by means of a system of dams, dikes, or ditches and spreading it over relatively flat surfaces.

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.

Wetness (in tables). The soil is wet during the period of desired use.

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

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1961-90 at Licking, Missouri)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January-----	39.6	16.9	28.3	70	-15	4	2.03	0.64	3.16	4	5.5
February----	44.4	21.6	33.0	74	-9	10	2.40	1.11	3.50	4	4.4
March-------	55.3	32.4	43.9	82	4	70	3.81	2.23	5.22	7	3.4
April-------	67.3	42.7	55.0	88	20	216	4.16	2.67	5.51	6	0.1
May---------	75.3	51.5	63.4	89	29	420	4.51	2.27	6.46	7	0.0
June--------	82.6	60.0	71.3	95	41	639	4.30	2.24	6.10	6	0.0
July--------	88.3	64.6	76.5	100	47	820	3.52	1.86	4.98	5	0.0
August------	86.7	62.8	74.8	101	44	769	3.51	1.86	4.96	5	0.0
September---	78.7	55.5	67.1	95	33	517	4.03	1.65	6.05	6	0.0
October-----	68.6	42.9	55.7	88	22	229	3.47	1.34	5.25	5	0.0
November----	55.7	33.4	44.5	78	9	64	3.77	1.60	5.61	6	0.9
December----	43.3	22.4	32.8	71	-7	9	3.28	1.30	4.94	5	2.7
Yearly:											
Average---	65.5	42.2	53.9	---	---	---	---	---	---	---	---
Extreme---	108	-24	---	102	-17	---	---	---	---	---	---
Total-----	---	---	---	---	---	3,768	42.78	33.57	50.51	66	17.0

* 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 (50 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1961-90 at Licking, Missouri)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 14	May 3	May 16
2 year in 10 later than--	Apr. 9	Apr. 27	May 11
5 year in 10 later than--	Mar. 31	Apr. 15	Apr. 30
First freezing temperature in fall:			
1 yr in 10 earlier than--	Oct. 20	Oct. 3	Sept. 27
2 yr in 10 earlier than--	Oct. 25	Oct. 8	Oct. 1
5 yr in 10 earlier than--	Nov. 4	Oct. 19	Oct. 7

Table 3.--Growing Season

(Recorded in the period 1961-90 at Licking, Missouri)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	198	163	139
8 years in 10	205	172	146
5 years in 10	217	187	160
2 years in 10	229	203	175
1 year in 10	235	211	182

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
70022	Tonti silt loam, 3 to 8 percent slopes	39,146	5.2
70025	Branson-Splitlimb complex, 1 to 3 percent slopes	2,666	0.4
70026	Tonti silt loam, 1 to 3 percent slopes	18,656	2.5
73000	Pomme silt loam, 3 to 8 percent slopes	6,875	0.9
73013	Lowassie silt loam, 0 to 3 percent slopes, frequently ponded	1,537	0.2
73017	Bendavis-Poynor complex, 15 to 50 percent slopes, rocky, very stony	23,141	3.1
73019	Poynor very gravelly silt loam, 1 to 8 percent slopes	19,781	2.6
73021	Poynor extremely gravelly silt loam, 15 to 35 percent slopes, stony	13,394	1.8
73023	Mano-Ocie complex, 1 to 8 percent slopes	17,238	2.3
73024	Mano-Ocie complex, 8 to 15 percent slopes, stony	65,282	8.6
73032	Gatewood very gravelly silt loam, 3 to 15 percent slopes, stony	19,469	2.6
73033	Gatewood extremely gravelly silt loam, 15 to 35 percent slopes, very rocky, very stony	27,042	3.6
73051	Winnipeg silt loam, 2 to 5 percent slopes	909	0.1
73052	Lily loam, 3 to 8 percent slopes	6,737	0.9
73053	Lily-Bender complex, 3 to 15 percent slopes	15,648	2.1
73054	Viburnum silt loam, 1 to 3 percent slopes	9,981	1.3
73056	Viburnum very gravelly silt loam, 8 to 15 percent slopes	1,491	0.2
73057	Jerktail silt loam, 1 to 3 percent slopes	2,361	0.3
73058	Gunlock silt loam, 1 to 8 percent slopes	13,887	1.8
73063	Bendavis-Poynor complex, 1 to 8 percent slopes	19,499	2.6
73066	Bender very cobbly fine sandy loam, 3 to 15 percent slopes, stony	13,113	1.7
73067	Bender-Rock outcrop complex, 15 to 35 percent slopes, very stony	53,628	7.1
73068	Tick very gravelly silt loam, 3 to 15 percent slopes, stony	12,668	1.7
73069	Tick extremely gravelly silt loam, 15 to 50 percent slopes, very stony	12,238	1.6
73071	Hogcreek silt loam, 1 to 3 percent slopes	1,838	0.2
73072	Hogcreek silt loam, 3 to 8 percent slopes	5,748	0.8
73073	Scholten-Poynor complex, 8 to 15 percent slopes	28,969	3.8
73076	Mano-Ocie complex, 15 to 35 percent slopes, stony	57,979	7.7
73077	Eudy silt loam, 1 to 8 percent slopes	1,906	0.3
73080	Alred-Bardley-Rock outcrop complex, 15 to 60 percent slopes, very stony	9,269	1.2
73081	Bender-Alred-Rock outcrop complex, 15 to 60 percent slopes, very stony	11,157	1.5
73087	Celt silt loam, 1 to 3 percent slopes	2,685	0.4
73159	Yelton silt loam, 3 to 8 percent slopes	1,214	0.2
73176	Bendavis-Poynor complex, 8 to 15 percent slopes, stony	67,251	8.9
73197	Viburnum silt loam, 3 to 8 percent slopes	34,093	4.5
73198	Gressy-Viraton complex, 3 to 8 percent slopes	2,565	0.3
73199	Moko-Rock outcrop complex, 3 to 15 percent slopes, very flaggy	1,659	0.2
73220	Poynor extremely gravelly silt loam, 8 to 15 percent slopes	37,149	4.9
73221	Poynor very gravelly silt loam, karst, 3 to 35 percent slopes, very stony	261	*
73222	Splitlimb silt loam, 0 to 3 percent slopes, frequently ponded	2,371	0.3
73223	Coulstone-Bender complex, 15 to 50 percent slopes, very stony	793	0.1
73224	Moko-Rock outcrop complex, 15 to 35 percent slopes, extremely flaggy	2,591	0.3
74626	Tanglenook silt loam, 0 to 3 percent slopes, rarely flooded	855	0.1
74627	Hartville silt loam, 1 to 3 percent slopes, rarely flooded	2,215	0.3
74629	Raftville loam, 1 to 8 percent slopes, rarely flooded	1,383	0.2
74636	Lecoma loam, 3 to 8 percent slopes	1,412	0.2
74637	Lecoma loam, 8 to 15 percent slopes	2,559	0.3
74677	Deible silt loam, 0 to 3 percent slopes, rarely flooded	929	0.1
74679	Higdon silt loam, 0 to 3 percent slopes, rarely flooded	596	*
75381	Bearthicket silt loam, 0 to 3 percent slopes, rarely flooded	1,110	0.1
75382	Cedargap gravelly loam, 0 to 3 percent slopes, frequently flooded	9,406	1.2
75388	Kaintuck-Relfe complex, 0 to 3 percent slopes, frequently flooded	15,594	2.1
75389	Dunning-Hercules complex, 0 to 3 percent slopes, frequently flooded	3,561	0.5
75390	Razort silt loam, 0 to 3 percent slopes, rarely flooded	2,145	0.3
75391	Possumtrot fine sandy loam, 0 to 3 percent slopes, occasionally flooded	1,754	0.2
75392	Stultz very cobbly loam, 0 to 3 percent slopes, frequently flooded	8,223	1.1
75406	Racket loam, 0 to 3 percent slopes, frequently flooded	1,634	0.2
75417	Relfe-Sandbur complex, 0 to 3 percent slopes, frequently flooded	1,084	0.1
75418	Tilk very gravelly loam, 0 to 3 percent slopes, rarely flooded	393	*
75419	Perche loam, 0 to 3 percent slopes, occasionally flooded	549	*
75420	Secesh-Tilk complex, 0 to 3 percent slopes, occasionally flooded	13,846	1.8

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
99000	Pits, quarries	150	*
99001	Water	186	*
	Total	755,469	100.0

* Less than 0.1 percent.

Table 5.--Land Capability and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Alfalfa hay	Caucasian bluestem	Orchardgrass-red clover	Warm-season grasses	Winter wheat
		Tons*	Tons*	Tons*	Tons*	Bu
70022:						
Tonti	3e	3.6	3.9	3.0	4.2	36
70025:						
Branson	2e	6.7	7.0	5.2	7.5	46
Splitlimb	2w	8.4	9.0	6.7	9.6	50
70026:						
Tonti	2e	3.6	3.9	3.0	4.2	38
73000:						
Pomme	3e	6.2	6.1	5.0	6.4	43
73013:						
Lowassie	3w	---	---	7.2	10.4	---
73017:						
Bendavis	7e	---	---	---	---	---
Poynor	7e	---	---	---	---	---
73019:						
Poynor	4e	4.0	4.2	3.2	4.5	29
73021:						
Poynor	7e	---	4.2	---	4.5	---
73023:						
Mano	4e	4.2	4.5	3.4	4.8	36
Ocie	4e	3.5	4.2	2.8	4.5	32
73024:						
Mano	6e	4.2	4.5	3.4	4.8	---
Ocie	6e	3.5	4.2	2.8	4.5	---
73032:						
Gatewood	6e	2.4	3.0	2.0	3.2	---
73033:						
Gatewood	7e	---	---	---	---	---
73051:						
Winnipeg	2e	7.5	8.0	6.2	8.5	46
73052:						
Lily	4e	2.0	2.3	1.7	2.4	31
73053:						
Lily	4e	---	---	---	---	---
Bender	6e	---	---	---	---	---
73054:						
Viburnum	2e	4.2	4.5	3.3	4.8	43

See footnote at end of table.

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Caucasian bluestem	Orchardgrass-red clover	Warm-season grasses	Winter wheat
		Tons*	Tons*	Tons*	Tons*	Bu
73056:						
Viburnum------	4e	4.0	4.1	3.2	4.4	---
73057:						
Jerktail------	2e	4.0	4.3	3.2	4.5	43
73058:						
Gunlock-------	3e	5.0	5.3	4.0	5.6	41
73063:						
Bendavis------	4e	2.0	2.3	1.6	2.4	19
Poynor--------	4e	4.0	4.2	3.2	4.5	29
73066:						
Bender--------	6s	---	---	---	---	---
73067:						
Bender--------	7e	---	---	---	---	---
Rock outcrop--	8s	---	---	---	---	---
73068:						
Tick----------	6e	3.0	3.0	2.4	3.2	---
73069:						
Tick----------	7e	---	---	---	---	---
73071:						
Hogcreek------	2e	2.5	2.6	2.0	2.8	38
73072:						
Hogcreek------	3e	2.5	2.6	2.0	2.8	36
73073:						
Scholten------	6e	1.0	1.1	0.8	1.2	---
Poynor--------	6e	4.0	4.2	3.2	4.5	---
73076:						
Mano----------	7e	---	---	---	---	---
Ocie----------	7e	---	---	---	---	---
73077:						
Eudy----------	3e	3.3	3.5	2.6	3.7	35
73080:						
Alred---------	7e	---	---	---	---	---
Bardley-------	7e	---	---	---	---	---
Rock outcrop--	8s	---	---	---	---	---
73081:						
Bender--------	7e	---	---	---	---	---
Alred---------	7e	---	---	---	---	---
Rock outcrop--	8s	---	---	---	---	---

See footnote at end of table.

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Caucasian bluestem	Orchardgrass-red clover	Warm-season grasses	Winter wheat
		Tons*	Tons*	Tons*	Tons*	Bu
73087:						
Celt----------	2e	---	---	3.7	5.1	31
73159:						
Yelton--------	3e	4.1	4.4	3.4	4.7	36
73176:						
Bendavis------	6e	2.0	2.25	1.6	2.4	---
Poynor--------	6e	4.0	4.2	3.2	4.5	---
73197:						
Viburnum------	3e	4.2	4.5	3.3	4.8	38
73198:						
Gressy--------	3e	5.5	5.8	4.4	6.1	43
Viraton-------	3e	3.6	3.9	3.0	4.2	30
73199:						
Moko----------	6s	---	---	---	---	---
Rock outcrop--	8s	---	---	---	---	---
73220:						
Poynor--------	6e	4.0	4.2	3.2	4.5	---
73221:						
Poynor--------	7e	4.0	4.2	3.2	4.5	---
73222:						
Splitlimb-----	2w	8.4	9.0	6.7	9.6	50
73223:						
Coulstone-----	7e	---	---	---	---	---
Bender--------	7e	---	---	---	---	---
73224:						
Moko----------	7s	---	---	---	---	---
Rock outcrop--	8s	---	---	---	---	---
74626:						
Tanglenook----	3w	---	---	6.0	8.2	46
74627:						
Hartville-----	2e	---	---	6.0	7.8	38
74629:						
Raftville-----	3e	2.1	2.3	2.0	2.4	29
74636:						
Lecoma--------	3e	6.6	7.0	5.3	7.4	43
74637:						
Lecoma--------	4e	6.6	7.0	5.3	7.4	40
74677:						
Deible--------	4w	---	---	6.0	8.2	38

See footnote at end of table.

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Caucasian bluestem	Orchardgrass-red clover	Warm-season grasses	Winter wheat
		Tons*	Tons*	Tons*	Tons*	Bu
74679:						
Higdon	2w	---	---	7.7	10.6	50
75381:						
Bearthicket	2w	9.4	10.0	7.5	10.6	50
75382:						
Cedargap	3w	5.2	5.5	4.0	5.8	24
75388:						
Kaintuck	3w	6.6	7.0	5.2	7.4	---
Relfe	4s	2.0	2.3	1.6	2.4	---
75389:						
Dunning	3w	---	---	6.5	9.0	---
Hercules	3w	---	4.0	3.5	4.6	---
75390:						
Razort	2e	8.7	9.3	7.0	9.8	48
75391:						
Possumtrot	2s	6.6	7.0	5.2	7.4	29
75392:						
Stultz	3w	3.8	4.0	3.0	4.2	---
75406:						
Racket	2w	8.7	9.3	7.0	9.8	---
75417:						
Relfe	4s	2.0	2.3	1.6	2.4	---
Sandbur	3w	6.6	7.0	5.2	7.4	---
75418:						
Tilk	3s	3.0	3.1	2.4	3.3	26
75419:						
Perche	2w	---	---	5.2	7.4	36
75420:						
Secesh	2w	5.0	5.2	4.0	5.5	41
Tilk	3w	3.0	3.1	2.4	3.3	26
99000.						
Pits, quarries						
99001.						
Water						

* Yields (tons) are for total above-ground biomass production.

Table 6.--Pasture and Hayland Suitability Groups

(See text for descriptions of the groups listed in this table.)

Map symbol	Soil name	Component name	Pasture and hayland group
70022	Tonti silt loam, 3 to 8 percent slopes	Tonti	LyP
70025	Branson-Splitlimb complex, 1 to 3 percent slopes	Branson	LyU
		Splitlimb	LyU
70026	Tonti silt loam, 1 to 3 percent slopes	Tonti	LyP
73000	Pomme silt loam, 3 to 8 percent slopes	Pomme	LyU
73013	Lowassie silt loam, 0 to 3 percent slopes, frequently ponded	Lowassie	WCU
73017	Bendavis-Poynor complex, 15 to 50 percent slopes, rocky, very stony	Bendavis	GNS
		Poynor	GNS
73019	Poynor very gravelly silt loam, 1 to 8 percent slopes	Poynor	GrU
73021	Poynor extremely gravelly silt loam, 15 to 35 percent slopes, stony	Poynor	GrU
73023	Mano-Ocie complex, 1 to 8 percent slopes	Mano	GrU
		Ocie	GrU
73024	Mano-Ocie complex, 8 to 15 percent slopes, stony	Mano	GrU
		Ocie	GrU
73032	Gatewood very gravelly silt loam, 3 to 15 percent slopes, stony	Gatewood	MDU
73033	Gatevood extremely gravelly silt loam, 15 to 35 percent slopes, very rocky, very stony	Gatewood	GNS
73051	Winnipeg silt loam, 2 to 5 percent slopes	Winnipeg	LyU
73052	Lily loam, 3 to 8 percent slopes	Lily	MDU
73053	Lily-Bender complex, 3 to 15 percent slopes	Lily	MDU
		Bender	MDU
73054	Viburnum silt loam, 1 to 3 percent slopes	Viburnum	CyU
73056	Viburnum very gravelly silt loam, 8 to 15 percent slopes	Viburnum	CyU
73057	Jerktail silt loam, 1 to 3 percent slopes	Jerktail	CyU
73058	Gunlock ailt loam, 1 to 8 percent slopes	Gunlock	LyP
73063	Bendavis-Poynor complex, 1 to 8 percent slopes	Bendavis	MDU
		Poynor	GrU
73066	Bender very cobbly fine sandy loam, 3 to 15 percent slopes, stony	Bender	MDU
73067	Bender-Rock outcrop complex, 15 to 35 percent slopes, very stony	Bender	GNS
		Rock outcrop	---
73068	Tick very gravelly silt loam, 3 to 15 percent slopes, stony	Tick	GrU
73069	Tick extremely gravelly silt loam, 15 to 50 percent slopes, very stony	Tick	GNS
73071	Hogcreek silt loam, 1 to 3 percent slopes	Hogcreek	LyP
73072	Hogcreek silt loam, 3 to 8 percent slopes	Hogcreek	LyP
73073	Scholten-Poynor complex, 8 to 15 percent slopes	Scholten	GrP
		Poynor	GrU
73076	Mano-Ocie complex, 15 to 35 percent slopes, stony	Mano	GrU
		Ocie	GrU
73077	Eudy silt loam, 1 to 8 percent slopes	Eudy	MDU
73080	Alred-Bardley-Rock outcrop complex, 15 to 60 percent slopes, very stony	Alred	GNS
		Bardley	GNS
		Rock outcrop	---
73081	Bender-Alred-Rock outcrop complex, 15 to 60 percent slopes, very stony	Bender	GNS
		Alred	GNS
		Rock outcrop	---
73087	Celt silt loam, 1 to 3 percent slopes	Celt	WtP
73159	Yelton silt loam, 3 to 8 percent slopes	Yelton	LyP
73176	Bendavis-Poynor complex, S to 15 percent slopes, stony	Bendavis	MDU
		Poynor	GrU
73197	Viburnum silt loam, 3 to 8 percent slopes	Viburnum	CyU
73198	Gressy-Viraton complex, 3 to 8 percent slopes	Gressy	LyU
		Viraton	LyP
73199	Moko-Rock outcrop complex, 3 to 15 percent slopes, very flaggy	Moko	GNS
		Rock outcrop	---
73220	Poynor extremely gravelly silt loam, 8 to 15 percent slopes	Poynor	GrU
73221	Poynor very gravelly silt loam, karst, 3 to 35 percent slopes, very stony	Poynor	GrU
73222	Splitlimb silt loam, 0 to 3 percent slopes, frequently ponded	Splitlimb	WCU
73223	Coulstone-Bender complex, 15 to 50 percent slopes, very stony	Coulstone	GNS
		Bender	GNS

Table 6.--Pasture and Hayland Suitability Groups--Continued

Map symbol	Soil name	Component name	Pasture and hayland group
73224	Moko-Rock outcrop complex, 15 to 35 percent slopes, extremely flaggy	Moko	GNS
		Rock outcrop	---
74626	Tansienook silt loam, 0 to 3 percent slopes, rarely flooded	Tanglenook	WCB
74627	Hartville silt loam, 1 to 3 percent slopes, rarely flooded	Hartville	WCB
74629	Raftville loam, 1 to 8 percent slopes, rarely flooded	Raftville	LyO
74636	Lecoma loam, 3 to 8 percent slopes	Lecoma	LyU
74637	Lecoma loam, 8 to 15 percent slopes	Lecoma	LyU
74677	Deible silt loam, 0 to 3 percent slopes, rarely flooded	Deible	WCB
74679	Higdon silt loam, 0 to 3 percent slopes, rarely flooded	Higdon	WLO
75381	Bearthicket silt loam, 0 to 3 percent slopes, rarely flooded	Bearthicket	LyO
75382	Cedargap gravelly loam, 0 to 3 percent slopes, frequently flooded	Cedargap	GrO
75388	Kaintuck-Relfe complex, 0 to 3 percent slopes, frequently flooded	Kaintuck	LyO
		Relfe	SyO
75389	Dunning-Hercules complex, 0 to 3 percent slopes, frequently flooded	Dunning	WCB
		Hercules	GrO
75390	Razort silt loam, 0 to 3 percent slopes, rarely flooded	Razort	LyO
75391	Possumtrot fine sandy loam, 0 to 3 percent slopes, occasionally flooded	Possumtrot	LyO
75392	Stultz very cobbly loam, 0 to 3 percent slopes, frequently flooded	Stultz	GrO
75406	Racket loam, 0 to 3 percent slopes, frequently flooded	Racket	LyO
75417	Relfe-Sandbur complex, 0 to 3 percent slopes, frequently flooded	Relfe	SyO
		Sandbur	LyO
75418	Tilk very gravelly loam, 0 to 3 percent slopes, rarely flooded	Tilk	GrO
75419	Perche loam, 0 to 3 percent slopes, occasionally flooded	Perche	WLO
75420	Secesh-Tilk complex, 0 to 3 percent slopes, occasionally flooded	Secesh	LyO
		Tilk	GrO
99000	Pits, quarries	Pits, quarries	---
99001	Water	Water	---

Table 7.--Forestland Productivity

(Site index is based on 50 years. Absence of an entry indicates that information was not available)

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
70022:				
Tonti	black oak	60	43	black oak,
	post oak	---	---	shortleaf pine
	shortleaf pine	53	71	
70025:				
Branson	northern red oak	70	57	black walnut,
	white oak	66	43	shortleaf pine,
				white oak
Splitlimb	black oak	---	---	black oak, northern
	northern red oak	70	57	red oak, shortleaf
	shortleaf pine	---	---	pine
	white oak	66	43	
70026:				
Tonti	black oak	60	43	black oak,
	post oak	---	---	shortleaf pine
	shortleaf pine	53	71	
73000:				
Pomme	northern red oak	65	43	black oak, northern
	white oak	60	43	red oak, white oak
73013:				
Lowassie	pin oak	50	29	black oak, green
	post oak	45	29	ash, pin oak
73017:				
Bendavis	black oak	55	43	black oak, scarlet
	post oak	45	29	oak, shortleaf
	scarlet oak	---	---	pine
	shortleaf pine	56	86	
Poynor	black oak	60	43	black oak,
	shortleaf pine	58	86	shortleaf pine
	white oak	54	43	
73019:				
Poynor	black oak	60	43	black oak,
	shortleaf pine	58	86	shortleaf pine
	white oak	54	43	
73021:				
Poynor	black oak	60	43	black oak,
	shortleaf pine	58	86	shortleaf pine
	white oak	54	43	
73023:				
Mano	black oak	65	43	northern red oak,
	northern red oak	---	---	white oak
	white oak	60	43	
Ocie	black oak	60	43	northern red oak,
	northern red oak	---	---	shortleaf pine,
	white oak	57	43	white oak

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
73024:				
Mano	black oak	65	43	northern red oak, white oak
	northern red oak	---	---	
	white oak	60	43	
Ocie	black oak	60	43	northern red oak, shortleaf pine, white oak
	northern red oak	---	---	
	white oak	57	43	
73032:				
Gatewood	black oak	42	29	eastern redcedar, shortleaf pine
	eastern redcedar	40	43	
	post oak	43	29	
	white oak	45	29	
73033:				
Gatewood	black oak	42	29	eastern redcedar, shortleaf pine
	eastern redcedar	40	43	
	post oak	43	29	
	white oak	45	29	
73051:				
Winnipeg	black oak	65	43	black walnut, northern red oak, white oak
	black walnut	---	---	
	northern red oak	66	43	
	white oak	60	43	
73052:				
Lily	black oak	---	---	northern red oak, scarlet oak, shortleaf pine, white oak
	northern red oak	54	---	
	scarlet oak	---	---	
	shortleaf pine	58	43	
	white oak	45	29	
73053:				
Lily	black oak	---	---	northern red oak, scarlet oak, shortleaf pine, white oak
	northern red oak	54	---	
	scarlet oak	---	---	
	shortleaf pine	58	43	
	white oak	45	29	
Bender	black oak	52	29	black oak, scarlet oak, shortleaf pine
	scarlet oak	---	---	
	shortleaf pine	53	71	
	white oak	50	29	
73054:				
Viburnum	black oak	58	43	black oak, scarlet oak, shortleaf pine
	blackjack oak	---	---	
	post oak	---	---	
	scarlet oak	---	---	
73056:				
Viburnum	black oak	58	43	black oak, scarlet oak, shortleaf pine
	blackjack oak	---	---	
	post oak	---	---	
	scarlet oak	---	---	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
73057:				
Jerktail	black oak	60	43	northern red oak, white oak
	hickory	---	---	
	northern red oak	---	---	
	white oak	---	---	
73058:				
Gunlock	black oak	60	43	black oak, northern red oak, shortleaf pine
	northern red oak	60	43	
	white oak	57	43	
73063:				
Bendavis	black oak	54	43	scarlet oak, shortleaf pine
	post oak	47	29	
	scarlet oak	---	---	
	shortleaf pine	56	86	
Poynor	black oak	---	---	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	---	---	
73066:				
Bender	black oak	52	29	black oak, scarlet oak, shortleaf pine
	scarlet oak	---	---	
	shortleaf pine	53	71	
	white oak	50	29	
73067:				
Bender	black oak	52	29	black oak, scarlet oak, shortleaf pine
	scarlet oak	---	---	
	shortleaf pine	53	71	
	white oak	50	29	
Rock outcrop	---	---	---	---
73068:				
Tick	black oak	55	43	black oak
	post oak	45	29	
	white oak	50	29	
73069:				
Tick	black oak	55	43	black oak
	post oak	45	29	
	white oak	50	29	
73071:				
Hogcreek	black oak	54	43	black oak, scarlet oak, shortleaf pine
	post oak	---	---	
	scarlet oak	---	---	
	shortleaf pine	---	---	
73072:				
Hogcreek	black oak	54	43	black oak, scarlet oak, shortleaf pine
	post oak	---	---	
	scarlet oak	---	---	
	shortleaf pine	---	---	
73073:				
Scholten	black oak	50	29	black oak, eastern redcedar, shortleaf pine
	blackjack oak	---	---	
	hickory	---	---	
	post oak	---	---	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
73073:				
Poynor	black oak	60	43	black oak,
	shortleaf pine	58	86	shortleaf pine
	white oak	54	43	
73076:				
Mano	black oak	65	43	northern red oak,
	northern red oak	---	---	white oak
	white oak	60	43	
Ocie	black oak	60	43	northern red oak,
	northern red oak	---	---	shortleaf pine
	white oak	57	43	
73077:				
Eudy	black oak	42	29	eastern redcedar
	eastern redcedar	40	43	
	post oak	43	29	
	white oak	45	29	
73080:				
Alred	black oak	60	43	black oak,
	shortleaf pine	60	86	shortleaf pine,
	white oak	56	43	white oak
Bardley	black oak	54	43	black oak, eastern
	post oak	48	29	redcedar,
	white oak	42	29	shortleaf pine
Rock outcrop.				
73081:				
Bender	black oak	52	29	black oak, scarlet
	scarlet oak	---	---	oak, shortleaf
	shortleaf pine	53	71	pine
	white oak	50	29	
Alred	black oak	60	43	black oak,
	shortleaf pine	60	86	shortleaf pine,
	white oak	56	43	white oak
Rock outcrop.				
73087:				
Celt	black oak	60	43	black oak, post
	blackjack oak	---	---	oak, shortleaf
	post oak	---	---	pine
73159:				
Yelton	black oak	60	43	black oak,
	white oak	55	43	shortleaf pine
73176:				
Bendavis	black oak	54	43	scarlet oak,
	post oak	47	29	shortleaf pine
	scarlet oak	---	---	
	shortleaf pine	55	86	
Poynor	black oak	60	43	black oak,
	shortleaf pine	58	86	shortleaf pine
	white oak	54	43	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
73197:				
Viburnum	black oak	62	43	scarlet oak, shortleaf pine, white oak
	post oak	---	---	
	scarlet oak	---	---	
	shortleaf pine	58	86	
	white oak	---	---	
73198:				
Gressy	northern red oak	65	43	black walnut, white oak
	white oak	65	43	
Viraton	black oak	60	43	black oak, shortleaf pine, white oak
	shortleaf pine	56	86	
	white oak	55	43	
73199:				
Moko	eastern redcedar	30	29	eastern redcedar
Rock outcrop.				
73220:				
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	
73221:				
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	
73222:				
Splitlimb	black oak	---	---	black oak, northern red oak, white oak
	northern red oak	70	57	
	shortleaf pine	---	---	
	white oak	66	43	
73223:				
Coulstone	black oak	56	43	black oak, scarlet oak, shortleaf pine
	scarlet oak	---	---	
	shortleaf pine	57	86	
	white oak	55	43	
Bender	black oak	52	29	black oak, scarlet oak, shortleaf pine
	scarlet oak	---	---	
	shortleaf pine	53	71	
	white oak	50	29	
73224:				
Moko	eastern redcedar	30	29	eastern redcedar
Rock outcrop.				
74626:				
Tanglenook	American sycamore	---	---	eastern cottonwood, green ash, pin oak, silver maple
	common hackberry	---	---	
	eastern cottonwood	90	100	
	pin oak	---	---	
	silver maple	80	79	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
74627:				
Hartville	northern red oak	---	---	green ash, northern red oak, white oak
	white oak	55	43	
74629:				
Raftville	black oak	57	---	black oak, shortleaf pine
	post oak	---	---	
	white oak	55	---	
74636:				
Lecoma	black oak	65	43	northern red oak, shortleaf pine, white oak
	northern red oak	65	43	
	white oak	60	43	
74637:				
Lecoma	black oak	65	43	northern red oak, shortleaf pine, white oak
	northern red oak	65	43	
	white oak	60	43	
74677:				
Deible	green ash	---	---	eastern cottonwood, green ash, pin oak, silver maple
	pin oak	76	57	
	silver maple	---	---	
74679:				
Higdon	American sycamore	---	---	black walnut, green ash, pecan, white oak
	black walnut	---	---	
	green ash	---	---	
	white oak	65	43	
75381:				
Bearthicket	American sycamore	---	---	black walnut, green ash, northern red oak, white oak
	black walnut	---	---	
	common hackberry	---	---	
	pin oak	96	86	
	red maple	---	---	
75382:				
Cedargap	black oak	66	43	black oak, shortleaf pine
	black walnut	---	---	
	green ash	---	---	
75388:				
Kaintuck	American basswood	---	---	American sycamore, black walnut, green ash
	American sycamore	90	100	
	black walnut	---	---	
	green ash	---	---	
Relfe	American sycamore	---	---	black oak, shortleaf pine
	black oak	60	43	
	shortleaf pine	---	---	
	white oak	55	43	
75389:				
Dunning	American sycamore	---	---	American sycamore, pin oak, silver maple, swamp white oak
	black willow	---	---	
	eastern cottonwood	100	129	
	pin oak	95	86	
	silver maple	---	---	
	swamp white oak	---	---	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
75389:				
Hercules	American sycamore	65	57	black oak, black walnut, northern red oak
	black oak	66	43	
75390:				
Razort	American sycamore	85	86	black walnut, northern red oak, white oak
	eastern cottonwood	90	100	
	northern red oak	75	57	
	white oak	70	57	
75391:				
Possumtrot	American sycamore	85	86	black walnut, cottonwood, green ash
	black walnut	---	---	
	green ash	---	---	
	white oak	70	57	
75392:				
Stultz	American sycamore	65	57	American sycamore, black walnut, white oak
	black oak	---	---	
	white oak	60	---	
75406:				
Racket	American sycamore	---	---	black walnut, green ash, silver maple
	black cherry	---	---	
	black walnut	72	72	
	green ash	---	---	
	northern red oak	---	---	
75417:				
Relfe	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	---	---	
Sandbur	American basswood	---	---	American sycamore, black walnut, green ash, northern red oak
	American sycamore	---	---	
	northern red oak	---	---	
	river birch	---	---	
	white oak	60	43	
75418:				
Tilk	black oak	50	29	eastern redcedar, shortleaf pine
	eastern redcedar	---	---	
	post oak	45	29	
	scarlet oak	50	29	
	shortleaf pine	55	86	
75419:				
Perche	American sycamore	---	---	black walnut, green ash, pecan, silver maple
	green ash	---	---	
	northern red oak	66	43	
75420:				
Secesh	American sycamore	---	---	American sycamore, black walnut, shortleaf pine
	black oak	---	---	
	black walnut	---	---	
	shortleaf pine	---	---	
	white oak	60	43	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
Tilk	black oak	50	29	eastern redcedar, shortleaf pine
	eastern redcedar	---	---	
	post oak	45	29	
	scarlet oak	50	29	
	shortleaf pine	55	86	
99000. Pits, quarries				
99001. Water				

Table 8a.--Forest Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti----------	Not limited		Slightly limited slope	0.10	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.20	Slightly limited seasonal wetness (slightly limited)	0.20	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.20
70025:										
Branson--------	Not limited		Not limited		Moderately limited low strength (moderately limited)	0.50	Not limited		Moderately limited low strength (moderately limited)	0.50
Splitlimb------	Not limited		Not limited		Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.25	Slightly limited seasonal wetness (slightly limited)	0.25	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.25
70026:										
Tonti----------	Not limited		Not limited		Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.20	Slightly limited seasonal wetness (slightly limited)	0.20	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.20
73000:										
Pomme----------	Not limited		Not limited		Moderately limited low strength (moderately limited)	0.50	Not limited		Moderately limited slippage potential (moderately limited) low strength (moderately limited)	0.50 0.50
73013:										
Lowassie-------	Limited seasonally ponded (limited) seasonal wetness (moderately limited)	0.80 0.60	Limited seasonally ponded (limited) seasonal wetness (moderately limited)	0.80 0.60	Very limited seasonal wetness (very limited) seasonally ponded (limited) low strength (moderately limited)	1.00 0.80 0.50	Very limited seasonal wetness (very limited) seasonally ponded (limited)	1.00 0.80	Very limited seasonal wetness (very limited) ponded (wetness) (very limited) low strength (moderately limited)	1.00 1.00 0.50

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73017:										
Bendavis-------	Limited		Very limited		Limited		Limited		Very limited	
	small stones	0.67	slope	1.00	slope	0.91	slope	0.91	slope	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	slope	0.25	small stones	0.67	seasonal wetness	0.10	small stones	0.67	seasonal wetness	0.10
	(slightly limited)		(limited)		(slightly limited)		(limited)		(slightly limited)	
			surface stones	0.38			seasonal wetness	0.10		
			(moderately limited)				(slightly limited)			
Poynor---------	Limited		Limited		Moderately limited		Limited		Very limited	
	small stones	0.73	slope	0.99	slope	0.60	small stones	0.73	slope	1.00
	(limited)		(limited)		(moderately limited)		(limited)		(very limited)	
	slope	0.14	small stones	0.73			slope	0.60		
	(slightly limited)		(limited)				(moderately limited)			
			surface stones	0.03						
			(slightly limited)							
73019:										
Poynor---------	Limited		Limited		Not limited		Limited		Not Limited	
	small stones	0.67	small stones	0.67			small stones	0.67		
	(limited)		(limited)				(limited)			
			slope	0.10						
			(slightly limited)							
73021:										
Poynor---------	Limited		Limited		Moderately limited		Limited		Very limited	
	small stones	0.73	slope	0.99	slope	0.60	small stones	0.73	slope	1.00
	(limited)		(limited)		(moderately limited)		(limited)		(very limited)	
	slope	0.14	small stones	0.73			slope	0.60		
	(slightly limited)		(limited)				(moderately limited)			
			surface stones	0.03						
			(slightly limited)							
73023:										
Mano-----------	Slightly limited		Slightly limited		Moderately limited		Slightly limited		Moderately limited	
	small stones	0.08	small stones	0.08	low strength	0.50	seasonal wetness	0.10	slippage potential	0.50
	(slightly limited)		(slightly limited)		(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.10			low strength	0.50
					(slightly limited)				(moderately limited)	
									seasonal wetness	0.10
									(slightly limited)	

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73023:										
Ocie	Moderately limited small stones (moderately limited)	0.42	Moderately limited small stones (moderately limited)	0.42	Slightly limited seasonal wetness (slightly limited)	0.10	Slightly limited small stones (slightly limited) seasonal wetness (slightly limited)	0.30 0.10	Moderately limited slippage potential (moderately limited) seasonal wetness (slightly limited)	0.50 0.10
73024:										
Mano	Slightly limited small stones (slightly limited)	0.24	Moderately limited slope (moderately limited) small stones (slightly limited) surface stones (slightly limited)	0.47 0.24 0.03	Slightly limited seasonal wetness (slightly limited)	0.10	Slightly limited seasonal wetness (slightly limited) small stones (slightly limited)	0.10 0.01	Limited slope (limited) slippage potential (moderately limited) seasonal wetness (slightly limited)	0.76 0.50 0.10
Ocie	Moderately limited small stones (moderately limited)	0.42	Moderately limited slope (moderately limited) small stones (moderately limited) surface stones (slightly limited)	0.47 0.42 0.03	Slightly limited seasonal wetness (slightly limited)	0.10	Slightly limited small stones (slightly limited) seasonal wetness (slightly limited)	0.30 0.10	Limited slope (limited) slippage potential (moderately limited) seasonal wetness (slightly limited)	0.76 0.50 0.10
73032:										
Gatewood	Moderately limited small stones (moderately limited)	0.42	Moderately limited small stones (moderately limited) slope (moderately limited) surface stones (slightly limited)	0.42 0.34 0.02	Slightly limited seasonal wetness (slightly limited)	0.15	Slightly limited small stones (slightly limited) seasonal wetness (slightly limited)	0.30 0.15	Moderately limited slope (moderately limited) seasonal wetness (slightly limited)	0.45 0.15
73033:										
Gatewood	Very limited small stones (limited) slope (slightly limited)	0.99 0.14	Limited small stones (limited) slope (limited)	0.99 0.99	Moderately limited slope (moderately limited) seasonal wetness (slightly limited)	0.60 0.15	Limited small stones (limited) slope (moderately limited) seasonal wetness (slightly limited)	1.00 0.60 0.15	Very limited slope (very limited) seasonal wetness (slightly limited)	1.00 0.15
73051:										
Winnipeg	Not limited		Not limited		Moderately limited low strength (moderately limited)	0.50	Not limited		Moderately limited low strength (moderately limited)	0.50

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73052:										
Lily----------	Not limited		Slightly limited slope (slightly limited)	0.10	Moderately limited low strength (moderately limited)	0.50	Not limited		Moderately limited low strength (moderately limited)	0.50
73053:										
Lily----------	Not limited		Slightly limited slope (slightly limited)	0.30	Moderately limited low strength (moderately limited)	0.50	Not limited		Moderately limited low strength (moderately limited) slope (moderately limited)	0.50 0.31
Bender---------	Slightly limited large stones (slightly limited) small stones (slightly limited)	0.17 0.03	Moderately limited large stones (moderately limited) slope (slightly limited) small stones (slightly limited)	0.45 0.30 0.03	Not limited		Slightly limited large stones (slightly limited)	0.17	Moderately limited slope (moderately limited)	0.31
73054:										
Viburnum-------	Not limited		Not limited		Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.26	Slightly limited seasonal wetness (slightly limited)	0.26	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.26
73056:										
Viburnum-------	Slightly limited small stones (slightly limited)	0.01	Moderately limited slope (moderately limited) small stones (slightly limited)	0.47 0.01	Slightly limited seasonal wetness (slightly limited)	0.29	Slightly limited seasonal wetness (slightly limited)	0.29	Limited slope (limited) seasonal wetness (slightly limited)	0.76 0.29
73057:										
Jerktail-------	Not limited		Not limited		Moderately limited low strength (moderately limited) seasonal wetness (moderately limited)	0.50 0.49	Moderately limited seasonal wetness (moderately limited)	0.49	Moderately limited low strength (moderately limited) seasonal wetness (moderately limited)	0.50 0.49

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73058:										
Gunlock--------	Slightly limited		Slightly limited		Moderately limited		Slightly limited		Moderately limited	
	small stones	0.04	slope	0.10	low strength	0.50	seasonal wetness	0.28	low strength	0.50
	(slightly limited)		(slightly limited)		(moderately limited)		(slightly limited)		(moderately limited)	
			small stones	0.04	seasonal wetness	0.28			seasonal wetness	0.28
			(slightly limited)		(slightly limited)				(slightly limited)	
73063:										
Bendavis-------	Slightly limited		Slightly limited		Moderately limited		Slightly limited		Moderately limited	
	small stones	0.04	small stones	0.04	low strength	0.50	seasonal wetness	0.10	slippage potential	0.50
	(slightly limited)		(slightly limited)		(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.10			low strength	0.50
					(slightly limited)				(moderately limited)	
									seasonal wetness	0.10
									(slightly limited)	
Poynor---------	Limited		Limited		Not limited		Limited		Not Limited	
	small stones	0.67	small stones	0.67			small stones	0.67		
	(limited)		(limited)				(limited)			
73066:										
Bender---------	Moderately limited		Limited		Not limited		Slightly limited		Moderately limited	
	surface stones	0.41	surface stones	0.78			large stones	0.17	surface stones	0.41
	(moderately limited)		(limited)				(slightly limited)		(moderately limited)	
	large stones	0.17	large stones	0.45					slope	0.31
	(slightly limited)		(moderately limited)						(moderately limited)	
			slope	0.30						
			(slightly limited)							
73067:										
Bender---------	Slightly limited		Very limited		Limited		Limited		Very limited	
	slope	0.25	slope	1.00	slope	0.91	slope	0.91	slope	1.00
	(slightly limited)		(very limited)		(limited)		(limited)		(very limited)	
	large stones	0.17	large stones	0.45			large stones	0.17		
	(slightly limited)		(moderately limited)				(slightly limited)			
	small stones	0.01	surface stones	0.30						
	(slightly limited)		(slightly limited)							
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick-----------	Not limited		Moderately limited		Not limited		Not limited		Limited	
			slope	0.47					slope	0.76
			(moderately limited)						(limited)	
			surface stones	0.01						
			(slightly limited)							

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73069:										
Tick	Limited small stones (limited) very sandy (surface) (moderately limited) slope (slightly limited)	 0.93 0.50 0.14	Limited slope (limited) small stones (limited) very sandy (surface) (moderately limited)	 0.99 0.93 0.50	Moderately limited slope (moderately limited) very sandy (surface) (moderately limited)	 0.60 0.50	Limited small stones (limited) slope (moderately limited)	 0.94 0.60	Very limited slope (very limited) slippage potential (limited) very sandy (surface) (moderately limited)	 1.00 0.90 0.50
73071:										
Hogcreek	Not limited		Not limited		Moderately limited low strength (moderately limited) seasonal wetness (moderately limited)	 0.50 0.39	Moderately limited seasonal wetness (moderately limited)	 0.39	Moderately limited low strength (moderately limited) seasonal wetness (moderately limited)	 0.50 0.39
73072:										
Hogcreek	Not limited		Slightly limited slope (slightly limited)	 0.10	Moderately limited low strength (moderately limited) seasonal wetness (moderately limited)	 0.50 0.39	Moderately limited seasonal wetness (moderately limited)	 0.39	Moderately limited low strength (moderately limited) seasonal wetness (moderately limited)	 0.50 0.39
73073:										
Scholten	Moderately limited small stones (moderately limited)	 0.42	Moderately limited slope (moderately limited) small stones (moderately limited)	 0.47 0.42	Slightly limited seasonal wetness (slightly limited)	 0.28	Slightly limited small stones (slightly limited) seasonal wetness (slightly limited)	 0.30 0.28	Limited slope (limited) seasonal wetness (slightly limited)	 0.76 0.28
Poynor	Moderately limited small stones (moderately limited)	 0.60	Moderately limited small stones (moderately limited) slope (moderately limited)	 0.60 0.47	Not limited		Moderately limited small stones (moderately limited)	 0.60	Limited slope (limited)	 0.76
73076:										
Mano	Moderately limited small stones (moderately limited) slope (slightly limited)	 0.42 0.14	Limited slope (limited) small stones (moderately limited)	 0.99 0.42	Moderately limited slope (moderately limited) seasonal wetness (slightly limited)	 0.60 0.10	Moderately limited slope (moderately limited) small stones (slightly limited) seasonal wetness (slightly limited)	 0.60 0.30 0.10	Very limited slope (very limited) slippage potential (moderately limited) seasonal wetness (slightly limited)	 1.00 0.50 0.10

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73076:										
Ocie----------	Moderately limited		Limited		Moderately limited		Moderately limited		Very limited	
	small stones	0.42	slope	0.99	slope	0.60	slope	0.60	slope	1.00
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
	slope	0.14	small stones	0.42	seasonal wetness	0.10	small stones	0.30	slippage potential	0.50
	(slightly limited)		(moderately limited)		(slightly limited)		(slightly limited)		(moderately limited)	
							seasonal wetness	0.10	seasonal wetness	0.10
							(slightly limited)		(slightly limited)	
73077:										
Eudy----------	Slightly limited		Slightly limited		Moderately limited		Moderately limited		Moderately limited	
	small stones	0.04	small stones	0.04	low strength	0.50	seasonal wetness	0.49	low strength	0.50
	(slightly limited)		(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					seasonal wetness	0.49			seasonal wetness	0.49
					(moderately limited)				(moderately limited)	
73080:										
Alred----------	Slightly limited		Very limited		Limited		Limited		Very limited	
	slope	0.16	slope	1.00	slope	0.68	slope	0.68	slope	1.00
	(slightly limited)		(very limited)		(limited)		(limited)		(very limited)	
			surface stones	0.30						
			(slightly limited)							
Bardley--------	Slightly limited		Very limited		Limited		Limited		Very limited	
	slope	0.23	slope	1.00	slope	0.87	slope	0.87	slope	1.00
	(slightly limited)		(very limited)		(limited)		(limited)		(very limited)	
	large stones	0.17	large stones	0.45			large stones	0.17		
	(slightly limited)		(moderately limited)				(slightly limited)			
	small stones	0.14	surface stones	0.30						
	(slightly limited)		(slightly limited)							
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73081:										
Bender----------	Moderately limited		Very limited		Very limited		Very limited		Very limited	
	large stones	0.44	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(moderately limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	surface stones	0.41	large stones	0.78			large stones	0.44	slippage potential	0.50
	(moderately limited)		(limited)				(moderately limited)		(moderately limited)	
	slope	0.37	surface stones	0.78					surface stones	0.41
	(moderately limited)		(limited)						(moderately limited)	

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73081:										
Alred----------	Limited		Very limited		Limited		Limited		Very limited	
	large stones (limited)	0.61	slope (very limited)	1.00	slope (limited)	0.68	slope (limited)	0.68	slope (very limited)	1.00
	surface stones (moderately limited)	0.41	large stones >35% (very limited)	0.99			large stones (limited)	0.61	surface stones (moderately limited)	0.41
	slope (slightly limited)	0.16	surface stones (limited)	0.78						
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73087:										
Celt----------	Moderately limited		Moderately limited		Limited		Limited		Limited	
	seasonal wetness (moderately limited)	0.60	seasonal wetness (moderately limited)	0.60	seasonal wetness (limited)	0.62	seasonal wetness (limited)	0.62	seasonal wetness (limited)	0.62
					low strength (moderately limited)	0.50			low strength (moderately limited)	0.50
73159:										
Yelton---------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength (moderately limited)	0.50	seasonal wetness (slightly limited)	0.28	low strength (moderately limited)	0.50
					seasonal wetness (slightly limited)	0.28			seasonal wetness (slightly limited)	0.28
73176:										
Bendavis-------	Moderately limited		Moderately limited		Slightly limited		Moderately limited		Limited	
	small stones (moderately limited)	0.60	small stones (moderately limited)	0.60	seasonal wetness (slightly limited)	0.10	small stones (moderately limited)	0.60	slope (limited)	0.76
			slope (moderately limited)	0.47			seasonal wetness (slightly limited)	0.10	seasonal wetness (slightly limited)	0.10
			surface stones (slightly limited)	0.02						
Poynor---------	Slightly limited		Moderately limited		Not limited		Slightly limited		Limited	
	small stones (slightly limited)	0.24	slope (moderately limited)	0.47			small stones (slightly limited)	0.01	slope (limited)	0.76
			small stones (slightly limited)	0.24						
			surface stones (slightly limited)	0.02						

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73197:										
Viburnum-------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength	0.50	seasonal wetness	0.29	low strength	0.50
					(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.29			seasonal wetness	0.29
					(slightly limited)				(slightly limited)	
73198:										
Gressy---------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	
Viraton--------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength	0.50	seasonal wetness	0.20	low strength	0.50
					(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.20			seasonal wetness	0.20
					(slightly limited)				(slightly limited)	
73199:										
Moko----------	Limited		Limited		Not limited		Limited		Moderately limited	
	large stones	0.61	large stones >35%	0.99			large stones	0.61	slippage potential	0.50
	(limited)		(very limited)				(limited)		(moderately limited)	
	small stones	0.08	slope	0.34					slope	0.45
	(slightly limited)		(moderately limited)						(moderately limited)	
			surface stones	0.09						
			(slightly limited)							
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor---------	Very limited		Very limited		Moderately limited		Very limited		Limited	
	small stones	1.00	small stones	1.00	very sandy (surface)	0.50	small stones	1.00	slope	0.76
	(very limited)		(very limited)		(moderately limited)		(very limited)		(limited)	
	very sandy (surface)	0.50	very sandy (surface)	0.50					very sandy (surface)	0.50
	(moderately limited)		(moderately limited)						(moderately limited)	
			slope	0.47						
			(moderately limited)							
73221:										
Poynor---------	Limited		Limited		Slightly limited		Limited		Limited	
	small stones	0.81	small stones	0.81	slope	0.05	small stones	0.81	slope	0.99
	(limited)		(limited)		(slightly limited)		(limited)		(limited)	
	slope	0.01	slope	0.60			slope	0.05		
	(slightly limited)		(moderately limited)				(slightly limited)			
			surface stones	0.03						
			(slightly limited)							

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73222:										
Splitlimb------	Limited		Limited		Limited		Limited		Very limited	
	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80	ponded (wetness)	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
					low strength	0.50	seasonal wetness	0.26	low strength	0.50
					(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.26			seasonal wetness	0.26
					(slightly limited)				(slightly limited)	
73223:										
Coulstone------	Limited		Very limited		Moderately limited		Moderately limited		Very limited	
	surface stones	0.66	surface stones >15%	1.00	slope	0.60	slope	0.60	slope	1.00
	(limited)		(very limited)		(moderately limited)		(moderately limited)		(very limited)	
	small stones	0.60	slope	0.99	large surface stones	0.52	small stones	0.60	surface stones	0.66
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(limited)	
	slope	0.14	small stones	0.60			large surface stones	0.52	large surface stones	0.52
	(slightly limited)		(moderately limited)				(moderately limited)		(moderately limited)	
Bender---------	Moderately limited		Very limited		Limited		Limited		Very limited	
	very sandy (surface)	0.50	slope	1.00	slope	0.79	slope	0.79	slope	1.00
	(moderately limited)		(very limited)		(limited)		(limited)		(very limited)	
	surface stones	0.41	surface stones	0.78	very sandy (surface)	0.50	large stones	0.40	very sandy (surface)	0.50
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	large stones	0.40	large stones	0.73					slippage potential	0.50
	(moderately limited)		(limited)						(moderately limited)	
73224:										
Moko----------	Slightly limited		Limited		Moderately limited		Moderately limited		Very limited	
	slope	0.14	slope	0.99	slope	0.60	slope	0.60	slope	1.00
	(slightly limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
	small stones	0.13	large stones	0.33			large stones	0.06	slippage potential	0.50
	(slightly limited)		(moderately limited)				(slightly limited)		(moderately limited)	
	large stones	0.06	small stones	0.13						
	(slightly limited)		(slightly limited)							
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
74626:										
Tanglenook-----	Moderately limited		Moderately limited		Limited		Limited		Limited	
	seasonal wetness	0.60	seasonal wetness	0.60	seasonal wetness	0.76	seasonal wetness	0.76	seasonal wetness	0.76
	(moderately limited)		(moderately limited)		(limited)		(limited)		(limited)	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74627:										
Hartville------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength	0.50	seasonal wetness	0.20	low strength	0.50
					(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.20			seasonal wetness	0.20
					(slightly limited)				(slightly limited)	
74629:										
Raftville------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	
74636:										
Lecoma---------	Not limited		Slightly limited		Moderately limited		Not limited		Moderately limited	
			slope	0.10	low strength	0.50			low strength	0.50
			(slightly limited)		(moderately limited)				(moderately limited)	
74637:										
Lecoma---------	Not limited		Moderately limited		Moderately limited		Not limited		Moderately limited	
			slope	0.39	low strength	0.50			slope	0.60
			(moderately limited)		(moderately limited)				(moderately limited)	
									low strength	0.50
									(moderately limited)	
74677:										
Deible---------	Moderately limited		Moderately limited		Limited		Limited		Limited	
	seasonal wetness	0.60	seasonal wetness	0.60	seasonal wetness	0.95	seasonal wetness	0.95	seasonal wetness	0.95
	(moderately limited)		(moderately limited)		(limited)		(limited)		(limited)	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	
74679:										
Higdon---------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength	0.50	seasonal wetness	0.29	low strength	0.50
					(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.29			seasonal wetness	0.29
					(slightly limited)				(slightly limited)	
75381:										
Bearthicket----	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75382:										
Cedargap	Slightly limited small stones (slightly limited)	 0.08	Slightly limited small stones (slightly limited)	 0.08	Not limited		Not limited		Very limited flooding (very limited)	 1.00
75388:										
Kaintuck	Not limited		Not limited		Not limited		Not limited		Very limited flooding (very limited)	 1.00
Relfe	Limited small stones (limited) very sandy (surface) (moderately limited)	 0.73 0.50	Limited small stones (limited) very sandy (surface) (moderately limited)	 0.73 0.50	Moderately limited very sandy (surface) (moderately limited)	 0.50	Limited small stones (limited)	 0.73	Very limited flooding (very limited) very sandy (surface) (moderately limited)	 1.00 0.50
75389:										
Dunning	Moderately limited seasonal wetness (moderately limited)	 0.60	Moderately limited seasonal wetness (moderately limited)	 0.60	Very limited seasonal wetness (very limited) low strength (moderately limited)	 1.00 0.50	Very limited seasonal wetness (very limited)	 1.00	Very limited seasonal wetness (very limited) flooding (very limited) low strength (moderately limited)	 1.00 1.00 0.50
Hercules	Moderately limited seasonal wetness (moderately limited) large stones (slightly limited) small stones (slightly limited)	 0.60 0.17 0.01	Moderately limited seasonal wetness (moderately limited) large stones (moderately limited) small stones (slightly limited)	 0.60 0.45 0.01	Very limited seasonal wetness (very limited)	 1.00	Very limited seasonal wetness (very limited) large stones (slightly limited)	 1.00 0.17	Very limited seasonal wetness (very limited) flooding (very limited)	 1.00 1.00
75390:										
Razort	Not limited		Not limited		Moderately limited low strength (moderately limited)	 0.50	Not limited		Moderately limited low strength (moderately limited)	 0.50
75391:										
Possumtrot	Not limited		Not limited		Not limited		Not limited		Moderately limited flooding (moderately limited)	 0.60

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75392:										
Stultz	Moderately limited seasonal wetness (moderately limited)	0.60	Moderately limited seasonal wetness (moderately limited)	0.60	Limited seasonal wetness (limited)	0.66	Limited seasonal wetness (limited)	0.66	Very limited flooding (very limited) seasonal wetness (limited)	1.00 0.66
75406:										
Racket	Not limited		Not limited		Moderately limited low strength (moderately limited)	0.50	Not limited		Very limited flooding (very limited) low strength (moderately limited)	1.00 0.50
75417:										
Relfe	Moderately limited small stones (moderately limited) very sandy (surface) (moderately limited)	0.56 0.50	Moderately limited small stones (moderately limited) very sandy (surface) (moderately limited)	0.56 0.50	Moderately limited very sandy (surface) (moderately limited)	0.50	Moderately limited small stones (moderately limited)	0.53	Very limited flooding (very limited) very sandy (surface) (moderately limited)	1.00 0.50
Sandbur	Not limited		Not limited		Not limited		Not limited		Very limited flooding (very limited)	1.00
75418:										
Tilk	Limited small stones (limited)	0.65	Limited small stones (limited)	0.65	Not limited		Limited small stones (limited)	0.65	Moderately limited slippage potential (moderately limited)	0.50
75419:										
Perche	Moderately limited seasonal wetness (moderately limited)	0.60	Moderately limited seasonal wetness (moderately limited)	0.60	Limited seasonal wetness (limited)	0.91	Limited seasonal wetness (limited)	0.91	Limited seasonal wetness (limited) flooding (moderately limited)	0.91 0.60

Table 8a.--Forest Management--Continued

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75420:										
Secesh	Not limited		Not limited		Moderately limited low strength (moderately limited)	0.50	Not limited		Moderately limited flooding (moderately limited) low strength (moderately limited)	0.60 0.50
Tilk	Moderately limited small stones (moderately limited)	0.42	Moderately limited small stones (moderately limited)	0.42	Not limited		Slightly limited small stones (slightly limited)	0.30	Moderately limited flooding (moderately limited)	0.60
99000:										
Pits, quarries	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 8b.--Forest Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti	Limited slope/erodibility (limited)	0.67	Slightly limited slope/erodibility (slightly limited)	0.15	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.20	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.20	Not limited	
70025:										
Branson	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.04	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
Splitlimb	Slightly limited slope/erodibility (slightly limited)	0.11	Slightly limited slope/erodibility (slightly limited)	0.02	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.25	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.25	Not limited	
70026:										
Tonti	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.20	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.20	Not limited	
73000:										
Pomme	Moderately limited slope/erodibility (moderately limited)	0.44	Slightly limited slope/erodibility (slightly limited)	0.10	Limited low strength (limited)	0.80	Moderately limited slippage potential (moderately limited) low strength (moderately limited)	0.50 0.50	Not limited	
73013:										
Lowassie	Slightly limited slope/erodibility (slightly limited)	0.11	Slightly limited slope/erodibility (slightly limited)	0.02	Very limited seasonal wetness (very limited) low strength (limited)	1.00 0.80	Very limited seasonal wetness (very limited) seasonally ponded (limited) low strength (moderately limited)	1.00 0.80 0.50	Very limited seasonal wetness (very limited)	1.00

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73017:										
Bendavis	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.65	Slightly limited seasonal wetness (slightly limited)	0.10	Very limited slope (very limited) seasonal wetness (slightly limited)	1.00 0.10	Slightly limited soil reaction (slightly limited)	0.18
Poynor	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Not limited		Very limited slope (very limited)	1.00	Limited droughty (limited)	0.84
73019:										
Poynor	Limited slope/erodibility (limited)	0.67	Slightly limited slope/erodibility (slightly limited)	0.12	Not limited		Not limited		Limited droughty (limited)	0.84
73021:										
Poynor	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Not limited		Very limited slope (very limited)	1.00	Limited droughty (limited)	0.84
73023:										
Mano	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.10	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.10	Moderately limited slippage potential (moderately limited) low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.50 0.10	Not limited	
Ocie	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.10	Slightly limited seasonal wetness (slightly limited)	0.10	Moderately limited slippage potential (moderately limited) seasonal wetness (slightly limited)	0.50 0.10	Not limited	
73024:										
Mano	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Slightly limited seasonal wetness (slightly limited)	0.10	Limited slope (limited) slippage potential (moderately limited) seasonal wetness (slightly limited)	0.76 0.50 0.10	Not limited	

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73024:										
Ocie	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Slightly limited seasonal wetness (slightly limited)	0.10	Limited slope (limited)	0.76	Not limited	
							slippage potential (moderately limited)	0.50		
							seasonal wetness (slightly limited)	0.10		
73032:										
Gatewood	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.18	Slightly limited seasonal wetness (slightly limited)	0.15	Moderately limited slope (moderately limited)	0.45	Not limited	
							seasonal wetness (slightly limited)	0.15		
73033:										
Gatewood	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Slightly limited seasonal wetness (slightly limited)	0.15	Very limited slope (very limited)	1.00	Not limited	
							seasonal wetness (slightly limited)	0.15		
73051:										
Winnipeg	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
73052:										
Lily	Limited slope/erodibility (limited)	0.67	Slightly limited slope/erodibility (slightly limited)	0.12	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
73053:										
Lily	Limited slope/erodibility (limited)	0.89	Slightly limited slope/erodibility (slightly limited)	0.16	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
							slope (moderately limited)	0.31		
Bender	Moderately limited slope/erodibility (moderately limited)	0.31	Slightly limited slope/erodibility (slightly limited)	0.16	Not limited		Moderately limited slope (moderately limited)	0.31	Moderately limited droughty (moderately limited)	0.45

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73054:										
Viburnum-------	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.26	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.26	Not limited	
73056:										
Viburnum-------	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Slightly limited seasonal wetness (slightly limited)	0.29	Limited slope (limited) seasonal wetness (slightly limited)	0.76 0.29	Not limited	
73057:										
Jerktail-------	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited) seasonal wetness (moderately limited)	0.80 0.49	Moderately limited low strength (moderately limited) seasonal wetness (moderately limited)	0.50 0.49	Moderately limited seasonal wetness (moderately limited)	0.39
73058:										
Gunlock--------	Limited slope/erodibility (limited)	0.67	Slightly limited slope/erodibility (slightly limited)	0.15	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.28	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.28	Not limited	
73063:										
Bendavis-------	Moderately limited slope/erodibility (moderately limited)	0.31	Slightly limited slope/erodibility (slightly limited)	0.10	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.10	Moderately limited slippage potential (moderately limited) low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.50 0.10	Not limited	
Poynor---------	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.10	Not limited		Not limited		Moderately limited droughty (moderately limited)	0.57

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73066:										
Bender----------	Moderately limited slope/erodibility (moderately limited)	0.31	Slightly limited slope/erodibility (slightly limited)	0.16	Not limited		Moderately limited surface stones (moderately limited)	0.41	Limited droughty (limited)	0.78
							slope (moderately limited)	0.31		
73067:										
Bender----------	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.65	Not limited		Very limited slope (very limited)	1.00	Moderately limited droughty (moderately limited)	0.45
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick----------	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited)	0.76	Not limited	
73069:										
Tick----------	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Not limited		Very limited slope (very limited)	1.00	Not limited	
							slippage potential (limited)	0.90		
							very sandy (surface) (moderately limited)	0.50		
73071:										
Hogcreek-------	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Slightly limited seasonal wetness (slightly limited)	0.19
					seasonal wetness (moderately limited)	0.39	seasonal wetness (moderately limited)	0.39		
73072:										
Hogcreek-------	Limited slope/erodibility (limited)	0.67	Slightly limited slope/erodibility (slightly limited)	0.15	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Slightly limited seasonal wetness (slightly limited)	0.19
					seasonal wetness (moderately limited)	0.39	seasonal wetness (moderately limited)	0.39		

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73073:										
Scholten	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Slightly limited seasonal wetness (slightly limited)	0.28	Limited slope (limited) seasonal wetness (slightly limited)	0.76 0.28	Not limited	
Poynor	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited)	0.76	Limited droughty (limited)	0.84
73076:										
Mano	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Slightly limited seasonal wetness (slightly limited)	0.10	Very limited slope (very limited) slippage potential (moderately limited) seasonal wetness (slightly limited)	1.00 0.50 0.10	Not limited	
Ocie	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Slightly limited seasonal wetness (slightly limited)	0.10	Very limited slope (very limited) slippage potential (moderately limited) seasonal wetness (slightly limited)	1.00 0.50 0.10	Not limited	
73077:										
Eudy	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.12	Limited low strength (limited) seasonal wetness (moderately limited)	0.80 0.49	Moderately limited low strength (moderately limited) seasonal wetness (moderately limited)	0.50 0.49	Moderately limited seasonal wetness (moderately limited)	0.39
73080:										
Alred	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.53	Not limited		Very limited slope (very limited)	1.00	Slightly limited droughty (slightly limited)	0.12
Bardley	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.63	Not limited		Very limited slope (very limited)	1.00	Not limited	
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73081:										
Bender	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.78	Not limited		Very limited slope (very limited); slippage potential (moderately limited); surface stones (moderately limited)	1.00; 0.50; 0.41	Very limited droughty (very limited)	1.00
Alred	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.53	Not limited		Very limited slope (very limited); surface stones (moderately limited)	1.00; 0.41	Slightly limited droughty (slightly limited)	0.12
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73087:										
Celt	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited); seasonal wetness (limited)	0.80; 0.62	Limited seasonal wetness (limited); low strength (moderately limited)	0.62; 0.50	Limited seasonal wetness (limited)	0.62
73159:										
Yelton	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.12	Limited low strength (limited); seasonal wetness (slightly limited)	0.80; 0.28	Moderately limited low strength (moderately limited); seasonal wetness (slightly limited)	0.50; 0.28	Not limited	
73176:										
Bendavis	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Slightly limited seasonal wetness (slightly limited)	0.10	Limited slope (limited); seasonal wetness (slightly limited)	0.76; 0.10	Not limited	
Poynor	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited)	0.76	Not limited	

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73197:										
Viburnum-------	Moderately limited slope/erodibility (moderately limited)	0.44	Slightly limited slope/erodibility (slightly limited)	0.10	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.29	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.29	Not limited	
73198:										
Gressy---------	Moderately limited slope/erodibility (moderately limited)	0.44	Slightly limited slope/erodibility (slightly limited)	0.10	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
Viraton--------	Moderately limited slope/erodibility (moderately limited)	0.44	Slightly limited slope/erodibility (slightly limited)	0.10	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.20	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.20	Not limited	
73199:										
Moko----------	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.18	Not limited		Moderately limited slippage potential (moderately limited) slope (moderately limited)	0.50 0.45	Limited droughty (limited)	0.90
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor---------	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited) very sandy (surface) (moderately limited)	0.76 0.50	Limited droughty (limited)	0.84
73221:										
Poynor---------	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.29	Not limited		Limited slope (limited)	0.99	Limited droughty (limited)	0.84

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73222:										
Splitlimb------	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited)	0.80	Limited seasonally ponded (limited)	0.80	Not limited	
					seasonal wetness (slightly limited)	0.26	low strength (moderately limited)	0.50		
							seasonal wetness (slightly limited)	0.26		
73223:										
Coulstone------	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Not limited		Very limited slope (very limited)	1.00	Very limited droughty (very limited)	1.00
							surface stones (limited)	0.66		
							large surface stones (moderately limited)	0.52		
Bender---------	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.59	Not limited		Very limited slope (very limited)	1.00	Very limited droughty (very limited)	1.00
							slippage potential (moderately limited)	0.50		
							very sandy (surface) (moderately limited)	0.50		
73224:										
Moko-----------	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Not limited		Very limited slope (very limited)	1.00	Limited droughty (limited)	0.90
							slippage potential (moderately limited)	0.50		
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
74626:										
Tanglenook-----	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited)	0.80	Limited seasonal wetness (limited)	0.76	Limited seasonal wetness (limited)	0.76
					seasonal wetness (limited)	0.76	low strength (moderately limited)	0.50		

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74627:										
Hartville------	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
					seasonal wetness (slightly limited)	0.20	seasonal wetness (slightly limited)	0.20		
74629:										
Raftville------	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.10	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
74636:										
Lecoma---------	Limited slope/erodibility (limited)	0.67	Slightly limited slope/erodibility (slightly limited)	0.12	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
74637:										
Lecoma---------	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.20	Limited low strength (limited)	0.80	Moderately limited slope (moderately limited)	0.60	Not limited	
							low strength (moderately limited)	0.50		
74677:										
Deible---------	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited seasonal wetness (limited)	0.95	Limited seasonal wetness (limited)	0.95	Limited seasonal wetness (limited)	0.95
					low strength (limited)	0.80	low strength (moderately limited)	0.50		
74679:										
Higdon---------	Slightly limited slope/erodibility (slightly limited)	0.11	Slightly limited slope/erodibility (slightly limited)	0.02	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
					seasonal wetness (slightly limited)	0.29	seasonal wetness (slightly limited)	0.29		
75381:										
Bearthicket----	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75382:										
Cedargap	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.04	Moderately limited low strength (moderately limited)	0.50	Very limited flooding (very limited)	1.00	Limited flooding (limited)	0.90
75388:										
Kaintuck	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.04	Moderately limited low strength (moderately limited)	0.50	Very limited flooding (very limited)	1.00	Limited flooding (limited)	0.90
Relfe	Slightly limited slope/erodibility (slightly limited)	0.12	Slightly limited slope/erodibility (slightly limited)	0.04	Not limited		Very limited flooding (very limited)	1.00	Very limited droughty (very limited)	1.00
							very sandy (surface) (moderately limited)	0.50	flooding (limited)	0.90
75389:										
Dunning	Slightly limited slope/erodibility (slightly limited)	0.11	Slightly limited slope/erodibility (slightly limited)	0.02	Very limited seasonal wetness (very limited)	1.00	Very limited seasonal wetness (very limited)	1.00	Very limited seasonal wetness (very limited)	1.00
					low strength (limited)	0.80	flooding (very limited)	1.00	flooding (limited)	0.90
							low strength (moderately limited)	0.50		
Hercules	Slightly limited slope/erodibility (slightly limited)	0.12	Slightly limited slope/erodibility (slightly limited)	0.04	Very limited seasonal wetness (very limited)	1.00	Very limited seasonal wetness (very limited)	1.00	Very limited seasonal wetness (very limited)	1.00
							flooding (very limited)	1.00	flooding (limited)	0.90
75390:										
Razort	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.05	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
75391:										
Possumtrot	Slightly limited slope/erodibility (slightly limited)	0.11	Slightly limited slope/erodibility (slightly limited)	0.02	Moderately limited low strength (moderately limited)	0.50	Moderately limited flooding (moderately limited)	0.60	Moderately limited flooding (moderately limited)	0.60

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75392:										
Stultz	Slightly limited slope/erodibility (slightly limited)	0.12	Slightly limited slope/erodibility (slightly limited)	0.04	Limited seasonal wetness (limited)	0.66	Very limited flooding (very limited)	1.00	Limited flooding (limited)	0.90
							seasonal wetness (limited)	0.66	seasonal wetness (limited)	0.66
75406:										
Racket	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.04	Limited low strength (limited)	0.80	Very limited flooding (very limited)	1.00	Limited flooding (limited)	0.90
							low strength (moderately limited)	0.50		
75417:										
Relfe	Slightly limited slope/erodibility (slightly limited)	0.08	Slightly limited slope/erodibility (slightly limited)	0.04	Not limited		Very limited flooding (very limited)	1.00	Very limited droughty (very limited)	1.00
							very sandy (surface) (moderately limited)	0.50	flooding (limited)	0.90
Sandbur	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.04	Moderately limited low strength (moderately limited)	0.50	Very limited flooding (very limited)	1.00	Limited flooding (limited)	0.90
75418:										
Tilk	Slightly limited slope/erodibility (slightly limited)	0.12	Slightly limited slope/erodibility (slightly limited)	0.04	Not limited		Moderately limited slippage potential (moderately limited)	0.50	Moderately limited droughty (moderately limited)	0.31
75419:										
Perche	Slightly limited slope/erodibility (slightly limited)	0.11	Slightly limited slope/erodibility (slightly limited)	0.02	Limited seasonal wetness (limited)	0.91	Limited seasonal wetness (limited)	0.91	Limited seasonal wetness (limited)	0.91
					low strength (moderately limited)	0.50	flooding (moderately limited)	0.60	flooding (moderately limited)	0.60

Table 8b.--Forest Management--Continued

Map symbol and soil name	Erosion on roads and trails		Off-road or off-trail erosion		Soil rutting		Log landings		Seedling survival	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75420:										
Secesh	Slightly limited slope/erodibility (slightly limited)	0.11	Slightly limited slope/erodibility (slightly limited)	0.02	Limited low strength (limited)	0.80	Moderately limited flooding (moderately limited)	0.60	Moderately limited flooding (moderately limited)	0.60
							low strength (moderately limited)	0.50		
Tilk	Slightly limited slope/erodibility (slightly limited)	0.08	Slightly limited slope/erodibility (slightly limited)	0.04	Not limited		Moderately limited flooding (moderately limited)	0.60	Moderately limited flooding (moderately limited)	0.60
									droughty (moderately limited)	0.31
99000:										
Pits, quarries	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 9.--Windbreaks and Environmental Plantings

(Absence of an entry indicates that trees generally do not grow to the given height.)

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
70022:					
Tonti	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
70025:					
Branson	American hazelnut; downy arrowwood; fragrant sumac	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple; white oak	Northern red oak; tuliptree; white ash	Eastern white pine
Splitlimb	American hazelnut; downy arrowwood; fragrant sumac	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple; white oak	Northern red oak; tuliptree; white ash	Eastern white pine
70026:					
Tonti	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73000:					
Pomme	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73013:					
Lowassie	Buttonbush; ninebark	Possumhaw; sandbar willow	Black willow; bur oak; green hawthorn	Baldcypress; green ash; pecan; red maple; swamp white oak; sweetgum	Eastern cottonwood; silver maple
73017:					
Bendavis	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Poynor	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73019:					
Poynor	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
73021:					
Poynor	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73023:					
Mano	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
Ocie	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73024:					
Mano	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
Ocie	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73032:					
Gatewood	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73033:					
Gatewood	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73051:					
Winnipeg	American hazelnut; Downy Arrowwood; fragrant sumac	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple; white oak	Northern red oak; tuliptree; white ash	Eastern white pine
73052:					
Lily	American hazelnut; coralberry; flameleaf sumac	American plum; blue spruce; eastern redcedar; gray dogwood; Washington hawthorn	Common serviceberry; persimmon; post oak; shingle oak	Austrian pine; black oak	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
73053:					
Lily	American hazelnut; coralberry; flameleaf sumac	American plum; blue spruce; eastern redcedar; gray dogwood; Washington hawthorn	Common serviceberry; persimmon; post oak; shingle oak	Austrian pine; black oak	---
Bender	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73054:					
Viburnum	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73056:					
Viburnum	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73057:					
Jerktail	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73058:					
Gunlock	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73063:					
Bendavis	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Poynor	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73066:					
Bender	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
73067:					
Bender	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Rock outcrop.					
73068:					
Tick	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73069:					
Tick	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73071:					
Hogcreek	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73072:					
Hogcreek	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73073:					
Scholten	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Poynor	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73076:					
Mano	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
Ocie	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
73077:					
Eudy	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73080:					
Alred	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Bardley	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
Rock outcrop.					
73081:					
Bender	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Alred	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Rock outcrop.					
73087:					
Celt	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73159:					
Yelton	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73176:					
Bendavis	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Poynor	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
73197:					
Viburnum	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73198:					
Gressy	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Viraton	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73199:					
Moko.					
Rock outcrop.					
73220:					
Poynor	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73221:					
Poynor	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
73222:					
Splitlimb	American hazelnut; Downy Arrowwood; fragrant sumac	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple; white oak	Northern red oak; tuliptree; white ash	Eastern white pine
73223:					
Coulstone	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Bender	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
73224:					
Moko.					
Rock outcrop.					

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
74626: Tanglenook	Buttonbush; ninebark	Possumhaw; sandbar willow	Black willow; bur oak; green hawthorn	Baldcypress; green ash; pecan; red maple; swamp white oak; sweetgum	Eastern cottonwood; silver maple
74627: Hartville	Common ninebark; fragrant sumac; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; common hackberry; green ash; honeylocust; pin oak	---
74629: Raftville	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
74636: Lecoma	American hazelnut; downy arrowwood; fragrant sumac	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple; white oak	Northern red oak; tuliptree; white ash	Eastern white pine
74637: Lecoma	American hazelnut; downy arrowwood; fragrant sumac	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple; white oak	Northern red oak; tuliptree; white ash	Eastern white pine
74677: Deible	Buttonbush; ninebark	Possumhaw; sandbar willow	Black willow; bur oak; green hawthorn	Baldcypress; green ash; pecan; red maple; swamp white oak; sweetgum	Eastern cottonwood; silver maple
74679: Higdon	Buttonbush; ninebark	Possumhaw; sandbar willow	Black willow; bur oak; green hawthorn	Baldcypress; green ash; pecan; red maple; swamp white oak; sweetgum	Eastern cottonwood; silver maple
75381: Bearthicket	American hazelnut; ninebark; wild hydrangea	American plum; blue spruce; possumhaw; roughleaf dogwood	Arborvitae; bur oak; green hawthorn; shingle oak	Austrian pine; baldcypress; hackberry; pin oak; red maple	American sycamore; eastern cottonwood; eastern white pine
75382: Cedargap	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
75388:					
Kaintuck	American hazelnut; American plum; fragrant sumac; ninebark; wild hydrangea	American plum; blackhaw; blue spruce; gray dogwood	Eastern redcedar; nannyberry; Washington hawthorn	Baldcypress; green ash; sweetgum	Eastern white pine; pin oak
Relfe	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; gray dogwood	Common serviceberry; persimmon	Black oak	---
75389:					
Dunning	Buttonbush; ninebark	Possumhaw; sandbar willow	Black willow; bur oak; green hawthorn	Baldcypress; green ash; pecan; red maple; swamp white oak; sweetgum	Rastern cottonwood; silver maple
Hercules	American hazelnut; ninebark; wild hydrangea	American plum; blue spruce; possumhaw; roughleaf dogwood	Arborvitae; bur oak; green hawthorn; shingle oak	Austrian pine; baldcypress; hackberry; pin oak; red maple	American sycamore; eastern cottonwood; eastern white pine
75390:					
Razort	American hazelnut; ninebark; wild hydrangea	American plum; blue spruce; possumhaw; roughleaf dogwood	Arborvitae; bur oak; green hawthorn; shingle oak	Austrian pine; baldcypress; hackberry; pin oak; red maple	American sycamore; eastern cottonwood; eastern white pine
75391:					
Possumtrot	American hazelnut; coralberry; flameleaf sumac	American plum; blue spruce; eastern redcedar; gray dogwood; Washington hawthorn	Common serviceberry; persimmon; post oak; shingle oak	Austrian pine; black oak	---
75392:					
Stultz	American hazelnut; ninebark; wild hydrangea	American plum; blue spruce; possumhaw; roughleaf dogwood	Arborvitae; bur oak; green hawthorn; shingle oak	Austrian pine; baldcypress; hackberry; pin oak; red maple	American sycamore; eastern cottonwood; eastern white pine
75406:					
Racket	American hazelnut; ninebark; wild hydrangea	American plum; blue spruce; possumhaw; roughleaf dogwood	Arborvitae; bur oak; green hawthorn; shingle oak	Austrian pine; baldcypress; hackberry; pin oak; red maple	American sycamore; eastern cottonwood; eastern white pine
75417:					
Relfe	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Sandbur	Coralberry; flameleaf sumac	Eastern redcedar; gray dogwood; jack pine	Chinkapin oak; persimmon; post oak	Black oak; honeylocust	---
75418:					
Tilk	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
75419: Perche	American hazelnut; ninebark; wild hydrangea	American plum; blue spruce; possumhaw; roughleaf dogwood	Arborvitae; bur oak; green hawthorn; shingle oak	Austrian pine; baldcypress; hackberry; pin oak; red maple	American sycamore; eastern cottonwood; eastern white pine
75420: Secesh	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Tilk	Coralberry; fragrant sumac; ninebark	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
99000. Pits, quarries					
99001. Water					

Table 10.--Recreational Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:								
Tonti	Very limited percs slowly (very limited) wetness (moderately limited)	 1.00 0.50	Very limited percs slowly (very limited) wetness (slightly limited)	 1.00 0.28	Very limited percs slowly (very limited) slope (limited) wetness (moderately limited)	 1.00 0.98 0.50	Slightly limited wetness (slightly limited)	 0.28
70025:								
Branson	Not limited		Not limited		Not limited		Not limited	
Splitlimb	Limited wetness (limited)	 0.75	Moderately limited wetness (moderately limited)	 0.45	Limited wetness (limited)	 0.75	Moderately limited wetness (moderately limited)	 0.45
70026:								
Tonti	Very limited percs slowly (very limited) wetness (moderately limited)	 1.00 0.50	Very limited percs slowly (very limited) wetness (slightly limited)	 1.00 0.28	Very limited percs slowly (very limited) wetness (moderately limited) small stones (moderately limited)	 1.00 0.50 0.31	Slightly limited wetness (slightly limited)	 0.28
73000:								
Pomme	Not limited		Not limited		Moderately limited slope (moderately limited)	 0.40	Not limited	
73013:								
Lowassie	Very limited ponded (wetness) (very limited) wetness (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Very limited ponded (wetness) (very limited) wetness (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Very limited ponded (wetness) (very limited) wetness (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Very limited ponded (wetness) (very limited) wetness (very limited)	 1.00 1.00
73017:								
Bendavis	Very limited slope (very limited) percs slowly (very limited) small stones (very limited)	 1.00 1.00 1.00	Very limited slope (very limited) percs slowly (very limited) small stones (very limited)	 1.00 1.00 1.00	Very limited small stones (very limited) percs slowly (very limited) slope (very limited)	 1.00 1.00 1.00	Very limited slope (very limited) large surface stones (limited) small stones (limited)	 1.00 0.70 0.67
Poynor	Very limited slope (very limited) small stones (very limited) large surface stones (moderately limited)	 1.00 1.00 0.31	Very limited slope (very limited) small stones (very limited) large surface stones (moderately limited)	 1.00 1.00 0.31	Very limited small stones (very limited) slope (very limited) too acid (slightly limited)	 1.00 1.00 0.30	Limited slope (limited) small stones (limited) large surface stones (moderately limited)	 0.92 0.73 0.31

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73019:								
Poynor	Very limited		Very limited		Very limited		Limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.67
	(very limited)		(very limited)		(very limited)		(limited)	
					slope	0.98		
					(limited)			
73021:								
Poynor	Very limited		Very limited		Very limited		Limited	
	slope	1.00	slope	1.00	small stones	1.00	slope	0.92
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00	small stones	1.00	slope	1.00	small stones	0.73
	(very limited)		(very limited)		(very limited)		(limited)	
	large surface stones	0.31	large surface stones	0.31	too acid	0.30	large surface stones	0.31
	(moderately limited)		(moderately limited)		(slightly limited)		(moderately limited)	
73023:								
Mano	Moderately limited		Moderately limited		Very limited		Not limited	
	small stones	0.48	small stones	0.48	small stones	1.00		
	(moderately limited)		(moderately limited)		(very limited)			
	percs slowly	0.39	percs slowly	0.39	slope	0.78		
	(moderately limited)		(moderately limited)		(limited)			
					percs slowly	0.39		
					(moderately limited)			
Ocie	Very limited		Very limited		Very limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.30
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	percs slowly	0.39	percs slowly	0.39	slope	0.78		
	(moderately limited)		(moderately limited)		(limited)			
					percs slowly	0.39		
					(moderately limited)			
73024:								
Mano	Very limited		Very limited		Very limited		Moderately limited	
	small stones	1.00	small stones	1.00	slope	1.00	large surface stones	0.31
	(limited)		(limited)		(very limited)		(moderately limited)	
	slope	0.63	slope	0.63	small stones	1.00	small stones	0.01
	(limited)		(limited)		(very limited)		(slightly limited)	
	percs slowly	0.39	percs slowly	0.39	percs slowly	0.39		
	(moderately limited)		(moderately limited)		(moderately limited)			
Ocie	Very limited		Very limited		Very limited		Moderately limited	
	small stones	1.00	small stones	1.00	small stones	1.00	large surface stones	0.30
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	slope	0.63	slope	0.63	slope	1.00	small stones	0.30
	(limited)		(limited)		(very limited)		(slightly limited)	
	percs slowly	0.39	percs slowly	0.39	percs slowly	0.39		
	(moderately limited)		(moderately limited)		(moderately limited)			
73032:								
Gatewood	Very limited		Very limited		Very limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.30
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	percs slowly	0.39	percs slowly	0.39	slope	1.00	large surface stones	0.13
	(moderately limited)		(moderately limited)		(very limited)		(slightly limited)	
	wetness	0.35	large surface stones	0.13	depth to bedrock	0.46	wetness	0.13
	(moderately limited)		(slightly limited)		(moderately limited)		(slightly limited)	

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73033:								
Gatewood	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	small stones	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00	small stones	1.00	slope	1.00	slope	0.92
	(very limited)		(very limited)		(very limited)		(limited)	
	percs slowly	0.39	percs slowly	0.39	depth to bedrock	0.46	wetness	0.13
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)	
73051:								
Winnipeg	Not limited		Not limited		Not limited		Not limited	
73052:								
Lily	Not limited		Not limited		Limited		Not limited	
					slope	0.98		
					(limited)			
					depth to bedrock	0.66		
					(limited)			
73053:								
Lily	Very limited		Very limited		Very limited		Not limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00		
	(very limited)		(very limited)		(very limited)			
					slope	1.00		
					(very limited)			
					depth to bedrock	0.76		
					(limited)			
Bender	Slightly limited		Slightly limited		Very limited		Slightly limited	
	small stones	0.24	small stones	0.24	large stones >25%	1.00	large stones	0.17
	(slightly limited)		(slightly limited)		(very limited)		(slightly limited)	
	too acid	0.18	too acid	0.18	small stones	1.00	large surface stones	0.13
	(slightly limited)		(slightly limited)		(very limited)		(slightly limited)	
	large stones	0.17	large stones	0.17	slope	1.00		
	(slightly limited)		(slightly limited)		(very limited)			
73054:								
Viburnum	Limited		Moderately limited		Limited		Moderately limited	
	wetness	0.81	wetness	0.49	wetness	0.81	wetness	0.49
	(limited)		(moderately limited)		(limited)		(moderately limited)	
	percs slowly	0.13	percs slowly	0.13	percs slowly	0.13		
	(slightly limited)		(slightly limited)		(slightly limited)			
					small stones	0.01		
					(slightly limited)			
73056:								
Viburnum	Very limited		Very limited		Very limited		Limited	
	percs slowly	0.99	percs slowly	0.99	slope	1.00	wetness	0.61
	(very limited)		(very limited)		(very limited)		(limited)	
	wetness	0.96	slope	0.63	small stones	1.00		
	(limited)		(limited)		(limited)			
	slope	0.63	wetness	0.61	percs slowly	0.99		
	(limited)		(limited)		(very limited)			
73057:								
Jerktail	Very limited		Limited		Very limited		Limited	
	wetness	1.00	wetness	0.86	wetness	1.00	wetness	0.86
	(very limited)		(limited)		(very limited)		(limited)	
	percs slowly	0.39	percs slowly	0.39	percs slowly	0.39		
	(moderately limited)		(moderately limited)		(moderately limited)			

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73058:								
Gunlock	Limited wetness (limited) percs slowly (moderately limited) small stones (moderately limited)	 0.90 0.39 0.33 	Moderately limited wetness (moderately limited) percs slowly (moderately limited) small stones (moderately limited)	 0.56 0.39 0.33 	Very limited small stones (very limited) slope (limited) wetness (limited)	 1.00 0.98 0.90 	Moderately limited wetness (moderately limited)	 0.56
73063:								
Bendavis	Moderately limited small stones (moderately limited)	 0.33 	Moderately limited small stones (moderately limited)	 0.33 	Very limited small stones (very limited) slope (limited) depth to bedrock (slightly limited)	 1.00 0.78 0.27 	Not limited	
Poynor	Very limited small stones (very limited)	 1.00 	Very limited small stones (very limited)	 1.00 	Very limited small stones (very limited) slope (limited)	 1.00 0.78 	Limited small stones (limited)	 0.67
73066:								
Bender	Moderately limited large surface stones (moderately limited) large stones (slightly limited) too acid (slightly limited)	 0.43 0.17 0.06 	Moderately limited large surface stones (moderately limited) large stones (slightly limited) too acid (slightly limited)	 0.43 0.17 0.06 	Very limited large stones >25% (very limited) slope (very limited) small stones (limited)	 1.00 1.00 0.96 	Moderately limited large surface stones (moderately limited) large stones (slightly limited)	 0.43 0.17
73067:								
Bender	Very limited slope (very limited) large surface stones (moderately limited) too acid (slightly limited)	 1.00 0.60 0.18 	Very limited slope (very limited) large surface stones (moderately limited) too acid (slightly limited)	 1.00 0.60 0.18 	Very limited slope (very limited) large stones >25% (very limited) small stones (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) large surface stones (moderately limited) large stones (slightly limited)	 1.00 0.60 0.17
Rock outcrop	Not rated		Not rated		Not rated		Not rated	
73068:								
Tick	Limited slope (limited) percs slowly (moderately limited) too acid (slightly limited)	 0.63 0.34 0.06 	Limited slope (limited) percs slowly (moderately limited) too acid (slightly limited)	 0.63 0.34 0.06 	Very limited slope (very limited) percs slowly (moderately limited) small stones (moderately limited)	 1.00 0.34 0.31 	Not limited	
73069:								
Tick	Very limited slope (very limited) small stones (very limited) percs slowly (moderately limited)	 1.00 1.00 0.34 	Very limited slope (very limited) small stones (very limited) percs slowly (moderately limited)	 1.00 1.00 0.34 	Very limited small stones (very limited) slope (very limited) percs slowly (moderately limited)	 1.00 1.00 0.34 	Limited small stones (limited) slope (limited) large surface stones (slightly limited)	 0.94 0.92 0.07

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73071:								
Hogcreek	Very limited wetness (very limited) percs slowly (very limited)	 1.00 1.00	Very limited percs slowly (very limited) wetness (limited)	 1.00 0.73	Very limited wetness (very limited) percs slowly (very limited) small stones (moderately limited)	 1.00 1.00 0.31	Limited wetness (limited)	 0.73
73072:								
Hogcreek	Very limited wetness (very limited) percs slowly (very limited)	 1.00 1.00	Very limited percs slowly (very limited) wetness (limited)	 1.00 0.73	Very limited wetness (very limited) percs slowly (very limited) slope (limited)	 1.00 1.00 0.98	Limited wetness (limited)	 0.73
73073:								
Scholten	Very limited percs slowly (very limited) small stones (very limited) wetness (limited)	 1.00 1.00 0.90	Very limited percs slowly (very limited) small stones (very limited) slope (limited)	 1.00 1.00 0.63	Very limited small stones (very limited) slope (very limited) percs slowly (very limited)	 1.00 1.00 1.00	Moderately limited wetness (moderately limited) small stones (slightly limited)	 0.56 0.30
Poynor	Very limited small stones (very limited) slope (limited) percs slowly (slightly limited)	 1.00 0.63 0.18	Very limited small stones (very limited) slope (limited) percs slowly (slightly limited)	 1.00 0.63 0.18	Very limited small stones (very limited) slope (very limited) percs slowly (slightly limited)	 1.00 1.00 0.18	Moderately limited small stones (moderately limited)	 0.60
73076:								
Mano	Very limited slope (very limited) small stones (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Very limited slope (very limited) small stones (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Very limited small stones (very limited) slope (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Limited slope (limited) small stones (slightly limited)	 0.92 0.30
Ocie	Very limited slope (very limited) small stones (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Very limited slope (very limited) small stones (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Very limited small stones (very limited) slope (very limited) percs slowly (moderately limited)	 1.00 1.00 0.39	Limited slope (limited) small stones (slightly limited)	 0.92 0.30
73077:								
Eudy	Very limited wetness (very limited) percs slowly (moderately limited) small stones (moderately limited)	 1.00 0.39 0.33	Limited wetness (limited) percs slowly (moderately limited) small stones (moderately limited)	 0.86 0.39 0.33	Very limited wetness (very limited) small stones (very limited) slope (limited)	 1.00 1.00 0.78	Limited wetness (limited)	 0.86

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73080:								
Alred	Very limited slope (very limited) large surface stones (moderately limited) percs slowly (moderately limited)	 1.00 0.60 0.39 	Very limited slope (very limited) large surface stones (moderately limited) percs slowly (moderately limited)	 1.00 0.60 0.39 	Very limited slope (very limited) percs slowly (moderately limited) small stones (slightly limited)	 1.00 0.39 0.01 	Very limited slope (very limited) large surface stones (moderately limited)	 1.00 0.60
Bardley	Very limited slope (very limited) small stones (limited) large surface stones (moderately limited)	 1.00 0.71 0.60 	Very limited slope (very limited) small stones (limited) large surface stones (moderately limited)	 1.00 0.71 0.60 	Very limited slope (very limited) large stones >25% (very limited) small stones (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) large surface stones (moderately limited) large stones (slightly limited)	 1.00 0.60 0.17
Rock outcrop	Not rated		Not rated		Not rated		Not rated	
73081:								
Bender	Very limited slope (very limited) large stones (moderately limited) large surface stones (moderately limited)	 1.00 0.44 0.43 	Very limited slope (very limited) large stones (moderately limited) large surface stones (moderately limited)	 1.00 0.44 0.43 	Very limited large stones >25% (very limited) slope (very limited) small stones (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) large stones (moderately limited) large surface stones (moderately limited)	 1.00 0.44 0.43
Alred	Very limited slope (very limited) large stones (limited) large surface stones (moderately limited)	 1.00 0.61 0.43 	Very limited slope (very limited) large stones (limited) large surface stones (moderately limited)	 1.00 0.61 0.43 	Very limited large stones >25% (very limited) slope (very limited) small stones (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) large stones (limited) large surface stones (moderately limited)	 1.00 0.61 0.43
Rock outcrop	Not rated		Not rated		Not rated		Not rated	
73087:								
Celt	Very limited wetness (very limited) percs slowly (very limited)	 1.00 1.00 	Very limited wetness (very limited) percs slowly (very limited)	 1.00 1.00 	Very limited wetness (very limited) percs slowly (very limited)	 1.00 1.00 	Very limited wetness (very limited)	 1.00
73159:								
Yelton	Limited wetness (limited) percs slowly (moderately limited)	 0.90 0.39 	Moderately limited wetness (moderately limited) percs slowly (moderately limited)	 0.56 0.39 	Limited wetness (limited) slope (limited) percs slowly (moderately limited)	 0.90 0.78 0.39 	Moderately limited wetness (moderately limited)	 0.56

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73176:								
Bendavis	Very limited small stones (very limited) slope (limited) large surface stones (slightly limited)	 1.00 0.63 0.13 	Very limited small stones (very limited) slope (limited) large surface stones (slightly limited)	 1.00 0.63 0.13 	Very limited small stones (very limited) slope (very limited) depth to bedrock (moderately limited)	 1.00 1.00 0.58 	Moderately limited small stones (moderately limited) large surface stones (slightly limited)	 0.60 0.13
Poynor	Very limited small stones (limited) slope (limited) large surface stones (slightly limited)	 1.00 0.63 0.13 	Very limited small stones (limited) slope (limited) large surface stones (slightly limited)	 1.00 0.63 0.13 	Very limited small stones (very limited) slope (very limited)	 1.00 1.00 	Slightly limited large surface stones (slightly limited) small stones (slightly limited)	 0.13 0.01
73197:								
Viburnum	Limited wetness (limited) percs slowly (slightly limited)	 0.96 0.13 	Limited wetness (limited) percs slowly (slightly limited)	 0.61 0.13 	Limited wetness (limited) slope (moderately limited) percs slowly (slightly limited)	 0.96 0.40 0.13 	Limited wetness (limited)	 0.61
73198:								
Gressy	Not limited		Not limited		Moderately limited slope (moderately limited) small stones (slightly limited)	 0.40 0.01 	Not limited	
Viraton	Very limited percs slowly (very limited) wetness (moderately limited) too acid (slightly limited)	 1.00 0.50 0.12 	Very limited percs slowly (very limited) wetness (slightly limited) too acid (slightly limited)	 1.00 0.28 0.12 	Very limited percs slowly (very limited) wetness (moderately limited) slope (moderately limited)	 1.00 0.50 0.40 	Slightly limited wetness (slightly limited)	 0.28
73199:								
Moko	Limited shallow to bedrock (limited) large stones (limited) small stones (moderately limited)	 0.90 0.61 0.48 	Limited shallow to bedrock (limited) large stones (limited) small stones (moderately limited)	 0.90 0.61 0.48 	Very limited large stones >25% (very limited) shallow to bedrock (very limited) small stones (very limited)	 1.00 1.00 1.00 	Limited large stones (limited) large surface stones (moderately limited)	 0.61 0.37
Rock outcrop	Not rated		Not rated		Not rated		Not rated	
73220:								
Poynor	Very limited small stones (very limited) slope (limited) percs slowly (slightly limited)	 1.00 0.63 0.18 	Very limited small stones (very limited) slope (limited) percs slowly (slightly limited)	 1.00 0.63 0.18 	Very limited small stones (very limited) slope (very limited) percs slowly (slightly limited)	 1.00 1.00 0.18 	Very limited small stones (very limited)	 1.00

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73221:								
Poynor	Very limited		Very limited		Very limited		Limited	
	small stones (very limited)	1.00	small stones (very limited)	1.00	small stones (very limited)	1.00	small stones (limited)	0.81
	slope (very limited)	1.00	slope (very limited)	1.00	slope (very limited)	1.00	large surface stones (moderately limited)	0.31
	large surface stones (moderately limited)	0.31	large surface stones (moderately limited)	0.31	too acid (slightly limited)	0.30	slope (slightly limited)	0.08
73222:								
Splitlimb	Very limited		Very limited		Very limited		Very limited	
	ponded (wetness) (very limited)	1.00	ponded (wetness) (very limited)	1.00	ponded (wetness) (very limited)	1.00	ponded (wetness) (very limited)	1.00
	wetness (limited)	0.81	wetness (moderately limited)	0.49	wetness (limited)	0.81	wetness (moderately limited)	0.49
	percs slowly (slightly limited)	0.13	percs slowly (slightly limited)	0.13	percs slowly (slightly limited)	0.13		
73223:								
Coulstone	Very limited		Very limited		Very limited		Very limited	
	slope (very limited)	1.00	slope (very limited)	1.00	small stones (very limited)	1.00	large surface stones (very limited)	1.00
	small stones (very limited)	1.00	small stones (very limited)	1.00	slope (very limited)	1.00	slope (limited)	0.92
	large surface stones (very limited)	1.00	large surface stones (very limited)	1.00			small stones (moderately limited)	0.60
Bender	Very limited		Very limited		Very limited		Very limited	
	slope (very limited)	1.00	slope (very limited)	1.00	large stones >25% (very limited)	1.00	slope (very limited)	1.00
	small stones (limited)	0.71	small stones (limited)	0.71	slope (very limited)	1.00	large surface stones (moderately limited)	0.43
	large surface stones (moderately limited)	0.43	large surface stones (moderately limited)	0.43	small stones (very limited)	1.00	large stones (moderately limited)	0.40
73224:								
Moko	Very limited		Very limited		Very limited		Limited	
	slope (very limited)	1.00	slope (very limited)	1.00	slope (very limited)	1.00	slope (limited)	0.92
	shallow to bedrock (limited)	0.90	shallow to bedrock (limited)	0.90	shallow to bedrock (very limited)	1.00	large surface stones (moderately limited)	0.37
	small stones (limited)	0.66	small stones (limited)	0.66	small stones (very limited)	1.00	large stones (slightly limited)	0.06
Rock outcrop	Not rated		Not rated		Not rated		Not rated	
74626:								
Tanglenook	Very limited		Very limited		Very limited		Very limited	
	wetness (very limited)	1.00	wetness (very limited)	1.00	wetness (very limited)	1.00	wetness (very limited)	1.00
	flooding (rare) (limited)	0.90	percs slowly (moderately limited)	0.39	percs slowly (moderately limited)	0.39		
	percs slowly (moderately limited)	0.39						

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74627:								
Hartville	Limited flooding (rare) (limited) wetness (moderately limited) percs slowly (moderately limited)	 0.90 0.50 0.39	Moderately limited percs slowly (moderately limited) wetness (slightly limited)	 0.39 0.28	Moderately limited wetness (moderately limited) percs slowly (moderately limited)	 0.50 0.39	Slightly limited wetness (slightly limited)	 0.28
74629:								
Raftville	Limited flooding (rare) (limited)	 0.90	Not limited		Limited slope (limited) depth to bedrock (limited)	 0.78 0.66	Not limited	
74636:								
Lecoma	Not limited		Not limited		Limited slope (limited)	 0.98	Not limited	
74637:								
Lecoma	Slightly limited slope (slightly limited)	 0.16	Slightly limited slope (slightly limited)	 0.16	Very limited slope (very limited)	 1.00	Not limited	
74677:								
Deible	Very limited wetness (very limited) flooding (rare) (limited) percs slowly (limited)	 1.00 0.90 0.86	Very limited wetness (very limited) percs slowly (limited)	 1.00 0.86	Very limited wetness (very limited) percs slowly (limited) small stones (moderately limited)	 1.00 0.86 0.36	Very limited wetness (very limited)	 1.00
74679:								
Higdon	Limited wetness (limited) flooding (rare) (limited)	 0.96 0.90	Limited wetness (limited)	 0.61	Limited wetness (limited)	 0.96	Limited wetness (limited)	 0.61
75381:								
Bearthicket	Limited flooding (rare) (limited)	 0.90	Not limited		Not limited		Not limited	
75382:								
Cedargap	Very limited flooding (very limited) small stones (moderately limited)	 1.00 0.48	Moderately limited flooding (moderately limited) small stones (moderately limited)	 0.60 0.48	Very limited flooding (very limited) small stones (very limited)	 1.00 1.00	Moderately limited flooding (moderately limited)	 0.60

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75388:								
Kaintuck	Very limited flooding (very limited)	1.00	Moderately limited flooding (moderately limited)	0.60	Very limited flooding (very limited)	1.00	Moderately limited flooding (moderately limited)	0.60
Relfe	Very limited flooding (very limited) small stones (very limited)	1.00 1.00	Very limited small stones (very limited) flooding (moderately limited)	1.00 0.60	Very limited flooding (very limited) small stones (very limited)	1.00 1.00	Limited small stones (limited) flooding (moderately limited)	0.73 0.60
75389:								
Dunning	Very limited flooding (very limited) wetness (very limited) percs slowly (very limited)	1.00 1.00 1.00	Very limited wetness (very limited) percs slowly (very limited) flooding (moderately limited)	1.00 1.00 0.60	Very limited flooding (very limited) wetness (very limited) percs slowly (very limited)	1.00 1.00 1.00	Very limited wetness (very limited) flooding (moderately limited)	1.00 0.60
Hercules	Very limited flooding (very limited) wetness (very limited) large stones (slightly limited)	1.00 1.00 0.17	Very limited wetness (very limited) flooding (moderately limited) large stones (slightly limited)	1.00 0.60 0.17	Very limited flooding (very limited) wetness (very limited) large stones >25% (very limited)	1.00 1.00 1.00	Very limited wetness (very limited) flooding (moderately limited) large stones (slightly limited)	1.00 0.60 0.17
75390:								
Razort	Limited flooding (rare) (limited)	0.90	Not limited		Slightly limited small stones (slightly limited)	0.15	Not limited	
75391:								
Possumtrot	Very limited flooding (very limited) too acid (slightly limited)	1.00 0.24	Slightly limited too acid (slightly limited)	0.24	Moderately limited flooding (moderately limited) too acid (slightly limited) small stones (slightly limited)	0.60 0.24 0.15	Not limited	
75392:								
Stultz	Very limited flooding (very limited) wetness (very limited) percs slowly (slightly limited)	1.00 1.00 0.13	Very limited wetness (very limited) flooding (moderately limited) percs slowly (slightly limited)	1.00 0.60 0.13	Very limited flooding (very limited) wetness (very limited) percs slowly (slightly limited)	1.00 1.00 0.13	Very limited wetness (very limited) flooding (moderately limited)	1.00 0.60
75406:								
Racket	Very limited flooding (very limited)	1.00	Moderately limited flooding (moderately limited)	0.60	Very limited flooding (very limited)	1.00	Moderately limited flooding (moderately limited)	0.60

Table 10.--Recreational Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75417:								
Relfe	Very limited flooding (very limited) small stones (very limited)	1.00 1.00	Very limited small stones (very limited) flooding (moderately limited)	1.00 0.60	Very limited flooding (very limited) small stones (very limited)	1.00 1.00	Moderately limited flooding (moderately limited) small stones (moderately limited)	0.60 0.53
Sandbur	Very limited flooding (very limited)	1.00	Moderately limited flooding (moderately limited)	0.60	Very limited flooding (very limited)	1.00	Moderately limited flooding (moderately limited)	0.60
75418:								
Tilk	Very limited small stones (very limited) flooding (rare) (limited)	1.00 0.90	Very limited small stones (very limited)	1.00	Very limited small stones (very limited) large stones (slightly limited)	1.00 0.01	Limited small stones (limited)	0.65
75419:								
Perche	Very limited flooding (very limited) wetness (very limited) too acid (slightly limited)	1.00 1.00 0.24	Very limited wetness (very limited) too acid (slightly limited)	1.00 0.24	Very limited wetness (very limited) flooding (moderately limited) too acid (slightly limited)	1.00 0.60 0.24	Very limited wetness (very limited)	1.00
75420:								
Secesh	Very limited flooding (very limited)	1.00	Not limited		Moderately limited flooding (moderately limited)	0.60	Not limited	
Tilk	Very limited flooding (very limited) small stones (very limited)	1.00 1.00	Very limited small stones (very limited)	1.00	Very limited small stones (very limited) flooding (moderately limited)	1.00 0.60	Slightly limited small stones (slightly limited)	0.30
99000:								
Pits, quarries	Not rated		Not rated		Not rated		Not rated	
99001:								
Water	Not rated		Not rated		Not rated		Not rated	

Table 11a.--Wildlife Habitat

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti----------	Very limited percs slowly (very limited) droughty (limited) high erodibility (limited)	 1.00 0.90 0.80	Very limited percs slowly (very limited) high erodibility (limited) wetness (moderately limited)	 1.00 0.80 0.44	Moderately limited wetness (moderately limited)	 0.44	Moderately limited wetness (moderately limited)	 0.44	Moderately limited wetness (moderately limited)	 0.59
70025:										
Branson--------	Moderately limited moderate erodibility (moderately limited)	 0.50	Moderately limited moderate erodibility (moderately limited)	 0.50	Not limited		Not limited		Not limited	
Splitlimb------	Moderately limited wetness (moderately limited) moderate erodibility (moderately limited)	 0.53 0.50	Moderately limited wetness (moderately limited) moderate erodibility (moderately limited)	 0.53 0.50	Moderately limited wetness (moderately limited)	 0.53	Moderately limited wetness (moderately limited)	 0.53	Limited wetness (limited)	 0.79
70026:										
Tonti----------	Very limited percs slowly (very limited) droughty (limited) moderate erodibility (moderately limited)	 1.00 0.90 0.50	Very limited percs slowly (very limited) moderate erodibility (moderately limited) wetness (moderately limited)	 1.00 0.50 0.44	Moderately limited wetness (moderately limited)	 0.44	Moderately limited wetness (moderately limited)	 0.44	Moderately limited wetness (moderately limited)	 0.59
73000:										
Pomme----------	Limited high erodibility (limited) droughty (slightly limited)	 0.80 0.02	Limited high erodibility (limited)	 0.80	Not limited		Not limited		Not limited	

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73013:										
Lowassie-------	Very limited wetness (very limited) ponded (wetness) (very limited) percs slowly (moderately limited)	1.00 1.00 0.39	Very limited wetness (very limited) ponded (wetness) (very limited) percs slowly (moderately limited)	1.00 1.00 0.39	Very limited wetness (very limited) seasonally ponded (limited)	1.00 0.80	Very limited wetness (very limited) seasonally ponded (limited)	1.00 0.80	Very limited wetness (very limited) seasonally ponded (limited)	1.00 0.80
73017:										
Bendavis-------	Very limited percs slowly (very limited) small stones (very limited) slope (limited)	1.00 1.00 0.91	Very limited percs slowly (very limited) small stones (very limited) slope (limited)	1.00 1.00 0.91	Limited small stones (limited) wetness (slightly limited)	0.67 0.28	Limited small stones (limited) wetness (slightly limited) depth to bedrock (slightly limited)	0.67 0.28 0.13	Moderately limited wetness (moderately limited) depth to bedrock (slightly limited)	0.45 0.13
Poynor---------	Very limited droughty (very limited) small stones (very limited) high erodibility (limited)	1.00 1.00 0.80	Very limited small stones (very limited) high erodibility (limited) slope (moderately limited)	1.00 0.80 0.60	Limited small stones (limited) droughty (moderately limited)	0.73 0.57	Limited small stones (limited) droughty (moderately limited)	0.73 0.57	Moderately limited droughty (moderately limited)	0.57
73019:										
Poynor---------	Very limited droughty (very limited) small stones (very limited) high erodibility (limited)	1.00 1.00 0.80	Very limited small stones (very limited) high erodibility (limited) droughty (moderately limited)	1.00 0.80 0.57	Limited small stones (limited) droughty (moderately limited)	0.67 0.57	Limited small stones (limited) droughty (moderately limited)	0.67 0.57	Moderately limited droughty (moderately limited)	0.57
73021:										
Poynor---------	Very limited droughty (very limited) small stones (very limited) high erodibility (limited)	1.00 1.00 0.80	Very limited small stones (very limited) high erodibility (limited) slope (moderately limited)	1.00 0.80 0.60	Limited small stones (limited) droughty (moderately limited)	0.73 0.57	Limited small stones (limited) droughty (moderately limited)	0.73 0.57	Moderately limited droughty (moderately limited)	0.57

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73023:										
Mano	Limited droughty (limited) high erodibility (limited) small stones (moderately limited)	 0.87 0.80 0.48 	Limited high erodibility (limited) small stones (moderately limited) percs slowly (moderately limited)	 0.80 0.48 0.39 	Slightly limited wetness (slightly limited) small stones (slightly limited)	 0.28 0.08 	Slightly limited wetness (slightly limited)	 0.28 	Moderately limited wetness (moderately limited)	 0.45
Ocie	Very limited small stones (very limited) high erodibility (limited) droughty (limited)	 1.00 0.80 0.63 	Very limited small stones (very limited) high erodibility (limited) percs slowly (moderately limited)	 1.00 0.80 0.39 	Moderately limited small stones (moderately limited) wetness (slightly limited)	 0.42 0.28 	Slightly limited small stones (slightly limited) wetness (slightly limited)	 0.30 0.28 	Moderately limited wetness (moderately limited)	 0.45
73024:										
Mano	Limited small stones (limited) droughty (limited) high erodibility (limited)	 1.00 0.87 0.80 	Limited small stones (limited) high erodibility (limited) percs slowly (moderately limited)	 1.00 0.80 0.39 	Slightly limited wetness (slightly limited) small stones (slightly limited)	 0.28 0.24 	Slightly limited wetness (slightly limited) small stones (slightly limited)	 0.28 0.01 	Moderately limited wetness (moderately limited)	 0.45
Ocie	Very limited small stones (very limited) high erodibility (limited) droughty (limited)	 1.00 0.80 0.63 	Very limited small stones (very limited) high erodibility (limited) percs slowly (moderately limited)	 1.00 0.80 0.39 	Moderately limited small stones (moderately limited) wetness (slightly limited)	 0.42 0.28 	Slightly limited small stones (slightly limited) wetness (slightly limited)	 0.30 0.28 	Moderately limited wetness (moderately limited)	 0.45
73032:										
Gatewood	Very limited droughty (very limited) small stones (very limited) high erodibility (limited)	 1.00 1.00 0.80 	Very limited small stones (very limited) high erodibility (limited) depth to bedrock (moderately limited)	 1.00 0.80 0.46 	Moderately limited small stones (moderately limited) wetness (moderately limited) droughty (moderately limited)	 0.42 0.36 0.31 	Moderately limited depth to bedrock (moderately limited) wetness (moderately limited) droughty (moderately limited)	 0.46 0.36 0.31 	Moderately limited wetness (moderately limited) depth to bedrock (moderately limited) droughty (moderately limited)	 0.51 0.46 0.31

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73033:										
Gatewood-------	Very limited		Very limited		Limited		Limited		Moderately limited	
	droughty	1.00	small stones	1.00	small stones	0.99	small stones	1.00	wetness	0.51
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	small stones	1.00	high erodibility	0.80	wetness	0.36	depth to bedrock	0.46	depth to bedrock	0.46
	(very limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	high erodibility	0.80	slope	0.60	droughty	0.31	wetness	0.36	droughty	0.31
	(limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
73051:										
Winnipeg-------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
73052:										
Lily-----------	Very limited		Limited		Slightly limited		Limited		Limited	
	droughty	1.00	depth to bedrock	0.66	droughty	0.19	depth to bedrock	0.66	depth to bedrock	0.66
	(very limited)		(limited)		(slightly limited)		(limited)		(limited)	
	depth to bedrock	0.66	moderate erodibility	0.50			droughty	0.19	droughty	0.19
	(limited)		(moderately limited)				(slightly limited)		(slightly limited)	
	moderate erodibility	0.50	droughty	0.19						
	(moderately limited)		(slightly limited)							
73053:										
Lily-----------	Very limited		Very limited		Moderately limited		Limited		Limited	
	droughty	1.00	percs slowly	1.00	droughty	0.48	depth to bedrock	0.76	depth to bedrock	0.76
	(very limited)		(very limited)		(moderately limited)		(limited)		(limited)	
	percs slowly	1.00	high erodibility	0.80			droughty	0.48	droughty	0.48
	(very limited)		(limited)				(moderately limited)		(moderately limited)	
	high erodibility	0.80	depth to bedrock	0.76						
	(limited)		(limited)							
Bender---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	high erodibility	0.80	high erodibility	0.80	large stones	0.17	depth to bedrock	0.76	depth to bedrock	0.76
	(limited)		(limited)		(slightly limited)		(limited)		(limited)	
	depth to bedrock	0.76	depth to bedrock	0.76	small stones	0.03	large stones	0.17	large stones	0.17
	(limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73054:										
Viburnum-------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Limited	
	wetness	0.55	wetness	0.55	wetness	0.55	wetness	0.55	wetness	0.85
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
	percs slowly	0.13	percs slowly	0.13						
	(slightly limited)		(slightly limited)							
	droughty	0.02								
	(slightly limited)									
73056:										
Viburnum-------	Limited		Limited		Moderately limited		Moderately limited		Limited	
	percs slowly	0.99	percs slowly	0.99	wetness	0.60	wetness	0.60	wetness	0.99
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(limited)	
	high erodibility	0.80	high erodibility	0.80	small stones	0.01				
	(limited)		(limited)		(slightly limited)					
	droughty	0.79	wetness	0.60						
	(limited)		(moderately limited)							
73057:										
Jerktail-------	Limited		Limited		Limited		Limited		Very limited	
	wetness	0.86	wetness	0.86	wetness	0.86	wetness	0.86	wetness	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	droughty	0.56	percs slowly	0.39						
	(moderately limited)		(moderately limited)							
	percs slowly	0.39								
	(moderately limited)									
73058:										
Gunlock--------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Limited	
	wetness	0.58	wetness	0.58	wetness	0.58	wetness	0.58	wetness	0.93
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
	moderate erodibility	0.50	moderate erodibility	0.50	small stones	0.04				
	(moderately limited)		(moderately limited)		(slightly limited)					
	percs slowly	0.39	percs slowly	0.39						
	(moderately limited)		(moderately limited)							

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73063:										
Bendavis-------	Limited		Moderately limited		Slightly limited		Slightly limited		Moderately limited	
	droughty	0.95	moderate erodibility	0.50	wetness	0.28	wetness	0.28	wetness	0.45
	(limited)		(moderately limited)		(slightly limited)		(slightly limited)		(moderately limited)	
	moderate erodibility	0.50	small stones	0.33	small stones	0.04	depth to bedrock	0.27	depth to bedrock	0.27
	(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	small stones	0.33	wetness	0.28						
	(moderately limited)		(slightly limited)							
Poynor---------	Very limited		Very limited		Limited		Limited		Moderately limited	
	droughty	1.00	small stones	1.00	small stones	0.67	small stones	0.67	droughty	0.40
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	small stones	1.00	moderate erodibility	0.50	droughty	0.40	droughty	0.40		
	(very limited)		(moderately limited)		(moderately limited)		(moderately limited)			
	moderate erodibility	0.50	droughty	0.40						
	(moderately limited)		(moderately limited)							
73066:										
Bender---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	high erodibility	0.80	high erodibility	0.80	large stones	0.17	depth to bedrock	0.32	depth to bedrock	0.32
	(limited)		(limited)		(slightly limited)		(moderately limited)		(moderately limited)	
	large stones	0.45	large stones	0.45			large stones	0.17	large stones	0.17
	(moderately limited)		(moderately limited)				(slightly limited)		(slightly limited)	
73067:										
Bender---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.91	slope	0.91	large stones	0.17	depth to bedrock	0.76	depth to bedrock	0.76
	(limited)		(limited)		(slightly limited)		(limited)		(limited)	
	high erodibility	0.80	high erodibility	0.80	small stones	0.01	large stones	0.17	large stones	0.17
	(limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick-----------	Limited		Limited		Not limited		Not limited		Not limited	
	droughty	0.82	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	percs slowly	0.34						
	(limited)		(moderately limited)							
	percs slowly	0.34								
	(moderately limited)									

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73069:										
Tick----------	Very limited		Very limited		Limited		Limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.93	small stones	0.94		
	(very limited)		(very limited)		(limited)		(limited)			
	droughty	0.82	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	slope	0.60						
	(limited)		(moderately limited)							
73071:										
Hogcreek-------	Very limited		Very limited		Limited		Limited		Very limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.73	wetness	0.73	wetness	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
	droughty	0.93	wetness	0.73			depth to bedrock	0.18	depth to bedrock	0.18
	(limited)		(limited)				(slightly limited)		(slightly limited)	
	wetness	0.73	depth to bedrock	0.18						
	(limited)		(slightly limited)							
73072:										
Hogcreek-------	Very limited		Very limited		Limited		Limited		Very limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.73	wetness	0.73	wetness	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
	droughty	0.93	wetness	0.73			depth to bedrock	0.18	depth to bedrock	0.18
	(limited)		(limited)				(slightly limited)		(slightly limited)	
	wetness	0.73	moderate erodibility	0.50						
	(limited)		(moderately limited)							
73073:										
Scholten-------	Very limited		Very limited		Limited		Limited		Limited	
	droughty	1.00	percs slowly	1.00	droughty	0.70	droughty	0.70	wetness	0.93
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	1.00	small stones	1.00	wetness	0.58	wetness	0.58	droughty	0.70
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(limited)	
	small stones	1.00	high erodibility	0.80	small stones	0.42	small stones	0.30		
	(very limited)		(limited)		(moderately limited)		(slightly limited)			
Poynor---------	Very limited		Very limited		Limited		Limited		Limited	
	droughty	1.00	small stones	1.00	droughty	0.75	droughty	0.75	droughty	0.75
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	small stones	1.00	high erodibility	0.80	small stones	0.60	small stones	0.60		
	(very limited)		(limited)		(moderately limited)		(moderately limited)			
	high erodibility	0.80	droughty	0.75						
	(limited)		(limited)							

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73076:										
Mano	Very limited small stones (very limited) droughty (limited) high erodibility (limited)	 1.00 0.87 0.80 	Very limited small stones (very limited) high erodibility (limited) slope (moderately limited)	 1.00 0.80 0.60 	Moderately limited small stones (moderately limited) wetness (slightly limited)	 0.42 0.28 	Slightly limited small stones (slightly limited) wetness (slightly limited)	 0.30 0.28 	Moderately limited wetness (moderately limited)	 0.45
Ocie	Very limited small stones (very limited) high erodibility (limited) droughty (limited)	 1.00 0.80 0.63 	Very limited small stones (very limited) high erodibility (limited) slope (moderately limited)	 1.00 0.80 0.60 	Moderately limited small stones (moderately limited) wetness (slightly limited)	 0.42 0.28 	Slightly limited small stones (slightly limited) wetness (slightly limited)	 0.30 0.28 	Moderately limited wetness (moderately limited)	 0.45
73077:										
Eudy	Limited wetness (limited) moderate erodibility (moderately limited) percs slowly (moderately limited)	 0.86 0.50 0.39 	Limited wetness (limited) moderate erodibility (moderately limited) percs slowly (moderately limited)	 0.86 0.50 0.39 	Limited wetness (limited) small stones (slightly limited)	 0.86 0.04 	Limited wetness (limited) depth to bedrock (slightly limited)	 0.86 0.13 	Very limited wetness (very limited) depth to bedrock (slightly limited)	 1.00 0.13
73080:										
Alred	Very limited droughty (very limited) high erodibility (limited) slope (limited)	 1.00 0.80 0.68 	Limited high erodibility (limited) slope (limited) percs slowly (moderately limited)	 0.80 0.68 0.39 	Slightly limited droughty (slightly limited)	 0.02 	Slightly limited droughty (slightly limited)	 0.02 	Slightly limited droughty (slightly limited)	 0.02
Bardley	Very limited droughty (very limited) slope (limited) high erodibility (limited)	 1.00 0.87 0.80 	Limited slope (limited) high erodibility (limited) droughty (limited)	 0.87 0.80 0.72 	Limited droughty (limited) large stones (slightly limited) small stones (slightly limited)	 0.72 0.17 0.14 	Limited droughty (limited) depth to bedrock (moderately limited) large stones (slightly limited)	 0.72 0.46 0.17 	Limited droughty (limited) depth to bedrock (moderately limited) large stones (slightly limited)	 0.72 0.46 0.17
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73081:										
Bender----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	large stones	0.44	large stones	0.44	large stones	0.44
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	high erodibility	0.80	high erodibility	0.80	small stones	0.06	depth to bedrock	0.32	depth to bedrock	0.32
	(limited)		(limited)		(slightly limited)		(moderately limited)		(moderately limited)	
Alred----------	Very limited		Limited		Limited		Limited		Limited	
	droughty	1.00	large stones >35%	0.99	large stones	0.61	large stones	0.61	large stones	0.61
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	large stones >35%	0.99	high erodibility	0.80	small stones	0.02	droughty	0.02	droughty	0.02
	(very limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	high erodibility	0.80	slope	0.68	droughty	0.02				
	(limited)		(limited)		(slightly limited)					
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73087:										
Celt----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00	percs slowly	1.00						
	(very limited)		(very limited)							
	droughty	0.94	moderate erodibility	0.50						
	(limited)		(moderately limited)							
73159:										
Yelton----------	Limited		Limited		Moderately limited		Moderately limited		Limited	
	droughty	0.88	high erodibility	0.80	wetness	0.58	wetness	0.58	wetness	0.93
	(limited)		(limited)		(moderately limited)		(moderately limited)		(limited)	
	high erodibility	0.80	wetness	0.58						
	(limited)		(moderately limited)							
	wetness	0.58	percs slowly	0.39						
	(moderately limited)		(moderately limited)							

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73176:										
Bendavis	Very limited droughty (very limited) small stones (very limited) high erodibility (limited)	 1.00 1.00 0.80	Very limited small stones (very limited) high erodibility (limited) depth to bedrock (moderately limited)	 1.00 0.80 0.58	Moderately limited small stones (moderately limited) droughty (moderately limited) wetness (slightly limited)	 0.60 0.45 0.28	Moderately limited small stones (moderately limited) depth to bedrock (moderately limited) droughty (moderately limited)	 0.60 0.58 0.45	Moderately limited depth to bedrock (moderately limited) droughty (moderately limited) wetness (moderately limited)	 0.58 0.45 0.45
Poynor	Limited small stones (limited) droughty (very limited) high erodibility (limited)	 1.00 0.99 0.80	Limited small stones (limited) high erodibility (limited)	 1.00 0.80	Slightly limited small stones (slightly limited)	 0.24	Slightly limited small stones (slightly limited)	 0.01	Not limited	
73197:										
Viburnum	Moderately limited wetness (moderately limited) moderate erodibility (moderately limited) percs slowly (slightly limited)	 0.60 0.50 0.13	Moderately limited wetness (moderately limited) moderate erodibility (moderately limited) percs slowly (slightly limited)	 0.60 0.50 0.13	Moderately limited wetness (moderately limited)	 0.60	Moderately limited wetness (moderately limited)	 0.60	Limited wetness (limited)	 0.99
73198:										
Gressy	Moderately limited moderate erodibility (moderately limited)	 0.50	Moderately limited moderate erodibility (moderately limited)	 0.50	Not limited		Not limited		Not limited	
Viraton	Very limited percs slowly (very limited) droughty (limited) moderate erodibility (moderately limited)	 1.00 0.98 0.50	Very limited percs slowly (very limited) moderate erodibility (moderately limited) wetness (moderately limited)	 1.00 0.50 0.44	Moderately limited wetness (moderately limited)	 0.44	Moderately limited wetness (moderately limited)	 0.44	Moderately limited wetness (moderately limited)	 0.59

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73199:										
Moko	Very limited droughty (very limited) shallow to bedrock (very limited) large stones >35% (very limited)	 1.00 1.00 0.99	Very limited droughty (very limited) shallow to bedrock (very limited) large stones >35% (very limited)	 1.00 1.00 0.99	Very limited droughty (very limited) large stones (limited) small stones (slightly limited)	 1.00 0.61 0.08	Very limited droughty (very limited) shallow to bedrock (very limited) large stones (limited)	 1.00 1.00 0.61	Very limited shallow to bedrock (very limited) droughty (very limited) large stones (limited)	 1.00 1.00 0.61
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor	Very limited small stones (very limited) droughty (very limited) high erodibility (limited)	 1.00 1.00 0.80	Very limited small stones (very limited) high erodibility (limited) droughty (moderately limited)	 1.00 0.80 0.57	Very limited small stones (very limited) droughty (moderately limited)	 1.00 0.57	Very limited small stones (very limited) droughty (moderately limited)	 1.00 0.57	Moderately limited droughty (moderately limited)	 0.57
73221:										
Poynor	Very limited droughty (very limited) small stones (very limited) high erodibility (limited)	 1.00 1.00 0.80	Very limited small stones (very limited) high erodibility (limited) droughty (moderately limited)	 1.00 0.80 0.57	Limited small stones (limited) droughty (moderately limited)	 0.81 0.57	Limited small stones (limited) droughty (moderately limited)	 0.81 0.57	Moderately limited droughty (moderately limited)	 0.57
73222:										
Splitlimb	Very limited ponded (wetness) (very limited) wetness (moderately limited) percs slowly (slightly limited)	 1.00 0.55 0.13	Very limited ponded (wetness) (very limited) wetness (moderately limited) percs slowly (slightly limited)	 1.00 0.55 0.13	Limited seasonally ponded (limited) wetness (moderately limited)	 0.80 0.55	Limited seasonally ponded (limited) wetness (moderately limited)	 0.80 0.55	Limited wetness (limited) seasonally ponded (limited)	 0.85 0.80

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73223:										
Coulstone------	Very limited droughty (very limited) small stones (very limited) high erodibility (limited)	 1.00 1.00 0.80	Very limited small stones (very limited) droughty (very limited) high erodibility (limited)	 1.00 1.00 0.80	Very limited droughty (very limited) small stones (moderately limited)	 1.00 0.60	Very limited droughty (very limited) small stones (moderately limited)	 1.00 0.60	Very limited droughty (very limited)	 1.00
Bender---------	Very limited droughty (very limited) high erodibility (limited) slope (limited)	 1.00 0.80 0.79	Very limited droughty (very limited) high erodibility (limited) slope (limited)	 1.00 0.80 0.79	Very limited droughty (very limited) large stones (moderately limited) small stones (slightly limited)	 1.00 0.40 0.14	Very limited droughty (very limited) large stones (moderately limited) depth to bedrock (moderately limited)	 1.00 0.40 0.32	Very limited droughty (very limited) large stones (moderately limited) depth to bedrock (moderately limited)	 1.00 0.40 0.32
73224:										
Moko----------	Very limited droughty (very limited) shallow to bedrock (very limited) high erodibility (limited)	 1.00 1.00 0.80	Very limited droughty (very limited) shallow to bedrock (very limited) high erodibility (limited)	 1.00 1.00 0.80	Very limited droughty (very limited) small stones (slightly limited) large stones (slightly limited)	 1.00 0.13 0.06	Very limited droughty (very limited) shallow to bedrock (very limited) large stones (slightly limited)	 1.00 1.00 0.06	Very limited shallow to bedrock (very limited) droughty (very limited) large stones (slightly limited)	 1.00 1.00 0.06
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
74626:										
Tanglenook-----	Very limited wetness (very limited) percs slowly (moderately limited)	 1.00 0.39	Very limited wetness (very limited) percs slowly (moderately limited)	 1.00 0.39	Very limited wetness (very limited)	 1.00	Very limited wetness (very limited)	 1.00	Very limited wetness (very limited)	 1.00
74627:										
Hartville------	Moderately limited wetness (moderately limited) percs slowly (moderately limited)	 0.44 0.39	Moderately limited wetness (moderately limited) percs slowly (moderately limited)	 0.44 0.39	Moderately limited wetness (moderately limited)	 0.44	Moderately limited wetness (moderately limited)	 0.44	Moderately limited wetness (moderately limited)	 0.59

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74629:										
Raftville------	Very limited		Limited		Slightly limited		Limited		Limited	
	droughty	1.00	depth to bedrock	0.66	droughty	0.23	depth to bedrock	0.66	depth to bedrock	0.66
	(very limited)		(limited)		(slightly limited)		(limited)		(limited)	
	depth to bedrock	0.66	moderate erodibility	0.50			droughty	0.23	droughty	0.23
	(limited)		(moderately limited)				(slightly limited)		(slightly limited)	
	moderate erodibility	0.50	droughty	0.23						
	(moderately limited)		(slightly limited)							
74636:										
Lecoma---------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
74637:										
Lecoma---------	Limited		Limited		Not limited		Not limited		Not limited	
	high erodibility	0.80	high erodibility	0.80						
	(limited)		(limited)							
74677:										
Deible---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.86	percs slowly	0.86						
	(limited)		(limited)							
	droughty	0.01								
	(slightly limited)									
74679:										
Higdon---------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Limited	
	wetness	0.60	wetness	0.60	wetness	0.60	wetness	0.60	wetness	0.99
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
75381:										
Bearthicket----	Not limited		Not limited		Not limited		Not limited		Not limited	

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75382:										
Cedargap-------	Limited		Limited		Slightly limited		Not limited		Not limited	
	flooding	0.90	flooding	0.90	small stones	0.08				
	(limited)		(limited)		(slightly limited)					
	small stones	0.48	small stones	0.48						
	(moderately limited)		(moderately limited)							
	droughty	0.22								
	(slightly limited)									
75388:										
Kaintuck-------	Limited		Limited		Not limited		Not limited		Not limited	
	flooding	0.90	flooding	0.90						
	(limited)		(limited)							
	droughty	0.34								
	(moderately limited)									
Relfe----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	1.00	small stones	1.00	small stones	0.73	small stones	0.73		
	(very limited)		(very limited)		(limited)		(limited)			
	flooding	0.90	flooding	0.90						
	(limited)		(limited)							
75389:										
Dunning--------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00	percs slowly	1.00						
	(very limited)		(very limited)							
	flooding	0.90	flooding	0.90						
	(limited)		(limited)							
Hercules-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	flooding	0.90	large stones	0.17	large stones	0.17	large stones	0.17
	(very limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	flooding	0.90	large stones	0.45	droughty	0.09	droughty	0.09	droughty	0.09
	(limited)		(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)	
75390:										
Razort---------	Not limited		Not limited		Not limited		Not limited		Not limited	

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75391:										
Possumtrot-----	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	flooding	0.60	flooding	0.60						
	(moderately limited)		(moderately limited)							
	droughty	0.02								
	(slightly limited)									
75392:										
Stultz---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	flooding	0.90	droughty	0.16	droughty	0.16	droughty	0.16
	(very limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	flooding	0.90	droughty	0.16						
	(limited)		(slightly limited)							
75406:										
Racket---------	Limited		Limited		Not limited		Not limited		Not limited	
	flooding	0.90	flooding	0.90						
	(limited)		(limited)							
75417:										
Relfe----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	1.00	small stones	1.00	small stones	0.56	small stones	0.53		
	(very limited)		(very limited)		(moderately limited)		(moderately limited)			
	flooding	0.90	flooding	0.90						
	(limited)		(limited)							
Sandbur--------	Limited		Limited		Not limited		Not limited		Not limited	
	flooding	0.90	flooding	0.90						
	(limited)		(limited)							
	droughty	0.34								
	(moderately limited)									
75418:										
Tilk-----------	Very limited		Very limited		Limited		Limited		Moderately limited	
	small stones	1.00	small stones	1.00	small stones	0.65	small stones	0.65	droughty	0.34
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	droughty	1.00	moderate erodibility	0.50	droughty	0.34	droughty	0.34		
	(very limited)		(moderately limited)		(moderately limited)		(moderately limited)			
	moderate erodibility	0.50	droughty	0.34						
	(moderately limited)		(moderately limited)							

Table 11a.--Wildlife Habitat--Continued

Map symbol and soil name	Grain and seed crops (for use as food and cover)		Domestic grasses and legumes (for use as food and cover)		Upland wild herbaceous plants		Upland shrubs and vines		Upland deciduous trees	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75419:										
Perche	Very limited wetness (very limited) flooding (moderately limited) droughty (slightly limited)	 1.00 0.60 0.02	Very limited wetness (very limited) flooding (moderately limited)	 1.00 0.60	Very limited wetness (very limited)	 1.00	Very limited wetness (very limited)	 1.00	Very limited wetness (very limited)	 1.00
75420:										
Secesh	Limited droughty (limited) flooding (moderately limited)	 0.70 0.60	Moderately limited flooding (moderately limited)	 0.60	Not limited		Not limited		Not limited	
Tilk	Very limited small stones (very limited) droughty (very limited) flooding (moderately limited)	 1.00 1.00 0.60	Very limited small stones (very limited) flooding (moderately limited) droughty (moderately limited)	 1.00 0.60 0.34	Moderately limited small stones (moderately limited) droughty (moderately limited)	 0.42 0.34	Moderately limited droughty (moderately limited) small stones (slightly limited)	 0.34 0.30	Moderately limited droughty (moderately limited)	 0.34
99000:										
Pits, quarries	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 11b.--Wildlife Habitat

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti	Moderately limited wetness (moderately limited)	0.59	Limited infrequent flooding (limited) deep to water (moderately limited)	0.80 0.45	Not limited		Moderately limited deep to water (moderately limited)	0.45	Limited slope (limited)	0.91
70025:										
Branson	Not limited		Limited infrequent flooding (limited)	0.80	Not limited		Not limited		Moderately limited seepage (moderately limited)	0.42
Splitlimb	Limited wetness (limited)	0.79	Limited infrequent flooding (limited) deep to water (moderately limited)	0.80 0.37	Not limited		Moderately limited deep to water (moderately limited)	0.37	Moderately limited seepage (moderately limited)	0.36
70026:										
Tonti	Moderately limited wetness (moderately limited)	0.59	Limited infrequent flooding (limited) deep to water (moderately limited)	0.80 0.45	Not limited		Moderately limited deep to water (moderately limited)	0.45	Not limited	
73000:										
Pomme	Not limited		Limited infrequent flooding (limited)	0.80	Not limited		Not limited		Moderately limited seepage (moderately limited) slope (moderately limited)	0.45 0.31
73013:										
Lowassie	Very limited wetness (very limited) seasonally ponded (limited)	1.00 0.80	Limited seasonally ponded (limited) infrequent flooding (limited)	0.80 0.80	Limited seasonally ponded (limited)	0.80	Limited seasonally ponded (limited)	0.80	Limited seasonally ponded (limited)	0.80

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73017:										
Bendavis	Moderately limited wetness (moderately limited) depth to bedrock (slightly limited)	 0.45 0.13	Limited infrequent flooding (limited) small stones (limited) deep to water (limited)	 0.80 0.67 0.61	Limited small stones (limited)	 0.67	Limited deep to water (limited) soil reaction (slightly limited)	 0.61 0.18	Very limited slope (very limited) soil reaction (slightly limited)	 1.00 0.18
Poynor	Moderately limited droughty (moderately limited)	 0.57	Limited infrequent flooding (limited) small stones (limited)	 0.80 0.73	Limited small stones (limited) droughty (moderately limited)	 0.73 0.57	Not limited		Very limited slope (very limited) seepage (moderately limited)	 1.00 0.45
73019:										
Poynor	Moderately limited droughty (moderately limited)	 0.57	Limited infrequent flooding (limited) small stones (limited)	 0.80 0.67	Limited small stones (limited) droughty (moderately limited)	 0.67 0.57	Not limited		Limited slope (limited) seepage (moderately limited)	 0.91 0.45
73021:										
Poynor	Moderately limited droughty (moderately limited)	 0.57	Limited infrequent flooding (limited) small stones (limited)	 0.80 0.73	Limited small stones (limited) droughty (moderately limited)	 0.73 0.57	Not limited		Very limited slope (very limited) seepage (moderately limited)	 1.00 0.45
73023:										
Mano	Moderately limited wetness (moderately limited)	 0.45	Limited infrequent flooding (limited) deep to water (limited)	 0.80 0.61	Not limited		Limited deep to water (limited)	 0.61	Limited slope (limited)	 0.66
Ocie	Moderately limited wetness (moderately limited)	 0.45	Limited infrequent flooding (limited) deep to water (limited) small stones (slightly limited)	 0.80 0.61 0.30	Slightly limited small stones (slightly limited)	 0.30	Limited deep to water (limited)	 0.61	Limited slope (limited)	 0.66

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73024:										
Mano	Moderately limited wetness (moderately limited)	0.45	Limited infrequent flooding (limited) deep to water (limited) small stones (slightly limited)	0.80 0.61 0.01	Slightly limited small stones (slightly limited)	0.01	Limited deep to water (limited)	0.61	Very limited slope (very limited)	1.00
Ocie	Moderately limited wetness (moderately limited)	0.45	Limited infrequent flooding (limited) deep to water (limited) small stones (slightly limited)	0.80 0.61 0.30	Slightly limited small stones (slightly limited)	0.30	Limited deep to water (limited)	0.61	Very limited slope (very limited)	1.00
73032:										
Gatewood	Moderately limited wetness (moderately limited) depth to bedrock (moderately limited) droughty (moderately limited)	0.51 0.46 0.31	Limited infrequent flooding (limited) deep to water (moderately limited) small stones (slightly limited)	0.80 0.53 0.30	Moderately limited droughty (moderately limited) small stones (slightly limited)	0.31 0.30	Moderately limited deep to water (moderately limited)	0.53	Very limited slope (very limited)	1.00
73033:										
Gatewood	Moderately limited wetness (moderately limited) depth to bedrock (moderately limited) droughty (moderately limited)	0.51 0.46 0.31	Limited small stones (limited) infrequent flooding (limited) deep to water (moderately limited)	1.00 0.80 0.53	Limited small stones (limited) droughty (moderately limited)	1.00 0.31	Moderately limited deep to water (moderately limited)	0.53	Very limited slope (very limited)	1.00
73051:										
Winnipeg	Not limited		Limited infrequent flooding (limited)	0.80	Not limited		Not limited		Moderately limited seepage (moderately limited)	0.45
73052:										
Lily	Limited depth to bedrock (limited) droughty (slightly limited)	0.66 0.19	Limited infrequent flooding (limited)	0.80	Slightly limited droughty (slightly limited)	0.19	Not limited		Limited slope (limited) seepage (limited)	0.91 0.79

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73053:										
Lily	Limited depth to bedrock (limited) droughty (moderately limited)	 0.76 0.48	Limited infrequent flooding (limited)	 0.80	Moderately limited droughty (moderately limited)	 0.48	Not limited		Very limited slope (very limited)	 1.00
Bender	Very limited droughty (very limited) depth to bedrock (limited) large stones (slightly limited)	 1.00 0.76 0.17	Limited infrequent flooding (limited) large stones (slightly limited)	 0.80 0.17	Very limited droughty (very limited) large stones (slightly limited)	 1.00 0.17	Not limited		Very limited slope (very limited) seepage (limited)	 1.00 0.79
73054:										
Viburnum	Limited wetness (limited)	 0.85	Limited infrequent flooding (limited) deep to water (moderately limited)	 0.80 0.35	Not limited		Moderately limited deep to water (moderately limited)	 0.35	Slightly limited seepage (slightly limited)	 0.18
73056:										
Viburnum	Limited wetness (limited)	 0.99	Limited infrequent flooding (limited) deep to water (slightly limited)	 0.80 0.30	Not limited		Slightly limited deep to water (slightly limited)	 0.30	Very limited slope (very limited)	 1.00
73057:										
Jerktail	Very limited wetness (very limited)	 1.00	Limited infrequent flooding (limited) deep to water (slightly limited)	 0.80 0.11	Not limited		Slightly limited deep to water (slightly limited)	 0.11	Not limited	
73058:										
Gunlock	Limited wetness (limited)	 0.93	Limited infrequent flooding (limited) deep to water (moderately limited)	 0.80 0.32	Not limited		Moderately limited deep to water (moderately limited)	 0.32	Limited slope (limited)	 0.91

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73063:										
Bendavis-------	Moderately limited wetness (moderately limited) depth to bedrock (slightly limited)	 0.45 0.27	Limited infrequent flooding (limited) deep to water (limited)	 0.80 0.61	Not limited		Limited deep to water (limited)	 0.61	Limited slope (limited) seepage (moderately limited)	 0.66 0.54
Poynor---------	Moderately limited droughty (moderately limited)	 0.40	Limited infrequent flooding (limited) small stones (limited)	 0.80 0.67	Limited small stones (limited) droughty (moderately limited)	 0.67 0.40	Not limited		Limited slope (limited) seepage (moderately limited)	 0.66 0.45
73066:										
Bender---------	Very limited droughty (very limited) depth to bedrock (moderately limited) large stones (slightly limited)	 1.00 0.32 0.17	Limited infrequent flooding (limited) large stones (slightly limited)	 0.80 0.17	Very limited droughty (very limited) large stones (slightly limited)	 1.00 0.17	Not limited		Very limited slope (very limited) seepage (limited)	 1.00 0.79
73067:										
Bender---------	Very limited droughty (very limited) depth to bedrock (limited) large stones (slightly limited)	 1.00 0.76 0.17	Limited infrequent flooding (limited) large stones (slightly limited)	 0.80 0.17	Very limited droughty (very limited) large stones (slightly limited)	 1.00 0.17	Not limited		Very limited slope (very limited) seepage (limited)	 1.00 0.79
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick----------	Not limited		Limited infrequent flooding (limited)	 0.80	Not limited		Not limited		Very limited slope (very limited)	 1.00
73069:										
Tick----------	Not limited		Limited small stones (limited) infrequent flooding (limited)	 0.94 0.80	Limited small stones (limited)	 0.94	Not limited		Very limited slope (very limited)	 1.00

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73071:										
Hogcreek-------	Very limited		Limited		Not limited		Slightly limited		Not limited	
	wetness	1.00	infrequent flooding	0.80			deep to water	0.21		
	(very limited)		(limited)				(slightly limited)			
	depth to bedrock	0.18	deep to water	0.21						
	(slightly limited)		(slightly limited)							
73072:										
Hogcreek-------	Very limited		Limited		Not limited		Slightly limited		Limited	
	wetness	1.00	infrequent flooding	0.80			deep to water	0.21	slope	0.91
	(very limited)		(limited)				(slightly limited)		(limited)	
	depth to bedrock	0.18	deep to water	0.21						
	(slightly limited)		(slightly limited)							
73073:										
Scholten-------	Limited		Limited		Limited		Moderately limited		Very limited	
	wetness	0.93	infrequent flooding	0.80	droughty	0.70	deep to water	0.32	slope	1.00
	(limited)		(limited)		(limited)		(moderately limited)		(very limited)	
	droughty	0.70	deep to water	0.32	small stones	0.30				
	(limited)		(moderately limited)		(slightly limited)					
			small stones	0.30						
			(slightly limited)							
Poynor---------	Limited		Limited		Limited		Not limited		Very limited	
	droughty	0.75	infrequent flooding	0.80	droughty	0.75			slope	1.00
	(limited)		(limited)		(limited)				(very limited)	
			small stones	0.60	small stones	0.60			seepage	0.14
			(moderately limited)		(moderately limited)				(slightly limited)	
73076:										
Mano-----------	Moderately limited		Limited		Slightly limited		Limited		Very limited	
	wetness	0.45	infrequent flooding	0.80	small stones	0.30	deep to water	0.61	slope	1.00
	(moderately limited)		(limited)		(slightly limited)		(limited)		(very limited)	
			deep to water	0.61						
			(limited)							
			small stones	0.30						
			(slightly limited)							
Ocie-----------	Moderately limited		Limited		Slightly limited		Limited		Very limited	
	wetness	0.45	infrequent flooding	0.80	small stones	0.30	deep to water	0.61	slope	1.00
	(moderately limited)		(limited)		(slightly limited)		(limited)		(very limited)	
			deep to water	0.61						
			(limited)							
			small stones	0.30						
			(slightly limited)							

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73077:										
Eudy	Very limited wetness (very limited) depth to bedrock (slightly limited)	 1.00 0.13	Limited infrequent flooding (limited) deep to water (slightly limited)	 0.80 0.11	Not limited		Slightly limited deep to water (slightly limited)	 0.11	Limited slope (limited)	 0.66
73080:										
Alred	Slightly limited droughty (slightly limited)	 0.02	Limited infrequent flooding (limited)	 0.80	Slightly limited droughty (slightly limited)	 0.02	Not limited		Very limited slope (very limited)	 1.00
Bardley	Limited droughty (limited) depth to bedrock (moderately limited) large stones (slightly limited)	 0.72 0.46 0.17	Limited infrequent flooding (limited) large stones (slightly limited)	 0.80 0.17	Limited droughty (limited) large stones (slightly limited)	 0.72 0.17	Not limited		Very limited slope (very limited)	 1.00
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73081:										
Bender	Very limited droughty (very limited) large stones (moderately limited) depth to bedrock (moderately limited)	 1.00 0.44 0.32	Limited infrequent flooding (limited) large stones (moderately limited)	 0.80 0.44	Very limited droughty (very limited) large stones (moderately limited)	 1.00 0.44	Not limited		Very limited slope (very limited) seepage (limited)	 1.00 0.89
Alred	Limited large stones (limited) droughty (slightly limited)	 0.61 0.02	Limited infrequent flooding (limited) large stones (limited)	 0.80 0.61	Limited large stones (limited) droughty (slightly limited)	 0.61 0.02	Not limited		Very limited slope (very limited)	 1.00
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73087:										
Celt	Very limited wetness (very limited)	 1.00	Limited infrequent flooding (limited)	 0.80	Not limited		Not limited		Not limited	

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73159:										
Yelton---	Limited wetness (limited)	0.93	Limited infrequent flooding (limited) deep to water (moderately limited)	0.80 0.32	Not limited		Moderately limited deep to water (moderately limited)	0.32	Limited slope (limited)	0.66
73176:										
Bendavis---	Moderately limited depth to bedrock (moderately limited) droughty (moderately limited) wetness (moderately limited)	0.58 0.45 0.45	Limited infrequent flooding (limited) deep to water (limited) small stones (moderately limited)	0.80 0.61 0.60	Moderately limited small stones (moderately limited) droughty (moderately limited)	0.60 0.45	Limited deep to water (limited)	0.61	Very limited slope (very limited) seepage (moderately limited)	1.00 0.45
Poynor---	Not limited		Limited infrequent flooding (limited) small stones (slightly limited)	0.80 0.01	Slightly limited small stones (slightly limited)	0.01	Not limited		Very limited slope (very limited) seepage (moderately limited)	1.00 0.45
73197:										
Viburnum---	Limited wetness (limited)	0.99	Limited infrequent flooding (limited) deep to water (slightly limited)	0.80 0.30	Not limited		Slightly limited deep to water (slightly limited)	0.30	Moderately limited slope (moderately limited) seepage (slightly limited)	0.31 0.18
73198:										
Gressy---	Not limited		Limited infrequent flooding (limited)	0.80	Not limited		Not limited		Moderately limited seepage (moderately limited) slope (moderately limited)	0.48 0.31
Viraton---	Moderately limited wetness (moderately limited)	0.59	Limited infrequent flooding (limited) deep to water (moderately limited)	0.80 0.45	Not limited		Moderately limited deep to water (moderately limited)	0.45	Moderately limited slope (moderately limited)	0.31

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73199:										
Moko	Very limited shallow to bedrock (very limited) droughty (very limited) large stones (limited)	 1.00 1.00 0.61	Limited infrequent flooding (limited) large stones (limited)	 0.80 0.61	Very limited droughty (very limited) large stones (limited)	 1.00 0.61	Not limited		Very limited slope (very limited) seepage (moderately limited)	 1.00 0.45
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor	Moderately limited droughty (moderately limited)	 0.57	Very limited small stones (very limited) infrequent flooding (limited)	 1.00 0.80	Very limited small stones (very limited) droughty (moderately limited)	 1.00 0.57	Not limited		Very limited slope (very limited) seepage (slightly limited)	 1.00 0.14
73221:										
Poynor	Moderately limited droughty (moderately limited)	 0.57	Limited small stones (limited) infrequent flooding (limited)	 0.81 0.80	Limited small stones (limited) droughty (moderately limited)	 0.81 0.57	Not limited		Very limited slope (very limited) seepage (slightly limited)	 1.00 0.14
73222:										
Splitlimb	Limited wetness (limited) seasonally ponded (limited)	 0.85 0.80	Limited seasonally ponded (limited) infrequent flooding (limited) deep to water (moderately limited)	 0.80 0.80 0.35	Limited seasonally ponded (limited)	 0.80	Limited seasonally ponded (limited) deep to water (moderately limited)	 0.80 0.35	Limited seasonally ponded (limited) seepage (slightly limited)	 0.80 0.18

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73223:										
Coulstone------	Very limited		Limited		Very limited		Not limited		Very limited	
	droughty	1.00	infrequent flooding	0.80	droughty	1.00			slope	1.00
	(very limited)		(limited)		(very limited)				(very limited)	
			small stones	0.60	small stones	0.60			seepage	0.79
			(moderately limited)		(moderately limited)				(limited)	
Bender---------	Very limited		Limited		Very limited		Not limited		Very limited	
	droughty	1.00	infrequent flooding	0.80	droughty	1.00			slope	1.00
	(very limited)		(limited)		(very limited)				(very limited)	
	large stones	0.40	large stones	0.40	large stones	0.40			seepage	0.89
	(moderately limited)		(moderately limited)		(moderately limited)				(limited)	
	depth to bedrock	0.32								
	(moderately limited)									
73224:										
Moko----------	Very limited		Limited		Very limited		Not limited		Very limited	
	shallow to bedrock	1.00	infrequent flooding	0.80	droughty	1.00			slope	1.00
	(very limited)		(limited)		(very limited)				(very limited)	
	droughty	1.00	large stones	0.06	large stones	0.06			seepage	0.45
	(very limited)		(slightly limited)		(slightly limited)				(moderately limited)	
	large stones	0.06								
	(slightly limited)									
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
74626:										
Tanglenook-----	Very limited		Not limited		Not limited		Not limited		Not limited	
	wetness	1.00								
	(very limited)									
74627:										
Hartville------	Moderately limited		Moderately limited		Not limited		Moderately limited		Not limited	
	wetness	0.59	deep to water	0.45			deep to water	0.45		
	(moderately limited)		(moderately limited)				(moderately limited)			
74629:										
Raftville------	Limited		Not limited		Slightly limited		Not limited		Limited	
	depth to bedrock	0.66			droughty	0.23			seepage	0.73
	(limited)				(slightly limited)				(limited)	
	droughty	0.23							slope	0.66
	(slightly limited)								(limited)	

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74636:										
Lecoma---------	Not limited		Limited infrequent flooding (limited)	0.80	Not limited		Not limited		Limited slope (limited) seepage (moderately limited)	0.91 0.45
74637:										
Lecoma---------	Not limited		Limited infrequent flooding (limited)	0.80	Not limited		Not limited		Very limited slope (very limited) seepage (moderately limited)	1.00 0.45
74677:										
Deible---------	Very limited wetness (very limited)	1.00	Not limited		Not limited		Not limited		Not limited	
74679:										
Higdon---------	Limited wetness (limited)	0.99	Slightly limited deep to water (slightly limited)	0.30	Not limited		Slightly limited deep to water (slightly limited)	0.30	Moderately limited seepage (moderately limited)	0.36
75381:										
Bearthicket----	Not limited		Not limited		Not limited		Not limited		Moderately limited seepage (moderately limited)	0.45
75382:										
Cedargap-------	Not limited		Very limited deep to water (very limited)	1.00	Very limited deep to water (very limited)	1.00	Very limited deep to water (very limited)	1.00	Very limited deep to water (very limited) seepage (moderately limited)	1.00 0.45

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75388:										
Kaintuck-------	Not limited		Moderately limited infrequent flooding (moderately limited)	0.50	Not limited		Not limited		Limited seepage (limited)	0.79
Relfe----------	Very limited droughty (very limited)	1.00	Limited small stones (limited) infrequent flooding (moderately limited)	0.73 0.50	Very limited droughty (very limited) small stones (limited)	1.00 0.73	Not limited		Limited seepage (limited)	0.79
75389:										
Dunning--------	Very limited wetness (very limited)	1.00	Moderately limited infrequent flooding (moderately limited)	0.50	Not limited		Not limited		Not limited	
Hercules-------	Very limited wetness (very limited) large stones (slightly limited) droughty (slightly limited)	1.00 0.17 0.09	Moderately limited infrequent flooding (moderately limited) large stones (slightly limited)	0.50 0.17	Slightly limited large stones (slightly limited) droughty (slightly limited)	0.17 0.09	Not limited		Slightly limited seepage (slightly limited)	0.18
75390:										
Razort---------	Not limited		Not limited		Not limited		Not limited		Moderately limited seepage (moderately limited)	0.45
75391:										
Possumtrot-----	Not limited		Moderately limited infrequent flooding (moderately limited)	0.50	Not limited		Not limited		Moderately limited seepage (moderately limited)	0.45
75392:										
Stultz---------	Very limited wetness (very limited) droughty (slightly limited)	1.00 0.16	Moderately limited infrequent flooding (moderately limited)	0.50	Slightly limited droughty (slightly limited)	0.16	Not limited		Slightly limited seepage (slightly limited)	0.18

Table 11b.--Wildlife Habitat--Continued

Map symbol and soil name	Upland mixed deciduous-conifer trees		Riparian herbaceous plants		Riparian shrubs, vines, and trees		Freshwater wetland plants		Irrigated freshwater wetland plants	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75406:										
Racket----------	Not limited		Very limited deep to water (very limited)	1.00	Very limited deep to water (very limited)	1.00	Very limited deep to water (very limited)	1.00	Very limited deep to water (very limited) seepage (moderately limited)	1.00 0.48
75417:										
Relfe----------	Very limited droughty (very limited)	1.00	Moderately limited small stones (moderately limited)	0.53	Very limited droughty (very limited) small stones (moderately limited)	1.00 0.53	Not limited		Limited seepage (limited)	0.75
Sandbur--------	Not limited		Not limited		Not limited		Not limited		Limited seepage (limited)	0.79
75418:										
Tilk----------	Moderately limited droughty (moderately limited)	0.34	Limited small stones (limited)	0.65	Limited small stones (limited) droughty (moderately limited)	0.65 0.34	Not limited		Limited seepage (limited)	0.79
75419:										
Perche----------	Very limited wetness (very limited)	1.00	Moderately limited infrequent flooding (moderately limited)	0.50	Not limited		Not limited		Moderately limited seepage (moderately limited)	0.45
75420:										
Secesh----------	Not limited		Moderately limited infrequent flooding (moderately limited)	0.50	Not limited		Not limited		Moderately limited seepage (moderately limited)	0.45
Tilk----------	Moderately limited droughty (moderately limited)	0.34	Moderately limited infrequent flooding (moderately limited) small stones (slightly limited)	0.50 0.30	Moderately limited droughty (moderately limited) small stones (slightly limited)	0.34 0.30	Not limited		Limited seepage (limited)	0.79
99000:										
Pits, quarries-	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 12.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti	Moderately limited wetness (moderately limited)	0.59	Very limited wetness (very limited) shrink-swell (slightly limited)	1.00 0.04	Limited slope (limited) wetness (slightly limited)	0.68 0.28	Slightly limited wetness (slightly limited)	0.28	Slightly limited too acid (slightly limited) wetness (slightly limited)	0.30 0.28
70025:										
Branson	Not limited		Not limited		Not limited		Not limited		Not limited	
Splitlimb	Limited wetness (limited) shrink-swell (moderately limited)	0.79 0.45	Very limited wetness (very limited) shrink-swell (moderately limited)	1.00 0.45	Moderately limited wetness (moderately limited) shrink-swell (moderately limited)	0.45 0.45	Very limited low strength (very limited) wetness (moderately limited) shrink-swell (moderately limited)	1.00 0.45 0.45	Moderately limited wetness (moderately limited)	0.45
70026:										
Tonti	Moderately limited wetness (moderately limited)	0.59	Very limited wetness (very limited) shrink-swell (slightly limited)	1.00 0.04	Slightly limited wetness (slightly limited)	0.28	Slightly limited wetness (slightly limited)	0.28	Slightly limited too acid (slightly limited) wetness (slightly limited)	0.30 0.28
73000:										
Pomme	Not limited		Not limited		Slightly limited slope (slightly limited)	0.15	Not limited		Not limited	
73013:										
Lowassie	Very limited wetness (very limited) ponded (very limited) shrink-swell (very limited)	1.00 1.00 1.00	Very limited ponded (very limited) wetness (very limited) shrink-swell (slightly limited)	1.00 1.00 0.27	Very limited ponded (wetness) (very limited) wetness (very limited) shrink-swell (very limited)	1.00 1.00 1.00	Very limited low strength (very limited) ponded (wetness) (very limited) wetness (very limited)	1.00 1.00 1.00	Very limited wetness (very limited) ponded (wetness) (very limited)	1.00 1.00

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73017:										
Bendavis	Very limited slope (very limited) wetness (moderately limited) depth to bedrock (slightly limited)	 1.00 0.45 0.25	Very limited hard bedrock <40" (very limited) slope (very limited) wetness (very limited)	 1.00 1.00 1.00	Very limited slope (very limited) depth to bedrock (slightly limited)	 1.00 0.25	Very limited slope (very limited) depth to bedrock (slightly limited)	 1.00 0.25	Very limited slope (very limited) small stones (very limited) too acid (limited)	 1.00 1.00 0.84
Poynor	Very limited slope (very limited)	 1.00	Very limited slope (very limited) shrink-swell (slightly limited)	 1.00 0.14	Very limited slope (very limited)	 1.00	Very limited slope (very limited)	 1.00	Very limited slope (very limited) small stones (very limited) too acid (limited)	 1.00 1.00 0.61
73019:										
Poynor	Not limited		Slightly limited shrink-swell (slightly limited)	 0.14	Limited slope (limited)	 0.68	Not limited		Very limited small stones (very limited) droughty (moderately limited) too acid (slightly limited)	 1.00 0.57 0.30
73021:										
Poynor	Very limited slope (very limited)	 1.00	Very limited slope (very limited) shrink-swell (slightly limited)	 1.00 0.14	Very limited slope (very limited)	 1.00	Very limited slope (very limited)	 1.00	Very limited slope (very limited) small stones (very limited) too acid (limited)	 1.00 1.00 0.61
73023:										
Mano	Moderately limited wetness (moderately limited)	 0.45	Very limited wetness (very limited) shrink-swell (moderately limited)	 1.00 0.50	Moderately limited slope (moderately limited)	 0.45	Not limited		Moderately limited small stones (moderately limited) too acid (slightly limited)	 0.48 0.30

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73023:										
Ocie	Very limited		Very limited		Very limited		Very limited		Very limited	
	shrink-swell	1.00	wetness	1.00	shrink-swell	1.00	low strength	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	0.45	shrink-swell	0.71	slope	0.45	shrink-swell	1.00		
	(moderately limited)		(limited)		(moderately limited)		(very limited)			
			depth to bedrock	0.42						
			(moderately limited)							
73024:										
Mano	Limited		Very limited		Very limited		Limited		Very limited	
	slope	0.76	wetness	1.00	slope	1.00	slope	0.63	small stones	1.00
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	wetness	0.45	slope	0.76					slope	0.63
	(moderately limited)		(limited)						(limited)	
			shrink-swell	0.50					too acid	0.30
			(moderately limited)						(slightly limited)	
Ocie	Very limited		Very limited		Very limited		Very limited		Very limited	
	shrink-swell	1.00	wetness	1.00	slope	1.00	low strength	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.76	slope	0.76	shrink-swell	1.00	shrink-swell	1.00	slope	0.63
	(limited)		(limited)		(very limited)		(very limited)		(limited)	
	wetness	0.45	shrink-swell	0.71			slope	0.63		
	(moderately limited)		(limited)				(limited)			
73032:										
Gatewood	Very limited		Very limited		Very limited		Very limited		Very limited	
	shrink-swell	1.00	hard bedrock <40"	1.00	shrink-swell	1.00	low strength	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.53	wetness	1.00	slope	1.00	shrink-swell	1.00	depth to bedrock	0.46
	(moderately limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
	wetness	0.51	shrink-swell	1.00	depth to bedrock	0.53	depth to bedrock	0.53	droughty	0.31
	(moderately limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
73033:										
Gatewood	Very limited		Very limited		Very limited		Very limited		Very limited	
	shrink-swell	1.00	hard bedrock <40"	1.00	slope	1.00	low strength	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	wetness	1.00	shrink-swell	1.00	slope	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.53	shrink-swell	1.00	depth to bedrock	0.53	shrink-swell	1.00	depth to bedrock	0.46
	(moderately limited)		(very limited)		(moderately limited)		(very limited)		(moderately limited)	

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73051:										
Winnipeg	Moderately limited shrink-swell (moderately limited)	0.45	Moderately limited shrink-swell (moderately limited)	0.33	Moderately limited shrink-swell (moderately limited)	0.45	Very limited low strength (very limited) shrink-swell (moderately limited)	1.00 0.45	Not limited	
73052:										
Lily	Limited depth to bedrock (limited)	0.66	Very limited hard bedrock <40" (very limited)	1.00	Limited slope (limited) depth to bedrock (limited)	0.68 0.66	Limited depth to bedrock (limited)	0.66	Limited depth to bedrock (limited) droughty (slightly limited) too acid (slightly limited)	0.66 0.19 0.06
73053:										
Lily	Limited depth to bedrock (limited) slope (moderately limited)	0.76 0.31	Very limited hard bedrock <40" (very limited) slope (moderately limited)	1.00 0.31	Limited slope (limited) depth to bedrock (limited)	0.99 0.76	Limited depth to bedrock (limited)	0.76	Limited depth to bedrock (limited) droughty (moderately limited) too acid (slightly limited)	0.76 0.48 0.06
Bender	Limited depth to bedrock (limited) slope (moderately limited) large stones (slightly limited)	0.76 0.31 0.09	Very limited hard bedrock <40" (very limited) slope (moderately limited) large stones (slightly limited)	1.00 0.31 0.09	Limited slope (limited) depth to bedrock (limited) large stones (slightly limited)	0.99 0.76 0.09	Limited depth to bedrock (limited) large stones (slightly limited)	0.76 0.09	Very limited droughty (very limited) large stones (limited) depth to bedrock (limited)	1.00 0.99 0.76
73054:										
Viburnum	Limited wetness (limited) shrink-swell (moderately limited)	0.85 0.45	Very limited wetness (very limited) shrink-swell (moderately limited)	1.00 0.45	Moderately limited wetness (moderately limited) shrink-swell (moderately limited)	0.49 0.45	Moderately limited wetness (moderately limited) shrink-swell (moderately limited)	0.49 0.45	Moderately limited wetness (moderately limited)	0.49

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73056:										
Viburnum-------	Very limited		Very limited		Very limited		Very limited		Limited	
	shrink-swell	1.00	wetness	1.00	slope	1.00	shrink-swell	1.00	slope	0.63
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	wetness	0.99	shrink-swell	0.81	shrink-swell	1.00	slope	0.63	wetness	0.61
	(limited)		(limited)		(very limited)		(limited)		(limited)	
	slope	0.76	slope	0.76	wetness	0.61	wetness	0.61	too acid	0.30
	(limited)		(limited)		(limited)		(limited)		(slightly limited)	
73057:										
Jerktail-------	Very limited		Very limited		Very limited		Very limited		Limited	
	wetness	1.00	wetness	1.00	shrink-swell	1.00	shrink-swell	1.00	wetness	0.86
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	shrink-swell	1.00	shrink-swell	1.00	wetness	0.86	wetness	0.86		
	(very limited)		(very limited)		(limited)		(limited)			
			depth to bedrock	0.22						
			(slightly limited)							
73058:										
Gunlock--------	Limited		Very limited		Limited		Very limited		Moderately limited	
	wetness	0.93	wetness	1.00	slope	0.68	low strength	1.00	wetness	0.56
	(limited)		(very limited)		(limited)		(very limited)		(moderately limited)	
	shrink-swell	0.45	shrink-swell	0.42	wetness	0.56	wetness	0.56	small stones	0.33
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					shrink-swell	0.45	shrink-swell	0.45		
					(moderately limited)		(moderately limited)			
73063:										
Bendavis-------	Moderately limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	wetness	0.45	hard bedrock <40"	1.00	slope	0.45	depth to bedrock	0.42	small stones	0.33
	(moderately limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	depth to bedrock	0.42	wetness	1.00	depth to bedrock	0.42			too acid	0.30
	(moderately limited)		(very limited)		(moderately limited)				(slightly limited)	
									depth to bedrock	0.27
									(slightly limited)	
Poynor---------	Not limited		Slightly limited		Moderately limited		Not limited		Very limited	
			shrink-swell	0.14	slope	0.45			small stones	1.00
			(slightly limited)		(moderately limited)				(very limited)	
									droughty	0.40
									(moderately limited)	
									too acid	0.30
									(slightly limited)	

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73066:										
Bender----------	Limited		Very limited		Limited		Limited		Very limited	
	large stones	0.79	hard bedrock <40"	1.00	slope	0.99	large stones	0.79	droughty	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	depth to bedrock	0.46	large stones	0.79	large stones	0.79	depth to bedrock	0.46	large stones	0.99
	(moderately limited)		(limited)		(limited)		(moderately limited)		(limited)	
	shrink-swell	0.45	slope	0.31	depth to bedrock	0.46	shrink-swell	0.45	too acid	0.36
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
73067:										
Bender----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	hard bedrock <40"	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.76	slope	1.00	depth to bedrock	0.76	depth to bedrock	0.76	droughty	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	large stones	0.47	large stones	0.47	large stones	0.47	large stones	0.47	large stones	0.99
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick----------	Limited		Limited		Very limited		Very limited		Limited	
	slope	0.76	slope	0.76	slope	1.00	low strength	1.00	slope	0.63
	(limited)		(limited)		(very limited)		(very limited)		(limited)	
	shrink-swell	0.45	shrink-swell	0.30	shrink-swell	0.45	slope	0.63	too acid	0.36
	(moderately limited)		(slightly limited)		(moderately limited)		(limited)		(moderately limited)	
							shrink-swell	0.45		
							(moderately limited)			
73069:										
Tick----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	low strength	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	shrink-swell	0.30	shrink-swell	0.45	slope	1.00	small stones	1.00
	(moderately limited)		(slightly limited)		(moderately limited)		(very limited)		(very limited)	
							shrink-swell	0.45	too acid	0.36
							(moderately limited)		(moderately limited)	
73071:										
Hogcreek-------	Very limited		Very limited		Limited		Limited		Limited	
	wetness	1.00	hard bedrock <40"	1.00	wetness	0.73	wetness	0.73	wetness	0.73
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	shrink-swell	0.45	wetness	1.00	shrink-swell	0.45	shrink-swell	0.45	depth to bedrock	0.18
	(moderately limited)		(very limited)		(moderately limited)		(moderately limited)		(slightly limited)	
	depth to bedrock	0.33			depth to bedrock	0.33	depth to bedrock	0.33	too acid	0.18
	(moderately limited)				(moderately limited)		(moderately limited)		(slightly limited)	

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73072:										
Hogcreek-------	Very limited		Very limited		Limited		Limited		Limited	
	wetness	1.00	hard bedrock <40"	1.00	wetness	0.73	wetness	0.73	wetness	0.73
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	shrink-swell	0.45	wetness	1.00	slope	0.68	shrink-swell	0.45	depth to bedrock	0.18
	(moderately limited)		(very limited)		(limited)		(moderately limited)		(slightly limited)	
	depth to bedrock	0.33			shrink-swell	0.45	depth to bedrock	0.33	too acid	0.18
	(moderately limited)				(moderately limited)		(moderately limited)		(slightly limited)	
73073:										
Scholten-------	Limited		Very limited		Very limited		Limited		Very limited	
	wetness	0.93	wetness	1.00	slope	1.00	slope	0.63	small stones	1.00
	(limited)		(very limited)		(very limited)		(limited)		(very limited)	
	slope	0.76	slope	0.76	wetness	0.56	wetness	0.56	droughty	0.70
	(limited)		(limited)		(moderately limited)		(moderately limited)		(limited)	
	shrink-swell	0.45	shrink-swell	0.25	shrink-swell	0.45	shrink-swell	0.45	slope	0.63
	(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)		(limited)	
Poynor---------	Limited		Limited		Very limited		Limited		Very limited	
	slope	0.76	slope	0.76	slope	1.00	slope	0.63	small stones	1.00
	(limited)		(limited)		(very limited)		(limited)		(very limited)	
			shrink-swell	0.14					droughty	0.75
			(slightly limited)						(limited)	
									slope	0.63
									(limited)	
73076:										
Mano-----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	0.45	wetness	1.00					small stones	1.00
	(moderately limited)		(very limited)						(very limited)	
			shrink-swell	0.50					too acid	0.30
			(moderately limited)						(slightly limited)	
Ocie-----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	shrink-swell	1.00	slope	1.00	slope	1.00	low strength	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	wetness	1.00	shrink-swell	1.00	slope	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	0.45	shrink-swell	0.71			shrink-swell	1.00		
	(moderately limited)		(limited)				(very limited)			

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73077:										
Eudy	Very limited		Very limited		Very limited		Very limited		Limited	
	wetness	1.00	hard bedrock <40"	1.00	shrink-swell	1.00	low strength	1.00	wetness	0.86
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	shrink-swell	1.00	wetness	1.00	wetness	0.86	shrink-swell	1.00	small stones	0.33
	(very limited)		(very limited)		(limited)		(very limited)		(moderately limited)	
	depth to bedrock	0.25	shrink-swell	1.00	slope	0.45	wetness	0.86	depth to bedrock	0.13
	(slightly limited)		(very limited)		(moderately limited)		(limited)		(slightly limited)	
73080:										
Alred	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	low strength	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	shrink-swell	0.15	shrink-swell	0.45	slope	1.00	too acid	0.12
	(moderately limited)		(slightly limited)		(moderately limited)		(very limited)		(slightly limited)	
	large stones	0.01	large stones	0.01	large stones	0.01	shrink-swell	0.45	droughty	0.02
	(slightly limited)		(slightly limited)		(slightly limited)		(moderately limited)		(slightly limited)	
Bardley	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	hard bedrock <40"	1.00	slope	1.00	low strength	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.53	slope	1.00	depth to bedrock	0.53	slope	1.00	large stones	0.99
	(moderately limited)		(very limited)		(moderately limited)		(very limited)		(limited)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	depth to bedrock	0.53	droughty	0.72
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73081:										
Bender	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	hard bedrock <40"	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.81	slope	1.00	large stones	0.81	large stones	0.81	droughty	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	depth to bedrock	0.46	large stones	0.81	depth to bedrock	0.46	depth to bedrock	0.46	large stones >30%	1.00
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
Alred	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	low strength	1.00	large stones >30%	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	shrink-swell	0.15	shrink-swell	0.45	slope	1.00	slope	1.00
	(moderately limited)		(slightly limited)		(moderately limited)		(very limited)		(very limited)	
	large stones	0.01	large stones	0.01	large stones	0.01	shrink-swell	0.45	small stones	0.21
	(slightly limited)		(slightly limited)		(slightly limited)		(moderately limited)		(slightly limited)	
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73087:										
Celt	Very limited wetness (very limited)	1.00	Very limited wetness (very limited) shrink-swell (limited)	1.00 0.77	Very limited wetness (very limited)	1.00	Very limited wetness (very limited)	1.00	Very limited wetness (very limited) too acid (slightly limited)	1.00 0.18
73159:										
Yelton	Limited wetness (limited)	0.93	Very limited wetness (very limited) shrink-swell (slightly limited)	1.00 0.12	Moderately limited wetness (moderately limited) slope (moderately limited)	0.56 0.45	Moderately limited wetness (moderately limited)	0.56	Moderately limited wetness (moderately limited)	0.56
73176:										
Bendavis	Limited slope (limited) depth to bedrock (moderately limited) wetness (moderately limited)	0.76 0.59 0.45	Very limited hard bedrock <40" (very limited) wetness (very limited) slope (limited)	1.00 1.00 0.76	Very limited slope (very limited) depth to bedrock (moderately limited)	1.00 0.59	Limited slope (limited) depth to bedrock (moderately limited)	0.63 0.59	Very limited small stones (very limited) slope (limited) depth to bedrock (moderately limited)	1.00 0.63 0.58
Poynor	Limited slope (limited) shrink-swell (moderately limited)	0.76 0.45	Limited slope (limited) shrink-swell (moderately limited)	0.76 0.32	Very limited slope (very limited) shrink-swell (moderately limited)	1.00 0.45	Very limited low strength (very limited) slope (limited) shrink-swell (moderately limited)	1.00 0.63 0.45	Very limited small stones (limited) slope (limited) too acid (slightly limited)	1.00 0.63 0.30
73197:										
Viburnum	Limited wetness (limited) shrink-swell (moderately limited)	0.99 0.45	Very limited wetness (very limited) shrink-swell (moderately limited)	1.00 0.45	Limited wetness (limited) shrink-swell (moderately limited) slope (slightly limited)	0.61 0.45 0.15	Limited wetness (limited) shrink-swell (moderately limited)	0.61 0.45	Limited wetness (limited)	0.61

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73198:										
Gressy	Not limited		Slightly limited shrink-swell (slightly limited)	0.18	Slightly limited slope (slightly limited)	0.15	Slightly limited low strength (slightly limited)	0.22	Not limited	
Viraton	Moderately limited wetness (moderately limited)	0.59	Very limited wetness (very limited) shrink-swell (slightly limited)	1.00 0.20	Slightly limited wetness (slightly limited) slope (slightly limited)	0.28 0.15	Slightly limited wetness (slightly limited)	0.28	Moderately limited too acid (moderately limited) wetness (slightly limited)	0.42 0.28
73199:										
Moko	Very limited hard bedrock <20" (very limited) large stones (limited) slope (moderately limited)	1.00 0.99 0.45	Very limited hard bedrock <40" (very limited) large stones (limited) slope (moderately limited)	1.00 0.99 0.45	Very limited hard bedrock <20" (very limited) slope (very limited) large stones (limited)	1.00 1.00 0.99	Very limited hard bedrock <20" (very limited) large stones (limited) low strength (slightly limited)	1.00 0.99 0.22	Very limited large stones >30% (very limited) shallow to bedrock (very limited) droughty (very limited)	1.00 1.00 1.00
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor	Limited slope (limited)	0.76	Limited slope (limited) shrink-swell (slightly limited)	0.76 0.14	Very limited slope (very limited)	1.00	Limited slope (limited)	0.63	Very limited small stones (very limited) slope (limited) droughty (moderately limited)	1.00 0.63 0.57
73221:										
Poynor	Limited slope (limited)	0.99	Limited slope (limited) shrink-swell (slightly limited)	0.99 0.14	Very limited slope (very limited)	1.00	Very limited slope (very limited)	1.00	Very limited small stones (very limited) slope (very limited) too acid (limited)	1.00 1.00 0.61

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73222:										
Splitlimb------	Very limited		Very limited		Very limited		Very limited		Very limited	
	ponded	1.00	ponded	1.00	ponded (wetness)	1.00	low strength	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	0.85	wetness	1.00	wetness	0.49	ponded (wetness)	1.00	wetness	0.49
	(limited)		(very limited)		(moderately limited)		(very limited)		(moderately limited)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	wetness	0.49		
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)			
73223:										
Coulstone------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
									small stones	1.00
									(very limited)	
									droughty	1.00
									(very limited)	
Bender---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	hard bedrock <40"	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.76	slope	1.00	large stones	0.76	large stones	0.76	droughty	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	depth to bedrock	0.46	large stones	0.76	depth to bedrock	0.46	depth to bedrock	0.46	large stones >30%	1.00
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
73224:										
Moko----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	hard bedrock <20"	1.00	hard bedrock <40"	1.00	hard bedrock <20"	1.00	hard bedrock <20"	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	shallow to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.86	large stones	0.86	large stones	0.86	large stones	0.86	droughty	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74626:										
Tanglenook-----	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	flooding	1.00	flooding	1.00	low strength	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	1.00	wetness	1.00	wetness	1.00	wetness	1.00		
	(very limited)		(very limited)		(very limited)		(very limited)			
	shrink-swell	1.00	shrink-swell	1.00	shrink-swell	1.00	shrink-swell	1.00		
	(very limited)		(very limited)		(very limited)		(very limited)			
74627:										
Hartville------	Very limited		Very limited		Very limited		Very limited		Slightly limited	
	flooding	1.00	flooding	1.00	flooding	1.00	low strength	1.00	wetness	0.28
	(very limited)		(very limited)		(very limited)		(very limited)		(slightly limited)	
	shrink-swell	1.00	wetness	1.00	shrink-swell	1.00	shrink-swell	1.00		
	(very limited)		(very limited)		(very limited)		(very limited)			
	wetness	0.59	shrink-swell	1.00	wetness	0.28	flooding (rare)	0.90		
	(moderately limited)		(very limited)		(slightly limited)		(limited)			
74629:										
Raftville------	Very limited		Very limited		Very limited		Limited		Limited	
	flooding	1.00	hard bedrock <40"	1.00	flooding	1.00	flooding (rare)	0.90	depth to bedrock	0.66
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	depth to bedrock	0.66	flooding	1.00	depth to bedrock	0.66	depth to bedrock	0.66	droughty	0.23
	(limited)		(very limited)		(limited)		(limited)		(slightly limited)	
					slope	0.45			too acid	0.18
					(moderately limited)				(slightly limited)	
74636:										
Lecoma---------	Moderately limited		Moderately limited		Limited		Moderately limited		Not limited	
	shrink-swell	0.45	shrink-swell	0.45	slope	0.68	shrink-swell	0.45		
	(moderately limited)		(moderately limited)		(limited)		(moderately limited)			
					shrink-swell	0.45	low strength	0.22		
					(moderately limited)		(slightly limited)			
74637:										
Lecoma---------	Moderately limited		Moderately limited		Very limited		Moderately limited		Slightly limited	
	slope	0.60	slope	0.60	slope	1.00	shrink-swell	0.45	slope	0.16
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)		(slightly limited)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	slope	0.16		
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)			

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74677:										
Deible	Very limited wetness (very limited) flooding (very limited) shrink-swell (very limited)	1.00 1.00 1.00	Very limited flooding (very limited) wetness (very limited) shrink-swell (very limited)	1.00 1.00 1.00	Very limited flooding (very limited) wetness (very limited) shrink-swell (very limited)	1.00 1.00 1.00	Very limited wetness (very limited) shrink-swell (very limited) flooding (rare) (limited)	1.00 1.00 0.90	Very limited wetness (very limited)	1.00
74679:										
Higdon	Very limited flooding (very limited) wetness (limited) shrink-swell (moderately limited)	1.00 0.99 0.45	Very limited flooding (very limited) wetness (very limited) shrink-swell (slightly limited)	1.00 1.00 0.23	Very limited flooding (very limited) wetness (limited) shrink-swell (moderately limited)	1.00 0.61 0.45	Very limited low strength (very limited) flooding (rare) (limited) wetness (limited)	1.00 0.90 0.61	Limited wetness (limited)	0.61
75381:										
Bearthicket	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited low strength (very limited) flooding (rare) (limited)	1.00 0.90	Not limited	
75382:										
Cedargap	Very limited flooding (very limited)	1.00	Very limited flooding (very limited) wetness (slightly limited)	1.00 0.16	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited) small stones (moderately limited)	1.00 0.48
75388:										
Kaintuck	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00
Relfe	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited) droughty (very limited) small stones (very limited)	1.00 1.00 1.00

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75389:										
Dunning	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	flooding	1.00	flooding	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	1.00	wetness	1.00	wetness	1.00	flooding	1.00	flooding	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	1.00	shrink-swell	0.65	shrink-swell	1.00	shrink-swell	1.00		
	(very limited)		(limited)		(very limited)		(very limited)			
Hercules	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	flooding	1.00	flooding	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	1.00	wetness	1.00	wetness	1.00	flooding	1.00	flooding	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	large stones	0.99
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
75390:										
Razort	Very limited		Very limited		Very limited		Limited		Not limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding (rare)	0.90		
	(very limited)		(very limited)		(very limited)		(limited)			
75391:										
Possumtrot	Very limited		Very limited		Very limited		Very limited		Moderately limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	flooding	0.60
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
									too acid	0.54
									(moderately limited)	
75392:										
Stultz	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	flooding	1.00	flooding	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	1.00	wetness	1.00	wetness	1.00	flooding	1.00	flooding	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	depth to bedrock	0.82	shrink-swell	0.45	shrink-swell	0.45	droughty	0.16
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(slightly limited)	
75406:										
Racket	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	shrink-swell	0.20	shrink-swell	0.45	low strength	0.78		
	(moderately limited)		(slightly limited)		(moderately limited)		(limited)			
			wetness	0.16			shrink-swell	0.45		
			(slightly limited)				(moderately limited)			

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75417:										
Relfe	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited) droughty (very limited) small stones (very limited)	1.00 1.00
Sandbur	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00
75418:										
Tilk	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Limited flooding (rare) (limited)	0.90	Very limited small stones (very limited) droughty (moderately limited) large stones (slightly limited)	1.00 0.34 0.01
75419:										
Perche	Very limited wetness (very limited) flooding (very limited)	1.00 1.00	Very limited flooding (very limited) wetness (very limited)	1.00 1.00	Very limited flooding (very limited) wetness (very limited)	1.00 1.00	Very limited wetness (very limited) flooding (very limited)	1.00 1.00	Very limited wetness (very limited) flooding (moderately limited) too acid (moderately limited)	1.00 0.60 0.54
75420:										
Secesh	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Moderately limited flooding (moderately limited)	0.60
Tilk	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited small stones (very limited) flooding (moderately limited) droughty (moderately limited)	1.00 0.60 0.34

Table 12.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings		Local roads and streets		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
99000:										
Pits, quarries-	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 13.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti	Very limited wetness (very limited) percs slowly (very limited)	 1.00 1.00 	Very limited wetness (very limited) slope (limited) seepage (moderately limited)	 1.00 0.91 0.50 	Limited wetness (limited) too clayey (limited) too acid (moderately limited)	 0.99 0.90 0.54 	Limited wetness (limited)	 0.80 	Very limited small stones >35% (very limited) too clayey (limited) too acid (moderately limited)	 1.00 0.79 0.54
70025:										
Branson	Moderately limited percs slowly (moderately limited)	 0.45 	Limited seepage (limited)	 0.68 	Moderately limited too acid (moderately limited) too clayey (slightly limited)	 0.42 0.19 	Not limited		Moderately limited too acid (moderately limited) too clayey (slightly limited)	 0.42 0.06
Splitlimb	Very limited wetness (very limited) percs slowly (moderately limited)	 1.00 0.45 	Very limited wetness (very limited) seepage (moderately limited)	 1.00 0.32 	Very limited wetness (very limited) too acid (moderately limited) too clayey (slightly limited)	 1.00 0.48 0.04 	Limited wetness (limited)	 0.90 	Moderately limited wetness (moderately limited) too acid (moderately limited)	 0.55 0.48
70026:										
Tonti	Very limited wetness (very limited) percs slowly (very limited)	 1.00 1.00 	Very limited wetness (very limited) seepage (moderately limited)	 1.00 0.50 	Limited wetness (limited) too clayey (limited) too acid (moderately limited)	 0.99 0.96 0.54 	Limited wetness (limited)	 0.80 	Limited small stones (limited) too clayey (limited) hard to pack (limited)	 1.00 0.91 0.70
73000:										
Pomme	Slightly limited percs slowly (slightly limited)	 0.25 	Moderately limited seepage (moderately limited) slope (moderately limited)	 0.50 0.31 	Very limited too clayey (very limited) too acid (slightly limited)	 1.00 0.18 	Not limited		Very limited too clayey (very limited) too acid (slightly limited)	 1.00 0.18

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73013:										
Lowassie-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	ponded (wetness)	1.00	wetness	1.00	ponded (wetness)	1.00	wetness	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	ponded (wetness)	1.00	wetness	1.00	ponded (wetness)	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.93			too clayey	0.80			too clayey	0.60
	(limited)				(limited)				(moderately limited)	
73017:										
Bendavis-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	depth to bedrock	1.00	slope	1.00	slope	1.00	depth to bedrock	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	wetness	1.00	depth to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	depth to bedrock	1.00	wetness	0.79	wetness	0.61	small stones >35%	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
Poynor---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.25	seepage	0.50	too clayey	1.00			too clayey	1.00
	(slightly limited)		(moderately limited)		(very limited)				(very limited)	
					too acid	0.36			hard to pack	0.70
					(moderately limited)				(limited)	
73019:										
Poynor---------	Slightly limited		Limited		Limited		Not limited		Limited	
	percs slowly	0.25	slope	0.91	too clayey	1.00			too clayey	0.99
	(slightly limited)		(limited)		(limited)				(limited)	
			seepage	0.50	too acid	0.76			too acid	0.76
			(moderately limited)		(limited)				(limited)	
									hard to pack	0.70
									(limited)	
73021:										
Poynor---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.25	seepage	0.50	too clayey	1.00			too clayey	1.00
	(slightly limited)		(moderately limited)		(very limited)				(very limited)	
					too acid	0.36			hard to pack	0.70
					(moderately limited)				(limited)	

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73023:										
Mano	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	wetness	1.00	too clayey	1.00	wetness	0.61	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.93	slope	0.66	wetness	0.79			hard to pack	0.70
	(limited)		(limited)		(limited)				(limited)	
			seepage	0.50					wetness	0.40
			(moderately limited)						(moderately limited)	
Ocie	Very limited		Very limited		Very limited		Limited		Very limited	
	percs slowly	1.00	wetness	1.00	depth to bedrock	1.00	wetness	0.61	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	wetness	1.00	slope	0.66	too clayey	1.00	depth to bedrock	0.25	hard to pack	0.70
	(very limited)		(limited)		(very limited)		(slightly limited)		(limited)	
	depth to bedrock	0.42	seepage	0.50	wetness	0.79			wetness	0.40
	(moderately limited)		(moderately limited)		(limited)				(moderately limited)	
73024:										
Mano	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	slope	1.00	too clayey	1.00	slope	0.63	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.93	wetness	1.00	wetness	0.79	wetness	0.61	hard to pack	0.70
	(limited)		(very limited)		(limited)		(limited)		(limited)	
	slope	0.63	seepage	0.50	slope	0.63			slope	0.63
	(limited)		(moderately limited)		(limited)				(limited)	
Ocie	Very limited		Very limited		Very limited		Limited		Very limited	
	percs slowly	1.00	slope	1.00	depth to bedrock	1.00	slope	0.63	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	wetness	1.00	wetness	1.00	too clayey	1.00	wetness	0.61	hard to pack	0.70
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	slope	0.63	seepage	0.50	wetness	0.79	depth to bedrock	0.25	slope	0.63
	(limited)		(moderately limited)		(limited)		(slightly limited)		(limited)	
73032:										
Gatewood	Very limited		Very limited		Very limited		Very limited		Very limited	
	depth to bedrock	1.00	wetness	1.00	depth to bedrock	1.00	depth to bedrock	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	depth to bedrock	1.00	too clayey	1.00	wetness	0.69	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	slope	0.04	slope	1.00	wetness	0.89	slope	0.04	hard to pack	0.70
	(slightly limited)		(very limited)		(limited)		(slightly limited)		(limited)	

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73033:										
Gatewood	Very limited depth to bedrock (very limited) slope (very limited) wetness (very limited)	 1.00 1.00 1.00	Very limited slope (very limited) wetness (very limited) depth to bedrock (very limited)	 1.00 1.00 1.00	Very limited slope (very limited) depth to bedrock (very limited) too clayey (very limited)	 1.00 1.00 1.00	Very limited depth to bedrock (very limited) slope (very limited) wetness (limited)	 1.00 1.00 0.69	Very limited depth to bedrock (very limited) slope (very limited) too clayey (very limited)	 1.00 1.00 1.00
73051:										
Winnipeg	Slightly limited percs slowly (slightly limited)	 0.25	Moderately limited seepage (moderately limited)	 0.50	Limited too clayey (limited)	 0.76	Not limited		Moderately limited too clayey (moderately limited)	 0.54
73052:										
Lily	Very limited depth to bedrock (very limited)	 1.00	Very limited depth to bedrock (very limited) seepage (very limited) slope (limited)	 1.00 1.00 0.91	Very limited depth to bedrock (very limited) seepage (limited) too acid (slightly limited)	 1.00 0.79 0.12	Very limited depth to bedrock (very limited) seepage (limited)	 1.00 0.75	Very limited depth to bedrock (very limited) seepage (moderately limited) too acid (slightly limited)	 1.00 0.50 0.12
73053:										
Lily	Very limited depth to bedrock (very limited)	 1.00	Very limited depth to bedrock (very limited) seepage (very limited) slope (very limited)	 1.00 1.00 1.00	Very limited depth to bedrock (very limited) seepage (limited) too acid (slightly limited)	 1.00 0.79 0.12	Very limited depth to bedrock (very limited) seepage (limited)	 1.00 0.75	Very limited depth to bedrock (very limited) seepage (moderately limited) too acid (slightly limited)	 1.00 0.50 0.12
Bender	Very limited depth to bedrock (very limited) large stones (slightly limited)	 1.00 0.09	Very limited depth to bedrock (very limited) seepage (very limited) slope (very limited)	 1.00 1.00 1.00	Very limited depth to bedrock (very limited) seepage (limited) too acid (slightly limited)	 1.00 0.79 0.24	Very limited depth to bedrock (very limited) seepage (limited)	 1.00 0.75	Very limited depth to bedrock (very limited) small stones (limited) seepage (moderately limited)	 1.00 0.80 0.50

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73054:										
Viburnum-------	Very limited		Very limited		Very limited		Limited		Limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.93	small stones	0.98
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	percs slowly	0.71	seepage	0.50	too clayey	0.90			too clayey	0.79
	(limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.76			too acid	0.76
					(limited)				(limited)	
73056:										
Viburnum-------	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	slope	1.00	wetness	1.00	wetness	0.99	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.99	wetness	1.00	too clayey	1.00	slope	0.63	slope	0.63
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	slope	0.63	seepage	0.50	slope	0.63			wetness	0.60
	(limited)		(moderately limited)		(limited)				(moderately limited)	
73057:										
Jerktail-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.93	depth to bedrock	0.22	depth to bedrock	1.00			wetness	0.86
	(limited)		(slightly limited)		(very limited)				(limited)	
	depth to bedrock	0.22			too clayey	1.00			small stones	0.26
	(slightly limited)				(very limited)				(slightly limited)	
73058:										
Gunlock--------	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.96	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.93	slope	0.91	too clayey	1.00			hard to pack	0.70
	(limited)		(limited)		(very limited)				(limited)	
									wetness	0.59
									(moderately limited)	
73063:										
Bendavis-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	depth to bedrock	1.00	wetness	1.00	depth to bedrock	1.00	depth to bedrock	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	depth to bedrock	1.00	wetness	0.79	wetness	0.61	small stones	0.98
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	0.10	seepage	0.92	too acid	0.30			wetness	0.40
	(slightly limited)		(limited)		(slightly limited)				(moderately limited)	

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73063:										
Poynor	Slightly limited percs slowly (slightly limited)	0.25	Limited slope (limited) seepage (moderately limited)	0.66 0.50	Limited too clayey (limited) too acid (limited)	1.00 0.76	Not limited		Limited too clayey (limited) too acid (limited) hard to pack (limited)	0.99 0.76 0.70
73066:										
Bender	Very limited depth to bedrock (very limited) large stones (limited)	1.00 0.79	Very limited depth to bedrock (very limited) seepage (very limited) slope (very limited)	1.00 1.00 1.00	Very limited depth to bedrock (very limited) seepage (very limited) too acid (moderately limited)	1.00 1.00 0.42	Very limited depth to bedrock (very limited) seepage (very limited)	1.00 1.00	Very limited seepage (very limited) depth to bedrock (very limited) large stones (limited)	1.00 1.00 0.64
73067:										
Bender	Very limited depth to bedrock (very limited) slope (very limited) large stones (moderately limited)	1.00 1.00 0.47	Very limited slope (very limited) depth to bedrock (very limited) seepage (very limited)	1.00 1.00 1.00	Very limited slope (very limited) depth to bedrock (very limited) seepage (limited)	1.00 1.00 0.79	Very limited depth to bedrock (very limited) slope (very limited) seepage (limited)	1.00 1.00 0.75	Very limited depth to bedrock (very limited) slope (very limited) seepage (moderately limited)	1.00 1.00 0.50
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick	Limited percs slowly (limited) slope (limited)	0.99 0.63	Very limited slope (very limited)	1.00 	Very limited too clayey (very limited) slope (limited) too acid (moderately limited)	1.00 0.63 0.48	Limited slope (limited)	0.63	Very limited too clayey (very limited) slope (limited) too acid (moderately limited)	1.00 0.63 0.48
73069:										
Tick	Very limited slope (very limited) percs slowly (limited)	1.00 0.99	Very limited slope (very limited)	1.00 	Very limited slope (very limited) too clayey (very limited) too acid (moderately limited)	1.00 1.00 0.48	Very limited slope (very limited)	1.00 	Very limited slope (very limited) too clayey (very limited) too acid (moderately limited)	1.00 1.00 0.48

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73071:										
Hogcreek-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	percs slowly	1.00	wetness	1.00	wetness	1.00	wetness	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	1.00	depth to bedrock	1.00	depth to bedrock	1.00			wetness	0.73
	(very limited)		(very limited)		(very limited)				(limited)	
	wetness	1.00	seepage	0.68						
	(very limited)		(limited)							
73072:										
Hogcreek-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	percs slowly	1.00	wetness	1.00	wetness	1.00	depth to bedrock	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	1.00	depth to bedrock	1.00	depth to bedrock	1.00	wetness	1.00	wetness	0.73
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	slope	0.91						
	(very limited)		(limited)							
73073:										
Scholten-------	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	slope	1.00	wetness	1.00	wetness	0.96	small stones >35%	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	1.00	wetness	1.00	too clayey	0.88	slope	0.63	too clayey	0.76
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	slope	0.63	seepage	0.68	slope	0.63			hard to pack	0.70
	(limited)		(limited)		(limited)				(limited)	
Poynor---------	Limited		Very limited		Very limited		Limited		Very limited	
	percs slowly	0.75	slope	1.00	too clayey	1.00	slope	0.63	too clayey	1.00
	(limited)		(very limited)		(very limited)		(limited)		(very limited)	
	slope	0.63	seepage	0.50	slope	0.63			hard to pack	0.70
	(limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.42			slope	0.63
					(moderately limited)				(limited)	
73076:										
Mano----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	wetness	1.00	too clayey	1.00	wetness	0.61	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.93	seepage	0.50	wetness	0.79			hard to pack	0.70
	(limited)		(moderately limited)		(limited)				(limited)	

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73076:										
Ocie	Very limited percs slowly (very limited) slope (very limited) wetness (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) wetness (very limited) seepage (moderately limited)	 1.00 1.00 0.50 	Very limited slope (very limited) depth to bedrock (very limited) too clayey (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) wetness (limited) depth to bedrock (slightly limited)	 1.00 0.61 0.25 	Very limited slope (very limited) too clayey (very limited) hard to pack (limited)	 1.00 1.00 0.70
73077:										
Eudy	Very limited depth to bedrock (very limited) wetness (very limited) percs slowly (limited)	 1.00 1.00 0.93 	Very limited wetness (very limited) depth to bedrock (very limited) slope (limited)	 1.00 1.00 0.66 	Very limited wetness (very limited) depth to bedrock (very limited) too clayey (very limited)	 1.00 1.00 1.00 	Very limited depth to bedrock (very limited) wetness (very limited)	 1.00 1.00 	Very limited depth to bedrock (very limited) too clayey (very limited) wetness (limited)	 1.00 1.00 0.86
73080:										
Alred	Very limited slope (very limited) percs slowly (limited) large stones (slightly limited)	 1.00 0.93 0.01 	Very limited slope (very limited) large stones (slightly limited)	 1.00 0.04 	Very limited slope (very limited) too clayey (very limited)	 1.00 1.00 	Very limited slope (very limited)	 1.00 	Very limited slope (very limited) too clayey (very limited) hard to pack (limited)	 1.00 1.00 0.70
Bardley	Very limited depth to bedrock (very limited) slope (very limited) percs slowly (limited)	 1.00 1.00 0.93 	Very limited slope (very limited) depth to bedrock (very limited)	 1.00 1.00 	Very limited slope (very limited) depth to bedrock (very limited) too clayey (very limited)	 1.00 1.00 1.00 	Very limited depth to bedrock (very limited) slope (very limited)	 1.00 1.00 	Very limited depth to bedrock (very limited) slope (very limited) too clayey (very limited)	 1.00 1.00 1.00
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73081:										
Bender	Very limited depth to bedrock (very limited) slope (very limited) large stones (limited)	 1.00 1.00 0.81 	Very limited slope (very limited) depth to bedrock (very limited) seepage (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) depth to bedrock (very limited) seepage (limited)	 1.00 1.00 0.96 	Very limited depth to bedrock (very limited) slope (very limited) seepage (limited)	 1.00 1.00 0.97 	Very limited depth to bedrock (very limited) slope (very limited) seepage (limited)	 1.00 1.00 0.99

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73081:										
Alred----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.93	large stones	0.08	too clayey	1.00			too clayey	1.00
	(limited)		(slightly limited)		(very limited)				(very limited)	
	large stones	0.01							hard to pack	0.70
	(slightly limited)								(limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73087:										
Celt----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00			too clayey	1.00			too clayey	1.00
	(very limited)				(very limited)				(very limited)	
					too acid	0.48			hard to pack	0.70
					(moderately limited)				(limited)	
73159:										
Yelton---------	Very limited		Very limited		Very limited		Limited		Moderately limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.96	wetness	0.59
	(very limited)		(very limited)		(very limited)		(limited)		(moderately limited)	
	percs slowly	0.93	slope	0.66	too acid	0.30			too acid	0.30
	(limited)		(limited)		(slightly limited)				(slightly limited)	
					too clayey	0.10				
					(slightly limited)					
73176:										
Bendavis-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	depth to bedrock	1.00	slope	1.00	depth to bedrock	1.00	depth to bedrock	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	wetness	1.00	wetness	0.79	slope	0.63	small stones >35%	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
	slope	0.63	depth to bedrock	1.00	slope	0.63	wetness	0.61	slope	0.63
	(limited)		(very limited)		(limited)		(limited)		(limited)	
Poynor---------	Limited		Very limited		Very limited		Limited		Very limited	
	slope	0.63	slope	1.00	too clayey	1.00	slope	0.63	too clayey	1.00
	(limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.25	seepage	0.50	slope	0.63			hard to pack	0.70
	(slightly limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.36			slope	0.63
					(moderately limited)				(limited)	

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73197:										
Viburnum	Very limited		Very limited		Very limited		Limited		Limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.99	small stones	0.98
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	percs slowly	0.71	slope	0.31	too clayey	0.90			too clayey	0.79
	(limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.76			too acid	0.76
					(limited)				(limited)	
73198:										
Gressy	Limited		Limited		Very limited		Not limited		Very limited	
	percs slowly	0.93	seepage	0.98	too clayey	1.00			too clayey	1.00
	(limited)		(limited)		(very limited)				(very limited)	
			slope	0.31	too acid	0.06			too acid	0.06
			(moderately limited)		(slightly limited)				(slightly limited)	
									small stones	0.01
									(slightly limited)	
Viraton	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	wetness	1.00	too clayey	1.00	wetness	0.80	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	1.00	seepage	0.50	wetness	0.99			small stones	0.51
	(very limited)		(moderately limited)		(limited)				(moderately limited)	
			slope	0.31	too acid	0.48			wetness	0.50
			(moderately limited)		(moderately limited)				(moderately limited)	
73199:										
Moko	Very limited		Very limited		Very limited		Very limited		Very limited	
	depth to bedrock	1.00	depth to bedrock	1.00	depth to bedrock	1.00	depth to bedrock	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.99	slope	1.00	slope	0.04	slope	0.04	large stones	0.99
	(limited)		(very limited)		(slightly limited)		(slightly limited)		(limited)	
	slope	0.04	large stones	0.81					small stones	0.50
	(slightly limited)		(limited)						(moderately limited)	
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor	Limited		Very limited		Very limited		Limited		Very limited	
	percs slowly	0.75	slope	1.00	too clayey	1.00	slope	0.63	too clayey	1.00
	(limited)		(very limited)		(very limited)		(limited)		(very limited)	
	slope	0.63	seepage	0.50	slope	0.63			hard to pack	0.70
	(limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.42			slope	0.63
					(moderately limited)				(limited)	

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73221:										
Poynor	Very limited slope (very limited) percs slowly (limited)	 1.00 0.75	Very limited slope (very limited) seepage (moderately limited)	 1.00 0.50	Very limited too clayey (very limited) slope (very limited) too acid (moderately limited)	 1.00 1.00 0.36	Very limited slope (very limited)	 1.00	Very limited too clayey (very limited) slope (very limited) hard to pack (limited)	 1.00 1.00 0.70
73222:										
Splitlimb	Very limited ponded (wetness) (very limited) wetness (very limited) percs slowly (limited)	 1.00 1.00 0.71	Very limited wetness (very limited) ponded (wetness) (very limited) seepage (moderately limited)	 1.00 1.00 0.32	Very limited ponded (wetness) (very limited) wetness (very limited) too acid (moderately limited)	 1.00 1.00 0.48	Very limited ponded (wetness) (very limited) wetness (limited)	 1.00 0.93	Very limited ponded (wetness) (very limited) wetness (moderately limited) too acid (moderately limited)	 1.00 0.57 0.48
73223:										
Coulstone	Very limited slope (very limited)	 1.00	Very limited slope (very limited) seepage (very limited)	 1.00 1.00	Very limited slope (very limited) seepage (limited) too acid (slightly limited)	 1.00 0.67 0.18	Very limited slope (very limited) seepage (limited)	 1.00 0.79	Very limited slope (very limited) small stones >35% (very limited) too acid (slightly limited)	 1.00 1.00 0.18
Bender	Very limited depth to bedrock (very limited) slope (very limited) large stones (limited)	 1.00 1.00 0.76	Very limited slope (very limited) depth to bedrock (very limited) seepage (very limited)	 1.00 1.00 1.00	Very limited slope (very limited) depth to bedrock (very limited) seepage (limited)	 1.00 1.00 0.96	Very limited depth to bedrock (very limited) slope (very limited) seepage (limited)	 1.00 1.00 0.97	Very limited depth to bedrock (very limited) slope (very limited) seepage (limited)	 1.00 1.00 0.99

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73224:										
Moko	Very limited		Very limited		Very limited		Very limited		Very limited	
	depth to bedrock (very limited)	1.00	slope (very limited)	1.00	slope (very limited)	1.00	depth to bedrock (very limited)	1.00	depth to bedrock (very limited)	1.00
	slope (very limited)	1.00	depth to bedrock (very limited)	1.00	depth to bedrock (very limited)	1.00	slope (very limited)	1.00	slope (very limited)	1.00
	large stones (limited)	0.86	large stones (moderately limited)	0.50					large stones (limited)	0.77
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
74626:										
Tanglenook	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness (very limited)	1.00	wetness (very limited)	1.00	wetness (very limited)	1.00	wetness (very limited)	1.00	wetness (very limited)	1.00
	percs slowly (limited)	0.93			too clayey (limited)	0.84	flooding (rare) (moderately limited)	0.60	hard to pack (limited)	0.70
	flooding (rare) (moderately limited)	0.60			flooding (rare) (moderately limited)	0.60			too clayey (limited)	0.68
74627:										
Hartville	Very limited		Very limited		Limited		Limited		Moderately limited	
	wetness (very limited)	1.00	wetness (very limited)	1.00	wetness (limited)	0.99	wetness (limited)	0.80	wetness (moderately limited)	0.50
	percs slowly (limited)	0.93			too clayey (limited)	0.62	flooding (rare) (moderately limited)	0.60	too clayey (moderately limited)	0.33
	flooding (rare) (moderately limited)	0.60			flooding (rare) (moderately limited)	0.60				
74629:										
Raftville	Very limited		Very limited		Very limited		Very limited		Very limited	
	depth to bedrock (very limited)	1.00	depth to bedrock (very limited)	1.00	depth to bedrock (very limited)	1.00	depth to bedrock (very limited)	1.00	depth to bedrock (very limited)	1.00
	flooding (rare) (moderately limited)	0.60	seepage (very limited)	1.00	seepage (limited)	0.79	seepage (limited)	0.75	seepage (moderately limited)	0.50
			slope (limited)	0.66	flooding (rare) (moderately limited)	0.60	flooding (rare) (moderately limited)	0.60	too acid (moderately limited)	0.36
74636:										
Lecoma	Slightly limited		Limited		Slightly limited		Not limited		Slightly limited	
	percs slowly (slightly limited)	0.25	slope (limited)	0.91	too acid (slightly limited)	0.12			too acid (slightly limited)	0.12
			seepage (moderately limited)	0.50	too clayey (slightly limited)	0.02				

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74637:										
Lecoma	Slightly limited percs slowly (slightly limited) slope (slightly limited)	 0.25 0.16 	Very limited slope (very limited) seepage (moderately limited)	 1.00 0.50 	Slightly limited slope (slightly limited) too acid (slightly limited) too clayey (slightly limited)	 0.16 0.12 0.02	Slightly limited slope (slightly limited)	 0.16 	Slightly limited slope (slightly limited) too acid (slightly limited)	 0.16 0.12
74677:										
Deible	Very limited wetness (very limited) percs slowly (limited) flooding (rare) (moderately limited)	 1.00 0.98 0.60	Very limited wetness (very limited)	 1.00 	Very limited wetness (very limited) too clayey (limited) flooding (rare) (moderately limited)	 1.00 0.80 0.60	Very limited wetness (very limited) flooding (rare) (moderately limited)	 1.00 0.60	Very limited wetness (very limited) hard to pack (limited) too clayey (moderately limited)	 1.00 0.70 0.60
74679:										
Higdon	Very limited wetness (very limited) flooding (rare) (moderately limited) percs slowly (moderately limited)	 1.00 0.60 0.45	Very limited wetness (very limited) seepage (moderately limited)	 1.00 0.32 	Very limited wetness (very limited) flooding (rare) (moderately limited)	 1.00 0.60 	Limited wetness (limited) flooding (rare) (moderately limited)	 0.99 0.60 	Moderately limited wetness (moderately limited)	 0.60
75381:										
Bearthicket	Moderately limited flooding (rare) (moderately limited) percs slowly (slightly limited)	 0.60 0.25 	Moderately limited seepage (moderately limited)	 0.50 	Moderately limited flooding (rare) (moderately limited)	 0.60 	Moderately limited flooding (rare) (moderately limited)	 0.60 	Not limited	
75382:										
Cedargap	Very limited flooding (very limited) wetness (moderately limited) percs slowly (slightly limited)	 1.00 0.31 0.25	Very limited flooding (very limited) seepage (moderately limited)	 1.00 0.50 	Very limited flooding (very limited) wetness (slightly limited) too clayey (slightly limited)	 1.00 0.15 0.07	Very limited flooding (very limited)	 1.00 	Very limited small stones >35% (very limited)	 1.00

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75388:										
Kaintuck	Very limited flooding (very limited)	1.00	Very limited flooding (very limited) seepage (very limited)	1.00 1.00	Very limited flooding (very limited) too sandy (very limited) seepage (limited)	1.00 1.00 0.79	Very limited flooding (very limited) seepage (limited)	1.00 0.75	Very limited too sandy (very limited) seepage (moderately limited)	1.00 0.50
Relfe	Very limited flooding (very limited)	1.00	Very limited flooding (very limited) seepage (very limited)	1.00 1.00	Very limited flooding (very limited) seepage (very limited) too sandy (moderately limited)	1.00 1.00 0.60	Very limited flooding (very limited) seepage (very limited)	1.00 1.00	Very limited seepage (very limited) small stones >35% (very limited) too sandy (moderately limited)	1.00 1.00 0.60
75389:										
Dunning	Very limited wetness (very limited) flooding (very limited) percs slowly (very limited)	1.00 1.00 1.00	Very limited flooding (very limited) wetness (very limited) seepage (moderately limited)	1.00 1.00 0.50	Very limited wetness (very limited) flooding (very limited) too clayey (limited)	1.00 1.00 0.68	Very limited flooding (very limited) wetness (very limited)	1.00 1.00	Very limited wetness (very limited) hard to pack (limited) too clayey (moderately limited)	1.00 0.70 0.42
Hercules	Very limited wetness (very limited) flooding (very limited) percs slowly (limited)	1.00 1.00 0.71	Very limited flooding (very limited) wetness (very limited) seepage (moderately limited)	1.00 1.00 0.50	Very limited wetness (very limited) flooding (very limited) too clayey (limited)	1.00 1.00 0.80	Very limited flooding (very limited) wetness (very limited)	1.00 1.00	Very limited wetness (very limited) small stones >35% (very limited) too clayey (moderately limited)	1.00 1.00 0.60
75390:										
Razort	Moderately limited flooding (rare) (moderately limited) percs slowly (slightly limited)	0.60 0.25	Very limited seepage (very limited)	1.00	Limited seepage (limited) flooding (rare) (moderately limited)	0.79 0.60	Limited seepage (limited) flooding (rare) (moderately limited)	0.75 0.60	Moderately limited seepage (moderately limited) small stones (slightly limited)	0.50 0.04

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75391:										
Possumtrot-----	Very limited		Very limited		Very limited		Very limited		Slightly limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	too acid	0.06
	(very limited)		(very limited)		(very limited)		(very limited)		(slightly limited)	
	percs slowly	0.30	seepage	0.50	too acid	0.06			small stones	0.02
	(slightly limited)		(moderately limited)		(slightly limited)				(slightly limited)	
75392:										
Stultz---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	flooding	1.00	wetness	1.00	flooding	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	1.00	wetness	1.00	flooding	1.00	wetness	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	depth to bedrock	0.82	depth to bedrock	0.82	depth to bedrock	1.00	depth to bedrock	0.66	depth to bedrock	0.66
	(limited)		(limited)		(very limited)		(limited)		(limited)	
75406:										
Racket---------	Very limited		Very limited		Very limited		Very limited		Moderately limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	seepage	0.50
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
	wetness	0.31	seepage	1.00	seepage	0.79	seepage	0.50	small stones	0.02
	(moderately limited)		(very limited)		(limited)		(moderately limited)		(slightly limited)	
	percs slowly	0.20			wetness	0.15				
	(slightly limited)				(slightly limited)					
75417:										
Relfe----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	seepage	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			seepage	1.00	seepage	1.00	seepage	1.00	small stones >35%	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
					too sandy	0.60			too sandy	0.60
					(moderately limited)				(moderately limited)	
Sandbur---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	too sandy	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.25	seepage	1.00	too sandy	1.00	seepage	0.75	seepage	0.50
	(slightly limited)		(very limited)		(very limited)		(limited)		(moderately limited)	

Table 13.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)		Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75418:										
Tilk	Moderately limited flooding (rare) (moderately limited)	0.60	Very limited seepage (very limited)	1.00	Limited seepage (limited) flooding (rare) (moderately limited) too acid (moderately limited)	0.99 0.60 0.36	Limited seepage (limited) flooding (rare) (moderately limited)	0.75 0.60	Very limited small stones >35% (very limited) seepage (moderately limited) too acid (moderately limited)	1.00 0.50 0.36
75419:										
Perche	Very limited wetness (very limited) flooding (very limited) percs slowly (slightly limited)	1.00 1.00 0.25	Very limited flooding (very limited) wetness (very limited) seepage (moderately limited)	1.00 1.00 0.50	Very limited wetness (very limited) flooding (very limited) too acid (slightly limited)	1.00 1.00 0.06	Very limited flooding (very limited) wetness (very limited)	1.00 1.00	Very limited wetness (very limited) too acid (slightly limited)	1.00 0.06
75420:										
Secesh	Very limited flooding (very limited) percs slowly (slightly limited)	1.00 0.25	Very limited flooding (very limited) seepage (moderately limited)	1.00 0.50	Very limited flooding (very limited) too clayey (slightly limited)	1.00 0.04	Very limited flooding (very limited)	1.00	Slightly limited small stones (slightly limited)	0.11
Tilk	Very limited flooding (very limited)	1.00	Very limited flooding (very limited) seepage (very limited)	1.00 1.00	Very limited flooding (very limited) seepage (very limited) too acid (moderately limited)	1.00 1.00 0.36	Very limited flooding (very limited) seepage (limited)	1.00 0.75	Very limited small stones >35% (very limited) seepage (moderately limited) too acid (moderately limited)	1.00 0.50 0.36
99000:										
Pits, quarries	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 14.--Construction Materials and Excavating

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti	Moderately limited wetness (moderately limited) shrink-swell (slightly limited)	 0.48 0.04	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Probable excess fines (bottom layer) probable source (thickest layer)	 0.75 0.42	Very limited small stones (very limited) dense layer <20" (very limited) area reclaim (very limited)	 1.00 1.00 1.00	Very limited dense layer <20" (very limited) wetness (very limited) cutbanks cave (very limited)	 1.00 1.00 1.00
70025:										
Branson	Very limited low strength (very limited)	 1.00	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00	Slightly limited too acid (slightly limited)	 0.12	Slightly limited cutbanks cave (slightly limited) too clayey (slightly limited)	 0.29 0.06
Splitlimb	Very limited low strength (very limited) wetness (limited) shrink-swell (moderately limited)	 1.00 0.71 0.45	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00	Limited wetness (limited) too acid (moderately limited) too clayey (moderately limited)	 0.71 0.48 0.33	Very limited wetness (very limited) cutbanks cave (slightly limited)	 1.00 0.29
70026:										
Tonti	Moderately limited wetness (moderately limited) shrink-swell (slightly limited)	 0.48 0.04	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Probable excess fines (bottom layer) probable source (thickest layer)	 0.75 0.50	Very limited small stones (very limited) dense layer <20" (very limited) area reclaim (very limited)	 1.00 1.00 1.00	Very limited dense layer <20" (very limited) wetness (very limited) cutbanks cave (very limited)	 1.00 1.00 1.00
73000:										
Pomme	Not limited		Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Limited small stones (limited) too clayey (limited) too acid (slightly limited)	 0.92 0.61 0.18	Very limited cutbanks cave (very limited) too clayey (very limited)	 1.00 1.00

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73013:										
Lowassie-------	Very limited		Improbable		Improbable		Very limited		Very limited	
	wetness	1.00	excess fines	1.00	excess fines	1.00	wetness	1.00	ponded (wetness)	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	wetness	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.27					too acid	0.54	too clayey	0.60
	(slightly limited)						(moderately limited)		(moderately limited)	
73017:										
Bendavis-------	Very limited		Improbable		Possible		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	0.75	slope	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	1.00	excess fines	1.00	excess fines	0.75	small stones	1.00	slope	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	wetness	0.12					large surface stones	0.70	cutbanks cave	1.00
	(slightly limited)						(limited)		(very limited)	
Poynor---------	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	0.92	excess fines	1.00	probable source	0.50	small stones	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.14					too acid	0.36	too clayey	1.00
	(slightly limited)						(moderately limited)		(very limited)	
73019:										
Poynor---------	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.14	excess fines	1.00	probable source	0.50	too acid	0.42	too clayey	0.99
	(slightly limited)		(bottom layer)		(thickest layer)		(moderately limited)		(limited)	
							too clayey	0.33		
							(moderately limited)			
73021:										
Poynor---------	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	0.92	excess fines	1.00	probable source	0.50	small stones	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.14					too clayey	0.50	too clayey	1.00
	(slightly limited)						(moderately limited)		(very limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73023:										
Mano	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.50	excess fines	1.00	probable source	0.50	too acid	0.30	too clayey	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(slightly limited)		(very limited)	
	wetness	0.12					wetness	0.12	wetness	1.00
	(slightly limited)						(slightly limited)		(very limited)	
Ocie	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	too clayey	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.71	excess fines	1.00	excess fines	1.00	small stones	0.88	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
	depth to bedrock	0.25					wetness	0.12	wetness	1.00
	(slightly limited)						(slightly limited)		(very limited)	
73024:										
Mano	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.50	excess fines	1.00	probable source	0.50	slope	0.63	too clayey	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
	wetness	0.12					too acid	0.48	wetness	1.00
	(slightly limited)						(moderately limited)		(very limited)	
Ocie	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	too clayey	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.71	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	depth to bedrock	0.25					slope	0.63	wetness	1.00
	(slightly limited)						(limited)		(very limited)	
73032:										
Gatewood	Very limited		Improbable		Possible		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	depth to bedrock	1.00	excess fines	1.00	excess fines	0.99	too clayey	1.00	wetness	1.00
	(very limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	1.00					small stones	0.50	too clayey	1.00
	(very limited)						(moderately limited)		(very limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73033:										
Gatewood-------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	depth to bedrock	1.00	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(very limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	1.00					too clayey	1.00	wetness	1.00
	(very limited)						(very limited)		(very limited)	
73051:										
Winnipeg-------	Very limited		Improbable		Improbable		Moderately limited		Moderately limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	0.55	too clayey	0.54
	(very limited)		(thickest layer)		(thickest layer)		(moderately limited)		(moderately limited)	
	shrink-swell	0.33	excess fines	1.00	excess fines	1.00			cutbanks cave	0.29
	(moderately limited)		(bottom layer)		(bottom layer)				(slightly limited)	
73052:										
Lily-----------	Very limited		Improbable		Improbable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	1.00	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							too sandy	0.26		
							(slightly limited)			
73053:										
Lily-----------	Very limited		Improbable		Improbable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	1.00	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	excess fines	1.00	too acid	0.30	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(slightly limited)		(very limited)	
							too clayey	0.04		
							(slightly limited)			
Bender---------	Very limited		Improbable		Probable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	probable source	0.42	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	large stones	0.09	excess fines	1.00	probable source	0.42	small stones	1.00	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							large stones >25%	1.00	large stones	0.09
							(very limited)		(slightly limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73054:										
Viburnum-------	Limited		Improbable		Probable		Very limited		Very limited	
	wetness	0.76	excess fines	1.00	excess fines	1.00	too clayey	1.00	wetness	1.00
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.45	excess fines	1.00	probable source	0.33	area reclaim	1.00	cutbanks cave	1.00
	(moderately limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
							small stones	1.00	too clayey	0.79
							(very limited)		(limited)	
73056:										
Viburnum-------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	small stones	1.00	wetness	1.00
	(very limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	wetness	0.86	excess fines	1.00	excess fines	1.00	too clayey	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.81					wetness	0.86	too clayey	1.00
	(limited)						(limited)		(very limited)	
73057:										
Jerktail-------	Very limited		Improbable		Improbable		Very limited		Very limited	
	shrink-swell	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	wetness	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	wetness	0.98	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							wetness	0.98	too clayey	1.00
							(limited)		(very limited)	
73058:										
Gunlock--------	Limited		Improbable		Improbable		Limited		Very limited	
	wetness	0.82	excess fines	1.00	excess fines	1.00	too clayey	0.83	wetness	1.00
	(limited)		(thickest layer)		(bottom layer)		(limited)		(very limited)	
	shrink-swell	0.42	excess fines	1.00	excess fines	1.00	wetness	0.82	cutbanks cave	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
	low strength	0.22					small stones	0.12	too clayey	1.00
	(slightly limited)						(slightly limited)		(very limited)	
73063:										
Bendavis-------	Very limited		Improbable		Possible		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	0.99	small stones	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	wetness	0.12	excess fines	1.00	excess fines	0.99	depth to bedrock	0.93	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
							too acid	0.30	wetness	1.00
							(slightly limited)		(very limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73063:										
Poynor----------	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.14	excess fines	1.00	probable source	0.50	too acid	0.42	too clayey	0.99
	(slightly limited)		(bottom layer)		(thickest layer)		(moderately limited)		(limited)	
							too clayey	0.33		
							(moderately limited)			
73066:										
Bender----------	Very limited		Possible		Improbable		Very limited		Very limited	
	depth to bedrock	1.00	small stones	0.99	excess fines	1.00	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	large stones	0.79	small stones	0.99	excess fines	1.00	too sandy	1.00	large stones	0.79
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(limited)	
	shrink-swell	0.27	excess fines	0.66	small stones	0.99	large stones >25%	1.00	cutbanks cave	0.29
	(slightly limited)		(thickest layer)		(thickest layer)		(very limited)		(slightly limited)	
73067:										
Bender----------	Very limited		Improbable		Improbable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	1.00	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	1.00	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	large stones	0.47	small stones	0.50	small stones	0.50	small stones	1.00	large stones	0.47
	(moderately limited)		(thickest layer)		(thickest layer)		(very limited)		(moderately limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick----------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	too clayey	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.30	excess fines	1.00	excess fines	1.00	slope	0.63	slope	0.63
	(slightly limited)		(bottom layer)		(thickest layer)		(limited)		(limited)	
							too acid	0.42	cutbanks cave	0.29
							(moderately limited)		(slightly limited)	
73069:										
Tick----------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	0.92	excess fines	1.00	excess fines	1.00	too clayey	1.00	too clayey	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.30					too acid	0.42	cutbanks cave	0.29
	(slightly limited)						(moderately limited)		(slightly limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73071:										
Hogcreek-------	Very limited		Improbable		Probable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	probable source	0.33	small stones	1.00	dense layer <20"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	wetness	0.93	excess fines	1.00	probable source	0.33	dense layer <20"	1.00	hard bedrock <40"	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							wetness	0.93	wetness	1.00
							(limited)		(very limited)	
73072:										
Hogcreek-------	Very limited		Improbable		Probable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	probable source	0.42	small stones	1.00	dense layer <20"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	wetness	0.93	excess fines	1.00	probable source	0.42	dense layer <20"	1.00	hard bedrock <40"	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							wetness	0.93	wetness	1.00
							(limited)		(very limited)	
73073:										
Scholten-------	Limited		Improbable		Possible		Very limited		Very limited	
	wetness	0.82	excess fines	1.00	excess fines	1.00	small stones	1.00	wetness	1.00
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.25	excess fines	1.00	excess fines	0.75	area reclaim	1.00	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
							dense layer	1.00	dense layer	1.00
							(limited)		(limited)	
Poynor---------	Very limited		Improbable		Possible		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.14	excess fines	1.00	excess fines	0.75	slope	0.63	too clayey	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
							too acid	0.42	slope	0.63
							(moderately limited)		(limited)	
73076:										
Mano-----------	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	0.92	excess fines	1.00	probable source	0.50	small stones	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.50					too acid	0.48	too clayey	1.00
	(moderately limited)						(moderately limited)		(very limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73076:										
Ocie	Very limited low strength (very limited) slope (limited) shrink-swell (limited)	 1.00 0.92 0.71 	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00 	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00 	Very limited slope (very limited) too clayey (very limited) small stones (very limited)	 1.00 1.00 1.00 	Very limited too clayey (very limited) slope (very limited) cutbanks cave (very limited)	 1.00 1.00 1.00
73077:										
Eudy	Very limited low strength (very limited) depth to bedrock (very limited) shrink-swell (very limited)	 1.00 1.00 1.00 	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00 	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00 	Very limited too clayey (very limited) small stones (very limited) wetness (limited)	 1.00 1.00 0.98 	Very limited hard bedrock <40" (very limited) wetness (very limited) cutbanks cave (very limited)	 1.00 1.00 1.00
73080:										
Alred	Very limited low strength (very limited) slope (very limited) shrink-swell (slightly limited)	 1.00 1.00 0.15 	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00 	Probable excess fines (bottom layer) probable source (thickest layer)	 1.00 0.42 	Very limited slope (very limited) small stones (very limited) large surface stones (moderately limited)	 1.00 1.00 0.60 	Very limited slope (very limited) too clayey (very limited) cutbanks cave (slightly limited)	 1.00 1.00 0.29
Bardley	Very limited low strength (very limited) depth to bedrock (very limited) slope (very limited)	 1.00 1.00 1.00 	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00 	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00 	Very limited depth to bedrock (very limited) slope (very limited) too clayey (very limited)	 1.00 1.00 1.00 	Very limited hard bedrock <40" (very limited) slope (very limited) too clayey (very limited)	 1.00 1.00 1.00
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73081:										
Bender	Very limited depth to bedrock (very limited) slope (very limited) large stones (limited)	 1.00 1.00 0.81 	Improbable excess fines (thickest layer) excess fines (bottom layer) small stones (thickest layer)	 1.00 1.00 0.66 	Improbable excess fines (bottom layer) excess fines (thickest layer) small stones (thickest layer)	 1.00 1.00 0.66 	Very limited depth to bedrock (very limited) slope (very limited) small stones (very limited)	 1.00 1.00 1.00 	Very limited hard bedrock <40" (very limited) slope (very limited) large stones (limited)	 1.00 1.00 0.81

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73081:										
Alred----------	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	1.00	excess fines	1.00	probable source	0.42	small stones	1.00	too clayey	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.15					large stones >25%	1.00	cutbanks cave	0.29
	(slightly limited)						(very limited)		(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73087:										
Celt----------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	dense layer <20"	1.00	dense layer <20"	1.00
	(very limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	wetness	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	wetness	1.00
	(very limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.77					wetness	1.00	cutbanks cave	1.00
	(limited)						(very limited)		(very limited)	
73159:										
Yelton---------	Limited		Improbable		Improbable		Very limited		Very limited	
	wetness	0.82	excess fines	1.00	excess fines	1.00	dense layer <20"	1.00	dense layer <20"	1.00
	(limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.12	excess fines	1.00	excess fines	1.00	wetness	0.82	wetness	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
							small stones	0.50	cutbanks cave	0.29
							(moderately limited)		(slightly limited)	
73176:										
Bendavis-------	Very limited		Improbable		Possible		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	0.75	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	wetness	0.12	excess fines	1.00	excess fines	0.75	small stones	1.00	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							slope	0.63	wetness	1.00
							(limited)		(very limited)	
Poynor---------	Very limited		Improbable		Possible		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	too clayey	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.32	excess fines	1.00	excess fines	0.99	slope	0.63	slope	0.63
	(moderately limited)		(bottom layer)		(thickest layer)		(limited)		(limited)	
							too acid	0.36	cutbanks cave	0.29
							(moderately limited)		(slightly limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73197:										
Viburnum-------	Limited		Improbable		Possible		Very limited		Very limited	
	wetness	0.86	excess fines	1.00	excess fines	1.00	too clayey	1.00	wetness	1.00
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.45	excess fines	1.00	excess fines	0.87	area reclaim	1.00	cutbanks cave	1.00
	(moderately limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
							small stones	1.00	too clayey	0.79
							(very limited)		(limited)	
73198:										
Gressy---------	Slightly limited		Improbable		Improbable		Slightly limited		Very limited	
	low strength	0.22	excess fines	1.00	excess fines	1.00	small stones	0.12	cutbanks cave	1.00
	(slightly limited)		(thickest layer)		(bottom layer)		(slightly limited)		(very limited)	
	shrink-swell	0.18	excess fines	1.00	excess fines	1.00	area reclaim	0.08	too clayey	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(slightly limited)		(very limited)	
Viraton--------	Moderately limited		Improbable		Probable		Very limited		Very limited	
	wetness	0.48	excess fines	1.00	excess fines	1.00	small stones	1.00	dense layer <20"	1.00
	(moderately limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.20	excess fines	1.00	probable source	0.25	dense layer <20"	1.00	wetness	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							too acid	0.68	cutbanks cave	1.00
							(limited)		(very limited)	
73199:										
Moko----------	Very limited		Improbable		Probable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	small stones	0.83	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	large stones	0.99	excess fines	1.00	small stones	0.66	small stones	1.00	large stones	0.99
	(limited)		(bottom layer)		(bottom layer)		(very limited)		(limited)	
	low strength	0.22	small stones	0.83	probable source	0.50	large stones >25%	1.00	cutbanks cave	0.29
	(slightly limited)		(thickest layer)		(thickest layer)		(very limited)		(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor---------	Very limited		Improbable		Possible		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.14	excess fines	1.00	excess fines	0.75	slope	0.63	too clayey	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
							too acid	0.42	slope	0.63
							(moderately limited)		(limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73221:										
Poynor---------	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.14	excess fines	1.00	probable source	0.50	slope	1.00	too clayey	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	slope	0.08					too acid	0.36	slope	1.00
	(slightly limited)						(moderately limited)		(very limited)	
73222:										
Splitlimb------	Very limited		Improbable		Improbable		Limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	wetness	0.76	ponded (wetness)	1.00
	(very limited)		(thickest layer)		(bottom layer)		(limited)		(very limited)	
	wetness	0.76	excess fines	1.00	excess fines	1.00	too acid	0.48	wetness	1.00
	(limited)		(bottom layer)		(thickest layer)		(moderately limited)		(very limited)	
	shrink-swell	0.45					too clayey	0.33	cutbanks cave	0.29
	(moderately limited)						(moderately limited)		(slightly limited)	
73223:										
Coulstone------	Limited		Improbable		Possible		Very limited		Very limited	
	slope	0.92	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			excess fines	1.00	excess fines	0.75	area reclaim	1.00	cutbanks cave	1.00
			(bottom layer)		(bottom layer)		(very limited)		(very limited)	
							small stones	1.00		
							(very limited)			
Bender---------	Very limited		Improbable		Possible		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	0.75	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	1.00	excess fines	1.00	excess fines	0.75	slope	1.00	slope	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	large stones	0.76	small stones	0.60	small stones	0.60	small stones	1.00	large stones	0.76
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73224:										
Moko	Very limited		Improbable		Improbable		Very limited		Very limited	
	depth to bedrock (very limited)	1.00	excess fines (thickest layer)	1.00	excess fines (bottom layer)	1.00	depth to bedrock (very limited)	1.00	hard bedrock <40" (very limited)	1.00
	slope (limited)	0.92	excess fines (bottom layer)	1.00	small stones (bottom layer)	1.00	slope (very limited)	1.00	slope (very limited)	1.00
	large stones (limited)	0.86	small stones (bottom layer)	1.00	excess fines (thickest layer)	0.99	small stones (very limited)	1.00	large stones (limited)	0.86
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
74626:										
Tanglenook	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength (very limited)	1.00	excess fines (thickest layer)	1.00	excess fines (bottom layer)	1.00	wetness (very limited)	1.00	wetness (very limited)	1.00
	wetness (very limited)	1.00	excess fines (bottom layer)	1.00	excess fines (thickest layer)	1.00	too clayey (very limited)	1.00	too clayey (limited)	0.68
	shrink-swell (very limited)	1.00							cutbanks cave (slightly limited)	0.29
74627:										
Hartville	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength (very limited)	1.00	excess fines (thickest layer)	1.00	excess fines (bottom layer)	1.00	too clayey (very limited)	1.00	wetness (very limited)	1.00
	shrink-swell (very limited)	1.00	excess fines (bottom layer)	1.00	excess fines (thickest layer)	1.00	wetness (moderately limited)	0.48	too clayey (moderately limited)	0.33
	wetness (moderately limited)	0.48							cutbanks cave (slightly limited)	0.29
74629:										
Raftville	Very limited		Improbable		Improbable		Very limited		Very limited	
	depth to bedrock (very limited)	1.00	excess fines (thickest layer)	1.00	excess fines (bottom layer)	1.00	depth to bedrock (very limited)	1.00	hard bedrock <40" (very limited)	1.00
			excess fines (bottom layer)	1.00	excess fines (thickest layer)	1.00	too acid (moderately limited)	0.36	cutbanks cave (slightly limited)	0.29
74636:										
Lecoma	Moderately limited		Improbable		Improbable		Not limited		Slightly limited	
	shrink-swell (moderately limited)	0.45	excess fines (thickest layer)	1.00	excess fines (bottom layer)	1.00			cutbanks cave (slightly limited)	0.29
			excess fines (bottom layer)	1.00	excess fines (thickest layer)	1.00				

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74637:										
Lecoma	Moderately limited shrink-swell (moderately limited)	 0.45	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00	Slightly limited slope (slightly limited)	 0.16	Slightly limited cutbanks cave (slightly limited) slope (slightly limited)	 0.29 0.16
74677:										
Deible	Very limited wetness (very limited) shrink-swell (very limited)	 1.00 1.00	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00	Very limited wetness (very limited) too clayey (very limited)	 1.00 1.00	Very limited wetness (very limited) too clayey (moderately limited) cutbanks cave (slightly limited)	 1.00 0.60 0.29
74679:										
Higdon	Very limited low strength (very limited) wetness (limited) shrink-swell (slightly limited)	 1.00 0.86 0.23	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00	Limited wetness (limited) too clayey (slightly limited)	 0.86 0.08	Very limited wetness (very limited) cutbanks cave (slightly limited)	 1.00 0.29
75381:										
Bearthicket	Very limited low strength (very limited)	 1.00	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Improbable excess fines (bottom layer) excess fines (thickest layer)	 1.00 1.00	Not limited		Slightly limited cutbanks cave (slightly limited)	 0.29
75382:										
Cedargap	Not limited		Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Possible excess fines (thickest layer) excess fines (bottom layer)	 0.99 0.75	Very limited small stones (very limited) area reclaim (very limited) too clayey (slightly limited)	 1.00 1.00 0.08	Very limited cutbanks cave (very limited) flooding (moderately limited) wetness (slightly limited)	 1.00 0.60 0.16

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75388:										
Kaintuck-------	Not limited		Improbable excess fines (thickest layer) excess fines (bottom layer)	1.00 1.00	Improbable excess fines (bottom layer) excess fines (thickest layer)	1.00 1.00	Limited too sandy (limited)	0.73	Very limited cutbanks cave (very limited) flooding (moderately limited)	1.00 0.60
Relfe----------	Not limited		Probable excess fines (thickest layer) probable source (bottom layer)	1.00 0.33	Probable probable source (thickest layer) probable source (bottom layer)	0.50 0.25	Very limited too sandy (very limited) small stones (very limited) area reclaim (very limited)	1.00 1.00 1.00	Very limited cutbanks cave (very limited) flooding (moderately limited)	1.00 0.60
75389:										
Dunning--------	Very limited wetness (very limited) low strength (very limited) shrink-swell (limited)	1.00 1.00 0.65	Improbable excess fines (thickest layer) excess fines (bottom layer)	1.00 1.00	Improbable excess fines (bottom layer) excess fines (thickest layer)	1.00 1.00	Very limited wetness (very limited) too clayey (very limited) too acid (slightly limited)	1.00 1.00 0.30	Very limited wetness (very limited) cutbanks cave (very limited) flooding (moderately limited)	1.00 1.00 0.60
Hercules-------	Very limited wetness (very limited) shrink-swell (moderately limited) large stones (slightly limited)	1.00 0.45 0.04	Improbable excess fines (thickest layer) excess fines (bottom layer)	1.00 1.00	Probable excess fines (thickest layer) probable source (bottom layer)	0.75 0.42	Very limited wetness (very limited) small stones (very limited) area reclaim (very limited)	1.00 1.00 1.00	Very limited wetness (very limited) cutbanks cave (very limited) flooding (moderately limited)	1.00 1.00 0.60
75390:										
Razort---------	Not limited		Improbable excess fines (thickest layer) excess fines (bottom layer)	1.00 1.00	Improbable excess fines (thickest layer) excess fines (bottom layer)	1.00 1.00	Limited area reclaim (limited)	0.92	Very limited cutbanks cave (very limited)	1.00

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75391:										
Possumtrot-----	Not limited		Probable		Possible		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	area reclaim	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			probable source	0.43	excess fines	0.75	too sandy	0.67	flooding	0.60
			(bottom layer)		(bottom layer)		(limited)		(moderately limited)	
							too acid	0.06		
							(slightly limited)			
75392:										
Stultz---------	Very limited		Improbable		Probable		Very limited		Very limited	
	wetness	1.00	excess fines	1.00	excess fines	1.00	wetness	1.00	wetness	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	depth to bedrock	0.66	excess fines	1.00	probable source	0.42	small stones	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.45					area reclaim	1.00	depth to bedrock	0.82
	(moderately limited)						(very limited)		(limited)	
75406:										
Racket---------	Limited		Probable		Probable		Very limited		Very limited	
	low strength	0.78	excess fines	1.00	excess fines	1.00	area reclaim	1.00	cutbanks cave	1.00
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.20	probable source	0.44	probable source	0.42			flooding	0.60
	(slightly limited)		(bottom layer)		(bottom layer)				(moderately limited)	
									wetness	0.16
									(slightly limited)	
75417:										
Relfe----------	Not limited		Probable		Probable		Very limited		Very limited	
			excess fines	1.00	excess fines	0.75	too sandy	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			probable source	0.26	probable source	0.25	small stones	1.00	flooding	0.60
			(bottom layer)		(bottom layer)		(very limited)		(moderately limited)	
							area reclaim	1.00		
							(very limited)			
Sandbur---------	Not limited		Possible		Possible		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	area reclaim	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			excess fines	0.97	excess fines	0.99	too sandy	0.76	flooding	0.60
			(bottom layer)		(bottom layer)		(limited)		(moderately limited)	

Table 14.--Construction Materials and Excavating--Continued

Map symbol and soil name	Roadfill		Sand		Gravel		Topsoil		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75418:										
Tilk----------	Not limited		Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 0.99	Probable probable source (thickest layer) probable source (bottom layer)	 0.33 0.17	Very limited small stones (very limited) area reclaim (very limited) too sandy (limited)	 1.00 1.00 0.61	Very limited cutbanks cave (very limited)	 1.00
75419:										
Perche----------	Very limited wetness (very limited)	 1.00	Probable excess fines (thickest layer) probable source (bottom layer)	 1.00 0.05	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Very limited wetness (very limited) area reclaim (limited) too sandy (moderately limited)	 1.00 0.92 0.54	Very limited wetness (very limited) cutbanks cave (very limited) flooding (moderately limited)	 1.00 1.00 0.60
75420:										
Secesh----------	Not limited		Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 1.00	Limited area reclaim (limited) small stones (moderately limited) too clayey (slightly limited)	 0.92 0.50 0.12	Very limited cutbanks cave (very limited) flooding (moderately limited)	 1.00 0.60
Tilk----------	Not limited		Improbable excess fines (thickest layer) excess fines (bottom layer)	 1.00 0.99	Probable excess fines (thickest layer) probable source (bottom layer)	 0.99 0.17	Very limited small stones (very limited) area reclaim (very limited) too sandy (limited)	 1.00 1.00 0.61	Very limited cutbanks cave (very limited) flooding (moderately limited)	 1.00 0.60
99000:										
Pits, quarries-	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 15.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti	Moderately limited seepage (moderately limited) slope (moderately limited)	0.50 0.31	Very limited percs slowly (very limited) slope (limited)	1.00 0.98	Very limited percs slowly (very limited) slope (limited) erodes easily (moderately limited)	1.00 0.98 0.60	Moderately limited erodes easily (moderately limited) wetness (moderately limited) slope (moderately limited)	0.60 0.44 0.31	Limited rooting depth (limited) erodes easily (moderately limited) wetness (moderately limited)	0.80 0.60 0.44
70025:										
Branson	Limited seepage (limited)	0.68	Not limited		Not limited		Not limited		Not limited	
Splitlimb	Moderately limited seepage (moderately limited)	0.32	Not limited		Moderately limited erodes easily (moderately limited)	0.60	Moderately limited erodes easily (moderately limited) wetness (moderately limited)	0.60 0.53	Moderately limited erodes easily (moderately limited) wetness (moderately limited)	0.60 0.53
70026:										
Tonti	Moderately limited seepage (moderately limited)	0.50	Very limited percs slowly (very limited)	1.00	Very limited percs slowly (very limited) erodes easily (moderately limited)	1.00 0.60	Moderately limited erodes easily (moderately limited) wetness (moderately limited)	0.60 0.44	Limited rooting depth (limited) erodes easily (moderately limited) wetness (moderately limited)	0.80 0.60 0.44
73000:										
Pomme	Moderately limited seepage (moderately limited) slope (slightly limited)	0.50 0.10	Moderately limited slope (moderately limited)	0.40	Moderately limited erodes easily (moderately limited) slope (moderately limited)	0.60 0.40	Moderately limited erodes easily (moderately limited) slope (slightly limited)	0.60 0.10	Moderately limited erodes easily (moderately limited) slope (slightly limited)	0.60 0.10

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73013:										
Lowassie-------	Not limited		Very limited		Very limited		Not rated		Not rated	
			ponded (wetness)	1.00	ponded (wetness)	1.00				
			(very limited)		(very limited)					
			percs slowly	0.39	erodes easily	0.60				
			(moderately limited)		(moderately limited)					
					percs slowly	0.39				
					(moderately limited)					
73017:										
Bendavis-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	percs slowly	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.77	percs slowly	1.00	slope	1.00	depth to bedrock	1.00	depth to bedrock	0.77
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	seepage	0.50	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70
	(moderately limited)		(limited)		(limited)		(limited)		(limited)	
Poynor---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	seepage	0.50	large surface stones	0.31	droughty	0.57	large surface stones	0.31	droughty	0.57
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					large surface stones	0.31			large surface stones	0.31
					(moderately limited)				(moderately limited)	
73019:										
Poynor---------	Moderately limited		Limited		Limited		Moderately limited		Moderately limited	
	seepage	0.50	slope	0.98	slope	0.98	slope	0.31	droughty	0.57
	(moderately limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.31			droughty	0.57			slope	0.31
	(moderately limited)				(moderately limited)				(moderately limited)	
73021:										
Poynor---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	seepage	0.50	large surface stones	0.31	droughty	0.57	large surface stones	0.31	droughty	0.57
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					large surface stones	0.31			large surface stones	0.31
					(moderately limited)				(moderately limited)	

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73023:										
Mano	Moderately limited seepage (moderately limited) slope (slightly limited)	0.50 0.20	Limited slope (limited) percs slowly (moderately limited)	0.78 0.39	Limited slope (limited) percs slowly (moderately limited)	0.78 0.39	Slightly limited wetness (slightly limited) slope (slightly limited)	0.28 0.20	Slightly limited wetness (slightly limited) slope (slightly limited)	0.28 0.20
Ocie	Moderately limited seepage (moderately limited) depth to bedrock (moderately limited) slope (slightly limited)	0.50 0.40 0.20	Limited slope (limited) percs slowly (moderately limited)	0.78 0.39	Limited slope (limited) percs slowly (moderately limited)	0.78 0.39	Slightly limited wetness (slightly limited) depth to bedrock (slightly limited) slope (slightly limited)	0.28 0.25 0.20	Moderately limited depth to bedrock (moderately limited) wetness (slightly limited) slope (slightly limited)	0.40 0.28 0.20
73024:										
Mano	Limited slope (limited) seepage (moderately limited)	0.99 0.50	Very limited slope (very limited) percs slowly (moderately limited) large surface stones (moderately limited)	1.00 0.39 0.31	Very limited slope (very limited) percs slowly (moderately limited) large surface stones (moderately limited)	1.00 0.39 0.31	Limited slope (limited) large surface stones (moderately limited) wetness (slightly limited)	0.99 0.31 0.28	Limited slope (limited) large surface stones (moderately limited) wetness (slightly limited)	0.99 0.31 0.28
Ocie	Limited slope (limited) seepage (moderately limited) depth to bedrock (moderately limited)	0.99 0.50 0.40	Very limited slope (very limited) percs slowly (moderately limited) large surface stones (moderately limited)	1.00 0.39 0.31	Very limited slope (very limited) percs slowly (moderately limited) large surface stones (moderately limited)	1.00 0.39 0.31	Limited slope (limited) large surface stones (moderately limited) wetness (slightly limited)	0.99 0.31 0.28	Limited slope (limited) depth to bedrock (moderately limited) large surface stones (moderately limited)	0.99 0.40 0.31
73032:										
Gatewood	Limited depth to bedrock (limited) slope (limited)	0.89 0.70	Very limited slope (very limited) depth to bedrock (moderately limited) percs slowly (moderately limited)	1.00 0.46 0.39	Very limited slope (very limited) depth to bedrock (moderately limited) percs slowly (moderately limited)	1.00 0.46 0.39	Very limited depth to bedrock (very limited) slope (limited) wetness (moderately limited)	1.00 0.70 0.36	Limited depth to bedrock (limited) slope (limited) wetness (moderately limited)	0.89 0.70 0.36

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73033:										
Gatewood-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.89	depth to bedrock	0.46	depth to bedrock	0.46	depth to bedrock	1.00	depth to bedrock	0.89
	(limited)		(moderately limited)		(moderately limited)		(very limited)		(limited)	
			percs slowly	0.39	percs slowly	0.39	wetness	0.36	wetness	0.36
			(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
73051:										
Winnipeg-------	Moderately limited		Not limited		Moderately limited		Moderately limited		Moderately limited	
	seepage	0.50			erodes easily	0.60	erodes easily	0.60	erodes easily	0.60
	(moderately limited)				(moderately limited)		(moderately limited)		(moderately limited)	
73052:										
Lily-----------	Very limited		Limited		Limited		Very limited		Limited	
	seepage	1.00	slope	0.98	slope	0.98	depth to bedrock	1.00	depth to bedrock	0.94
	(very limited)		(limited)		(limited)		(very limited)		(limited)	
	depth to bedrock	0.94	depth to bedrock	0.66	depth to bedrock	0.66	slope	0.31	slope	0.31
	(limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.31			droughty	0.19			droughty	0.19
	(moderately limited)				(slightly limited)				(slightly limited)	
73053:										
Lily-----------	Very limited		Very limited		Very limited		Very limited		Limited	
	seepage	1.00	percs slowly	1.00	percs slowly	1.00	depth to bedrock	1.00	depth to bedrock	0.95
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	depth to bedrock	0.95	slope	1.00	slope	1.00	slope	0.60	slope	0.60
	(limited)		(very limited)		(very limited)		(moderately limited)		(moderately limited)	
	slope	0.60	depth to bedrock	0.76	depth to bedrock	0.76			droughty	0.48
	(moderately limited)		(limited)		(limited)				(moderately limited)	
Bender---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	seepage	1.00	slope	1.00	droughty	1.00	depth to bedrock	1.00	large stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.95	depth to bedrock	0.76	slope	1.00	large stones	1.00	droughty	1.00
	(limited)		(limited)		(very limited)		(very limited)		(very limited)	
	slope	0.60	large stones	0.51	depth to bedrock	0.76	slope	0.60	depth to bedrock	0.95
	(moderately limited)		(moderately limited)		(limited)		(moderately limited)		(limited)	
73054:										
Viburnum-------	Moderately limited		Slightly limited		Moderately limited		Moderately limited		Moderately limited	
	seepage	0.50	percs slowly	0.13	erodes easily	0.60	erodes easily	0.60	erodes easily	0.60
	(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.13	wetness	0.55	wetness	0.55
					(slightly limited)		(moderately limited)		(moderately limited)	

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73056:										
Viburnum-------	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.99	slope	1.00	slope	1.00	slope	0.99	slope	0.99
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	seepage	0.50	percs slowly	0.99	percs slowly	0.99	wetness	0.60	wetness	0.60
	(moderately limited)		(very limited)		(very limited)		(moderately limited)		(moderately limited)	
73057:										
Jerktail-------	Slightly limited		Moderately limited		Moderately limited		Limited		Limited	
	depth to bedrock	0.22	percs slowly	0.39	erodes easily	0.60	wetness	0.86	wetness	0.86
	(slightly limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
					percs slowly	0.39	erodes easily	0.60	erodes easily	0.60
					(moderately limited)		(moderately limited)		(moderately limited)	
									depth to bedrock	0.22
									(slightly limited)	
73058:										
Gunlock--------	Moderately limited		Limited		Limited		Moderately limited		Moderately limited	
	slope	0.31	slope	0.98	slope	0.98	erodes easily	0.60	erodes easily	0.60
	(moderately limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
			percs slowly	0.39	erodes easily	0.60	wetness	0.58	wetness	0.58
			(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.39	slope	0.31	slope	0.31
					(moderately limited)		(moderately limited)		(moderately limited)	
73063:										
Bendavis-------	Limited		Limited		Limited		Very limited		Limited	
	seepage	0.92	slope	0.78	slope	0.78	depth to bedrock	1.00	depth to bedrock	0.84
	(limited)		(limited)		(limited)		(very limited)		(limited)	
	depth to bedrock	0.84	depth to bedrock	0.27	depth to bedrock	0.27	wetness	0.28	wetness	0.28
	(limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	slope	0.20					slope	0.20	slope	0.20
	(slightly limited)						(slightly limited)		(slightly limited)	
Poynor---------	Moderately limited		Limited		Limited		Slightly limited		Moderately limited	
	seepage	0.50	slope	0.78	slope	0.78	slope	0.20	droughty	0.40
	(moderately limited)		(limited)		(limited)		(slightly limited)		(moderately limited)	
	slope	0.20			droughty	0.40			slope	0.20
	(slightly limited)				(moderately limited)				(slightly limited)	

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73066:										
Bender	Very limited		Very limited		Very limited		Very limited		Very limited	
	seepage	1.00	large stones	1.00	droughty	1.00	depth to bedrock	1.00	large stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.86	slope	1.00	slope	1.00	large stones	1.00	droughty	1.00
	(limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.60	large surface stones	0.43	large stones	0.79	slope	0.60	depth to bedrock	0.86
	(moderately limited)		(moderately limited)		(limited)		(moderately limited)		(limited)	
73067:										
Bender	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	seepage	1.00	large stones	1.00	droughty	1.00	depth to bedrock	1.00	large stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.95	depth to bedrock	0.76	depth to bedrock	0.76	large stones	1.00	droughty	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.99	slope	1.00	slope	1.00	slope	0.99	slope	0.99
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
			percs slowly	0.34	percs slowly	0.34				
			(moderately limited)		(moderately limited)					
73069:										
Tick	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			percs slowly	0.34	percs slowly	0.34	large surface stones	0.07	large surface stones	0.07
			(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)	
			large surface stones	0.07	large surface stones	0.07				
			(slightly limited)		(slightly limited)					
73071:										
Hogcreek	Limited		Very limited		Very limited		Very limited		Limited	
	depth to bedrock	0.80	percs slowly	1.00	percs slowly	1.00	depth to bedrock	1.00	rooting depth	0.80
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	seepage	0.68	depth to bedrock	0.18	erodes easily	0.60	wetness	0.73	depth to bedrock	0.80
	(limited)		(slightly limited)		(moderately limited)		(limited)		(limited)	
					depth to bedrock	0.18	erodes easily	0.60	wetness	0.73
					(slightly limited)		(moderately limited)		(limited)	

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73072:										
Hogcreek-------	Limited		Very limited		Very limited		Very limited		Limited	
	depth to bedrock	0.80	percs slowly	1.00	percs slowly	1.00	depth to bedrock	1.00	rooting depth	0.80
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	seepage	0.68	slope	0.98	slope	0.98	wetness	0.73	depth to bedrock	0.80
	(limited)		(limited)		(limited)		(limited)		(limited)	
	slope	0.31	depth to bedrock	0.18	erodes easily	0.60	erodes easily	0.60	wetness	0.73
	(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)		(limited)	
73073:										
Scholten-------	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.99	slope	1.00	slope	1.00	slope	0.99	slope	0.99
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	seepage	0.68	percs slowly	1.00	percs slowly	1.00	wetness	0.58	rooting depth	0.80
	(limited)		(very limited)		(very limited)		(moderately limited)		(limited)	
					droughty	0.70			droughty	0.70
					(limited)				(limited)	
Poynor---------	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.99	slope	1.00	slope	1.00	slope	0.99	slope	0.99
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	seepage	0.50	percs slowly	0.18	droughty	0.75			droughty	0.75
	(moderately limited)		(slightly limited)		(limited)				(limited)	
					percs slowly	0.18				
					(slightly limited)					
73076:										
Mano-----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	seepage	0.50	percs slowly	0.39	percs slowly	0.39	wetness	0.28	wetness	0.28
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)	
Ocie-----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	seepage	0.50	percs slowly	0.39	percs slowly	0.39	wetness	0.28	depth to bedrock	0.40
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(moderately limited)	
	depth to bedrock	0.40					depth to bedrock	0.25	wetness	0.28
	(moderately limited)						(slightly limited)		(slightly limited)	

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73077:										
Eudy	Limited depth to bedrock (limited) slope (slightly limited)	 0.77 0.20	Limited slope (limited) percs slowly (moderately limited) depth to bedrock (slightly limited)	 0.78 0.39 0.13	Limited slope (limited) erodes easily (moderately limited) percs slowly (moderately limited)	 0.78 0.60 0.39	Very limited depth to bedrock (very limited) wetness (limited) erodes easily (moderately limited)	 1.00 0.86 0.60	Limited wetness (limited) depth to bedrock (limited) erodes easily (moderately limited)	 0.86 0.77 0.60
73080:										
Alred	Very limited slope (very limited)	 1.00	Very limited slope (very limited) large surface stones (moderately limited) percs slowly (moderately limited)	 1.00 0.60 0.39	Very limited slope (very limited) large surface stones (moderately limited) percs slowly (moderately limited)	 1.00 0.60 0.39	Very limited slope (very limited) large stones (very limited) large surface stones (moderately limited)	 1.00 1.00 0.60	Very limited slope (very limited) large stones (very limited) large surface stones (moderately limited)	 1.00 1.00 0.60
Bardley	Very limited slope (very limited) depth to bedrock (limited)	 1.00 0.89	Very limited slope (very limited) large surface stones (moderately limited) depth to bedrock (moderately limited)	 1.00 0.60 0.46	Very limited slope (very limited) droughty (limited) large surface stones (moderately limited)	 1.00 0.72 0.60	Very limited slope (very limited) depth to bedrock (very limited) large surface stones (moderately limited)	 1.00 1.00 0.60	Very limited slope (very limited) depth to bedrock (limited) droughty (limited)	 1.00 0.89 0.72
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73081:										
Bender	Very limited slope (very limited) seepage (very limited) depth to bedrock (limited)	 1.00 1.00 0.86	Very limited slope (very limited) large stones (very limited) cutbanks cave (limited)	 1.00 1.00 0.90	Very limited slope (very limited) droughty (very limited) large stones (limited)	 1.00 1.00 0.81	Very limited slope (very limited) depth to bedrock (very limited) large stones (very limited)	 1.00 1.00 1.00	Very limited slope (very limited) droughty (very limited) large stones (very limited)	 1.00 1.00 1.00
Alred	Very limited slope (very limited)	 1.00	Very limited slope (very limited) large surface stones (moderately limited) percs slowly (moderately limited)	 1.00 0.43 0.39	Very limited slope (very limited) large surface stones (moderately limited) percs slowly (moderately limited)	 1.00 0.43 0.39	Very limited slope (very limited) large stones (very limited) large surface stones (moderately limited)	 1.00 1.00 0.43	Very limited slope (very limited) large stones (very limited) large surface stones (moderately limited)	 1.00 1.00 0.43
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73087:										
Celt----------	Not limited		Very limited percs slowly (very limited)	1.00	Very limited percs slowly (very limited) erodes easily (moderately limited)	1.00 0.60	Very limited wetness (very limited) erodes easily (moderately limited)	1.00 0.60	Very limited wetness (very limited) rooting depth (limited) erodes easily (moderately limited)	1.00 0.80 0.60
73159:										
Yelton---------	Slightly limited slope (slightly limited)	0.20	Limited slope (limited) percs slowly (moderately limited)	0.78 0.39	Limited slope (limited) erodes easily (moderately limited) percs slowly (moderately limited)	0.78 0.60 0.39	Moderately limited erodes easily (moderately limited) wetness (moderately limited) slope (slightly limited)	0.60 0.58 0.20	Limited rooting depth (limited) erodes easily (moderately limited) wetness (moderately limited)	0.80 0.60 0.58
73176:										
Bendavis-------	Limited slope (limited) depth to bedrock (limited) seepage (moderately limited)	0.99 0.92 0.50	Very limited slope (very limited) depth to bedrock (moderately limited) large surface stones (slightly limited)	1.00 0.58 0.13	Very limited slope (very limited) depth to bedrock (moderately limited) droughty (moderately limited)	1.00 0.58 0.45	Very limited depth to bedrock (very limited) slope (limited) wetness (slightly limited)	1.00 0.99 0.28	Limited slope (limited) depth to bedrock (limited) droughty (moderately limited)	0.99 0.92 0.45
Poynor---------	Limited slope (limited) seepage (moderately limited)	0.99 0.50	Very limited slope (very limited) large surface stones (slightly limited)	1.00 0.13	Very limited slope (very limited) large surface stones (slightly limited)	1.00 0.13	Limited slope (limited) large surface stones (slightly limited)	0.99 0.13	Limited slope (limited) large surface stones (slightly limited)	0.99 0.13
73197:										
Viburnum-------	Slightly limited slope (slightly limited)	0.10	Moderately limited slope (moderately limited) percs slowly (slightly limited)	0.40 0.13	Moderately limited erodes easily (moderately limited) slope (moderately limited) percs slowly (slightly limited)	0.60 0.40 0.13	Moderately limited erodes easily (moderately limited) wetness (moderately limited) slope (slightly limited)	0.60 0.60 0.10	Moderately limited erodes easily (moderately limited) wetness (moderately limited) slope (slightly limited)	0.60 0.60 0.10

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73198:										
Gressy	Limited seepage (limited) slope (slightly limited)	 0.98 0.10	Moderately limited slope (moderately limited)	 0.40	Moderately limited erodes easily (moderately limited) slope (moderately limited)	 0.60 0.40	Moderately limited erodes easily (moderately limited) slope (slightly limited)	 0.60 0.10	Moderately limited erodes easily (moderately limited) slope (slightly limited)	 0.60 0.10
Viraton	Moderately limited seepage (moderately limited) slope (slightly limited)	 0.50 0.10	Very limited percs slowly (very limited) large stones (moderately limited) slope (moderately limited)	 1.00 0.60 0.40	Very limited percs slowly (very limited) erodes easily (moderately limited) slope (moderately limited)	 1.00 0.60 0.40	Moderately limited erodes easily (moderately limited) wetness (moderately limited) large stones (slightly limited)	 0.60 0.44 0.14	Limited rooting depth (limited) erodes easily (moderately limited) wetness (moderately limited)	 0.80 0.60 0.44
73199:										
Moko	Very limited bedrock <20 in. (very limited) slope (limited)	 1.00 0.70	Very limited shallow to bedrock (very limited) large stones (very limited) slope (very limited)	 1.00 1.00 1.00	Very limited shallow to bedrock (very limited) droughty (very limited) slope (very limited)	 1.00 1.00 1.00	Very limited depth to bedrock (very limited) large stones (very limited) slope (limited)	 1.00 1.00 0.70	Very limited large stones (very limited) bedrock <20 in. (very limited) droughty (very limited)	 1.00 1.00 1.00
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor	Limited slope (limited) seepage (moderately limited)	 0.99 0.50	Very limited slope (very limited) percs slowly (slightly limited)	 1.00 0.18	Very limited slope (very limited) droughty (moderately limited) percs slowly (slightly limited)	 1.00 0.57 0.18	Limited slope (limited)	 0.99	Limited slope (limited) droughty (moderately limited)	 0.99 0.57
73221:										
Poynor	Very limited slope (very limited) seepage (moderately limited)	 1.00 0.50	Very limited slope (very limited) large surface stones (moderately limited) percs slowly (slightly limited)	 1.00 0.31 0.18	Very limited slope (very limited) droughty (moderately limited) large surface stones (moderately limited)	 1.00 0.57 0.31	Very limited slope (very limited) large surface stones (moderately limited)	 1.00 0.31	Very limited slope (very limited) droughty (moderately limited) large surface stones (moderately limited)	 1.00 0.57 0.31

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73222:										
Splitlimb------	Moderately limited seepage (moderately limited)	0.32	Very limited ponded (wetness) (very limited) percs slowly (slightly limited)	1.00 0.13	Very limited ponded (wetness) (very limited) erodes easily (moderately limited) percs slowly (slightly limited)	1.00 0.60 0.13	Not rated		Not rated	
73223:										
Coulstone------	Very limited slope (very limited) seepage (very limited)	1.00 1.00	Very limited slope (very limited) large surface stones (very limited)	1.00 1.00	Very limited slope (very limited) droughty (very limited) large surface stones (very limited)	1.00 1.00 1.00	Very limited slope (very limited) large surface stones (very limited)	1.00 1.00	Very limited slope (very limited) droughty (very limited) large surface stones (very limited)	1.00 1.00 1.00
Bender---------	Very limited slope (very limited) seepage (very limited) depth to bedrock (limited)	1.00 1.00 0.86	Very limited slope (very limited) large stones (very limited) large surface stones (moderately limited)	1.00 1.00 0.43	Very limited slope (very limited) droughty (very limited) large stones (limited)	1.00 1.00 0.76	Very limited slope (very limited) depth to bedrock (very limited) large stones (very limited)	1.00 1.00 1.00	Very limited slope (very limited) droughty (very limited) large stones (very limited)	1.00 1.00 1.00
73224:										
Moko-----------	Very limited bedrock <20 in. (very limited) slope (very limited)	1.00 1.00	Very limited slope (very limited) shallow to bedrock (very limited) large stones (limited)	1.00 1.00 0.89	Very limited shallow to bedrock (very limited) droughty (very limited) slope (very limited)	1.00 1.00 1.00	Very limited slope (very limited) depth to bedrock (very limited) large stones (very limited)	1.00 1.00 1.00	Very limited large stones (very limited) bedrock <20 in. (very limited) slope (very limited)	1.00 1.00 1.00
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
74626:										
Tanglenook-----	Not limited		Moderately limited percs slowly (moderately limited)	0.39	Moderately limited erodes easily (moderately limited) percs slowly (moderately limited)	0.60 0.39	Very limited wetness (very limited) erodes easily (moderately limited)	1.00 0.60	Very limited wetness (very limited) erodes easily (moderately limited)	1.00 0.60

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74627:										
Hartville------	Not limited		Moderately limited percs slowly (moderately limited)	0.39	Moderately limited erodes easily (moderately limited) percs slowly (moderately limited)	0.60 0.39	Moderately limited erodes easily (moderately limited) wetness (moderately limited)	0.60 0.44	Moderately limited erodes easily (moderately limited) wetness (moderately limited)	0.60 0.44
74629:										
Raftville------	Very limited seepage (very limited) depth to bedrock (limited) slope (slightly limited)	1.00 0.94 0.20	Limited slope (limited) depth to bedrock (limited)	0.78 0.66	Limited slope (limited) depth to bedrock (limited) droughty (slightly limited)	0.78 0.66 0.23	Very limited depth to bedrock (very limited) slope (slightly limited)	1.00 0.20	Limited depth to bedrock (limited) droughty (slightly limited) slope (slightly limited)	0.94 0.23 0.20
74636:										
Lecoma---------	Moderately limited seepage (moderately limited) slope (moderately limited)	0.50 0.31	Limited slope (limited)	0.98	Limited slope (limited)	0.98	Moderately limited slope (moderately limited)	0.31	Moderately limited slope (moderately limited)	0.31
74637:										
Lecoma---------	Limited slope (limited) seepage (moderately limited)	0.80 0.50	Very limited slope (very limited)	1.00	Very limited slope (very limited)	1.00	Limited slope (limited)	0.80	Limited slope (limited)	0.80
74677:										
Deible---------	Not limited		Limited percs slowly (limited)	0.86	Limited percs slowly (limited) erodes easily (moderately limited)	0.86 0.60	Very limited wetness (very limited) erodes easily (moderately limited)	1.00 0.60	Very limited wetness (very limited) erodes easily (moderately limited)	1.00 0.60
74679:										
Higdon---------	Moderately limited seepage (moderately limited)	0.32	Not limited		Moderately limited erodes easily (moderately limited)	0.60	Moderately limited erodes easily (moderately limited) wetness (moderately limited)	0.60 0.60	Moderately limited erodes easily (moderately limited) wetness (moderately limited)	0.60 0.60

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75381:										
Bearthicket----	Moderately limited seepage (moderately limited)	0.50	Not limited		Moderately limited erodes easily (moderately limited)	0.60	Moderately limited erodes easily (moderately limited)	0.60	Moderately limited erodes easily (moderately limited)	0.60
75382:										
Cedargap-------	Moderately limited seepage (moderately limited)	0.50	Limited flooding (limited)	0.90	Limited flooding (limited)	0.90	Not limited		Not limited	
75388:										
Kaintuck-------	Very limited seepage (very limited)	1.00	Limited flooding (limited)	0.90	Limited flooding (limited)	0.90	Very limited too sandy (very limited)	1.00	Not limited	
Relfe----------	Very limited seepage (very limited)	1.00	Limited flooding (limited)	0.90	Very limited droughty (very limited)	1.00	Moderately limited too sandy (moderately limited)	0.60	Very limited droughty (very limited)	1.00
					flooding (limited)	0.90				
75389:										
Dunning--------	Moderately limited seepage (moderately limited)	0.50	Very limited percs slowly (very limited)	1.00	Very limited percs slowly (very limited)	1.00	Very limited wetness (very limited)	1.00	Very limited wetness (very limited)	1.00
			flooding (limited)	0.90	flooding (limited)	0.90	erodes easily (moderately limited)	0.60	erodes easily (moderately limited)	0.60
					erodes easily (moderately limited)	0.60				
Hercules-------	Moderately limited seepage (moderately limited)	0.50	Limited flooding (limited)	0.90	Limited flooding (limited)	0.90	Very limited wetness (very limited)	1.00	Very limited wetness (very limited)	1.00
			large stones (limited	0.75	percs slowly (slightly limited)	0.13	large stones (very limited)	1.00	large stones (very limited)	1.00
			percs slowly (slightly limited)	0.13	droughty (slightly limited)	0.09			droughty (slightly limited)	0.09
75390:										
Razort---------	Very limited seepage (very limited)	1.00	Not limited		Moderately limited erodes easily (moderately limited)	0.60	Moderately limited erodes easily (moderately limited)	0.60	Moderately limited erodes easily (moderately limited)	0.60

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75391:										
Possumtrot-----	Moderately limited seepage (moderately limited)	0.50	Moderately limited flooding (moderately limited)	0.60	Moderately limited flooding (moderately limited)	0.60	Not limited		Not limited	
75392:										
Stultz---------	Limited depth to bedrock (limited) seepage (moderately limited)	0.65 0.50	Limited flooding (limited) large stones (slightly limited) percs slowly (slightly limited)	0.90 0.30 0.13	Limited flooding (limited) droughty (slightly limited) percs slowly (slightly limited)	0.90 0.16 0.13	Very limited wetness (very limited) depth to bedrock (limited) large stones (limited)	1.00 0.66 0.62	Very limited wetness (very limited) depth to bedrock (limited) large stones (limited)	1.00 0.65 0.62
75406:										
Racket---------	Very limited seepage (very limited)	1.00	Limited flooding (limited)	0.90	Limited flooding (limited)	0.90	Not limited		Not limited	
75417:										
Relfe----------	Very limited seepage (very limited)	1.00	Limited flooding (limited)	0.90	Very limited droughty (very limited) flooding (limited)	1.00 0.90	Moderately limited too sandy (moderately limited)	0.60	Very limited droughty (very limited)	1.00
Sandbur--------	Very limited seepage (very limited)	1.00	Limited flooding (limited)	0.90	Limited flooding (limited)	0.90	Very limited too sandy (very limited)	1.00	Not limited	
75418:										
Tilk----------	Very limited seepage (very limited)	1.00	Slightly limited large stones (slightly limited)	0.30	Moderately limited droughty (moderately limited)	0.34	Moderately limited large stones (moderately limited)	0.52	Moderately limited large stones (moderately limited) droughty (moderately limited)	0.52 0.34
75419:										
Perche---------	Moderately limited seepage (moderately limited)	0.50	Moderately limited flooding (moderately limited)	0.60	Moderately limited flooding (moderately limited)	0.60	Very limited wetness (very limited)	1.00	Very limited wetness (very limited)	1.00

Table 15.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75420:										
Secesh---------	Moderately limited seepage (moderately limited)	0.50	Moderately limited flooding (moderately limited) large stones (slightly limited)	0.60 0.30	Moderately limited flooding (moderately limited)	0.60	Slightly limited large stones (slightly limited)	0.01	Slightly limited large stones (slightly limited)	0.01
Tilk-----------	Very limited seepage (very limited)	1.00	Moderately limited flooding (moderately limited) large stones (moderately limited)	0.60 0.51	Moderately limited flooding (moderately limited) droughty (moderately limited)	0.60 0.34	Limited large stones (limited)	0.90	Limited large stones (limited) droughty (moderately limited)	0.90 0.34
99000:										
Pits, quarries-	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 16.--Waste Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70022:										
Tonti	Moderately limited wetness (moderately limited) too acid (slightly limited)	 0.44 0.30	Moderately limited wetness (moderately limited) too acid (slightly limited)	 0.44 0.30	Moderately limited wetness (moderately limited) slope (moderately limited) too acid (slightly limited)	 0.44 0.31 0.30	Moderately limited wetness (moderately limited) slope (moderately limited) too acid (slightly limited)	 0.44 0.31 0.30	Very limited percs slowly (very limited) wetness (very limited) slope (limited)	 1.00 1.00 0.91
70025:										
Branson	Not limited		Not limited		Not limited		Not limited		Very limited percs slowly (very limited) too acid (slightly limited)	 1.00 0.03
Splitlimb	Moderately limited wetness (moderately limited)	 0.53	Moderately limited wetness (moderately limited)	 0.53	Moderately limited wetness (moderately limited)	 0.53	Moderately limited wetness (moderately limited)	 0.53	Very limited percs slowly (very limited) wetness (very limited) too acid (slightly limited)	 1.00 1.00 0.07
70026:										
Tonti	Moderately limited wetness (moderately limited) too acid (slightly limited)	 0.44 0.30	Moderately limited wetness (moderately limited) too acid (slightly limited)	 0.44 0.30	Moderately limited wetness (moderately limited) too acid (slightly limited)	 0.44 0.30	Moderately limited wetness (moderately limited) too acid (slightly limited)	 0.44 0.30	Very limited percs slowly (very limited) wetness (very limited) too acid (slightly limited)	 1.00 1.00 0.14
73000:										
Pomme	Not limited		Not limited		Slightly limited slope (slightly limited)	 0.10	Slightly limited slope (slightly limited)	 0.10	Very limited percs slowly (very limited) slope (moderately limited)	 1.00 0.31

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73013:										
Lowassie-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	ponded (wetness)	1.00	ponded (wetness)	1.00	wetness	1.00	wetness	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.99	percs slowly	0.99	percs slowly	0.99	percs slowly	0.99	wetness	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
73017:										
Bendavis-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	depth to bedrock	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	too acid	0.84	too acid	0.84	too acid	0.84	slope	1.00	slope	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	too acid	0.84	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
Poynor---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	too acid	0.61	too acid	0.61	too acid	0.61	too acid	0.61	percs slowly	0.38
	(limited)		(limited)		(limited)		(limited)		(moderately limited)	
	droughty	0.57	droughty	0.57	droughty	0.57	large surface stones	0.31	large surface stones	0.31
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
73019:										
Poynor---------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Limited	
	droughty	0.57	droughty	0.57	droughty	0.57	slope	0.31	slope	0.91
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
	too acid	0.30	too acid	0.30	slope	0.31	too acid	0.30	percs slowly	0.78
	(slightly limited)		(slightly limited)		(moderately limited)		(slightly limited)		(limited)	
					too acid	0.30			too acid	0.42
					(slightly limited)				(moderately limited)	
73021:										
Poynor---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	too acid	0.61	too acid	0.61	too acid	0.61	too acid	0.61	percs slowly	0.78
	(limited)		(limited)		(limited)		(limited)		(limited)	
	droughty	0.57	droughty	0.57	droughty	0.57	large surface stones	0.31	large surface stones	0.31
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73023:										
Mano	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Very limited	
	too acid	0.30	too acid	0.30	too acid	0.30	too acid	0.30	percs slowly	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
	wetness	0.28	wetness	0.28	wetness	0.28	wetness	0.28	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
					slope	0.20	slope	0.20	slope	0.66
					(slightly limited)		(slightly limited)		(limited)	
Ocie	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Very limited	
	wetness	0.28	wetness	0.28	wetness	0.28	wetness	0.28	percs slowly	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
					slope	0.20	depth to bedrock	0.25	depth to bedrock	1.00
					(slightly limited)		(slightly limited)		(very limited)	
							slope	0.20	wetness	1.00
							(slightly limited)		(very limited)	
73024:										
Mano	Limited		Limited		Limited		Limited		Very limited	
	slope	0.76	slope	0.76	slope	0.99	slope	0.99	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	large surface stones	0.31	large surface stones	0.31	large surface stones	0.31	large surface stones	0.31	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	too acid	0.30	too acid	0.30	too acid	0.30	too acid	0.30	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
Ocie	Limited		Limited		Limited		Limited		Very limited	
	slope	0.76	slope	0.76	slope	0.99	slope	0.99	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	large surface stones	0.31	large surface stones	0.31	large surface stones	0.31	large surface stones	0.31	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	wetness	0.28	wetness	0.28	wetness	0.28	wetness	0.28	depth to bedrock	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
73032:										
Gatewood	Moderately limited		Moderately limited		Limited		Very limited		Very limited	
	depth to bedrock	0.46	depth to bedrock	0.46	slope	0.70	depth to bedrock	1.00	percs slowly	1.00
	(moderately limited)		(moderately limited)		(limited)		(very limited)		(very limited)	
	slope	0.45	slope	0.45	depth to bedrock	0.46	slope	0.70	depth to bedrock	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)		(very limited)	
	wetness	0.36	wetness	0.36	wetness	0.36	wetness	0.36	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73033:										
Gatewood	Very limited slope (very limited) depth to bedrock (moderately limited) wetness (moderately limited)	 1.00 0.46 0.36	Very limited slope (very limited) depth to bedrock (moderately limited) wetness (moderately limited)	 1.00 0.46 0.36	Very limited slope (very limited) depth to bedrock (moderately limited) wetness (moderately limited)	 1.00 0.46 0.36	Very limited depth to bedrock (very limited) slope (very limited) wetness (moderately limited)	 1.00 1.00 0.36	Very limited percs slowly (very limited) slope (very limited) depth to bedrock (very limited)	 1.00 1.00 1.00
73051:										
Winnipeg	Not limited		Not limited		Not limited		Not limited		Very limited percs slowly (very limited)	 1.00
73052:										
Lily	Limited depth to bedrock (limited) droughty (slightly limited) too acid (slightly limited)	 0.66 0.19 0.06	Limited depth to bedrock (limited) droughty (slightly limited) too acid (slightly limited)	 0.66 0.19 0.06	Limited depth to bedrock (limited) slope (moderately limited) droughty (slightly limited)	 0.66 0.31 0.19	Very limited depth to bedrock (very limited) slope (moderately limited) too acid (slightly limited)	 1.00 0.31 0.06	Very limited depth to bedrock (very limited) slope (limited) percs slowly (moderately limited)	 1.00 0.91 0.32
73053:										
Lily	Limited depth to bedrock (limited) droughty (moderately limited) slope (moderately limited)	 0.76 0.48 0.31	Limited depth to bedrock (limited) droughty (moderately limited) slope (moderately limited)	 0.76 0.48 0.31	Limited depth to bedrock (limited) slope (moderately limited) droughty (moderately limited)	 0.76 0.60 0.48	Very limited depth to bedrock (very limited) slope (moderately limited) too acid (slightly limited)	 1.00 0.60 0.06	Very limited depth to bedrock (very limited) slope (very limited) percs slowly (moderately limited)	 1.00 1.00 0.32
Bender	Very limited droughty (very limited) depth to bedrock (limited) too acid (moderately limited)	 1.00 0.76 0.48	Very limited droughty (very limited) depth to bedrock (limited) too acid (moderately limited)	 1.00 0.76 0.48	Very limited droughty (very limited) depth to bedrock (limited) slope (moderately limited)	 1.00 0.76 0.60	Very limited depth to bedrock (very limited) slope (moderately limited) too acid (moderately limited)	 1.00 0.60 0.48	Very limited depth to bedrock (very limited) slope (very limited) percs slowly (moderately limited)	 1.00 1.00 0.32

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73054:										
Viburnum-------	Limited		Limited		Limited		Limited		Very limited	
	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	wetness	0.55	wetness	0.55	wetness	0.55	wetness	0.55	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
									too acid	0.42
									(moderately limited)	
73056:										
Viburnum-------	Limited		Limited		Limited		Limited		Very limited	
	slope	0.76	slope	0.76	slope	0.99	slope	0.99	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	wetness	0.60	wetness	0.60	wetness	0.60	wetness	0.60	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	too acid	0.30	too acid	0.30	too acid	0.30	too acid	0.30	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
73057:										
Jerktail-------	Limited		Limited		Limited		Limited		Very limited	
	wetness	0.86	wetness	0.86	wetness	0.86	wetness	0.86	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
									depth to bedrock	1.00
									(very limited)	
									wetness	1.00
									(very limited)	
73058:										
Gunlock--------	Limited		Limited		Limited		Limited		Very limited	
	percs slowly	0.99	percs slowly	0.99	percs slowly	0.99	percs slowly	0.99	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	wetness	0.58	wetness	0.58	wetness	0.58	wetness	0.58	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
					slope	0.31	slope	0.31	slope	0.91
					(moderately limited)		(moderately limited)		(limited)	
73063:										
Bendavis-------	Slightly limited		Slightly limited		Slightly limited		Very limited		Very limited	
	too acid	0.30	too acid	0.30	too acid	0.30	depth to bedrock	1.00	depth to bedrock	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(very limited)		(very limited)	
	wetness	0.28	wetness	0.28	wetness	0.28	too acid	0.30	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
	depth to bedrock	0.27	depth to bedrock	0.27	depth to bedrock	0.27	wetness	0.28	percs slowly	0.78
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73063:										
Poynor	Moderately limited		Moderately limited		Moderately limited		Slightly limited		Limited	
	droughty	0.40	droughty	0.40	droughty	0.40	too acid	0.30	percs slowly	0.78
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(limited)	
	too acid	0.30	too acid	0.30	too acid	0.30	slope	0.20	slope	0.66
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(limited)	
					slope	0.20			too acid	0.42
					(slightly limited)				(moderately limited)	
73066:										
Bender	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	depth to bedrock	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	too cobbly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.45	large stones	0.45	slope	0.60	slope	0.60	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
73067:										
Bender	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	depth to bedrock	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	droughty	1.00	droughty	1.00	slope	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.76	depth to bedrock	0.76	depth to bedrock	0.76	large surface stones	0.60	too cobbly	0.97
	(limited)		(limited)		(limited)		(moderately limited)		(limited)	
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73068:										
Tick	Limited		Limited		Limited		Limited		Very limited	
	percs slowly	0.99	percs slowly	0.99	slope	0.99	slope	0.99	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	slope	0.76	slope	0.76	percs slowly	0.99	percs slowly	0.99	slope	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	too acid	0.36	too acid	0.36	too acid	0.36	too acid	0.36	too acid	0.07
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)	
73069:										
Tick	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.99	percs slowly	0.99	percs slowly	0.99	percs slowly	0.99	slope	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	too acid	0.36	too acid	0.36	too acid	0.36	too acid	0.36	too acid	0.07
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73071:										
Hogcreek-------	Limited		Limited		Limited		Very limited		Very limited	
	wetness	0.73	wetness	0.73	wetness	0.73	depth to bedrock	1.00	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	depth to bedrock	0.18	depth to bedrock	0.18	depth to bedrock	0.18	wetness	0.73	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(limited)		(very limited)	
	too acid	0.18	too acid	0.18	too acid	0.18	too acid	0.18	percs slowly	0.92
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(limited)	
73072:										
Hogcreek-------	Limited		Limited		Limited		Very limited		Very limited	
	wetness	0.73	wetness	0.73	wetness	0.73	depth to bedrock	1.00	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	depth to bedrock	0.18	depth to bedrock	0.18	slope	0.31	wetness	0.73	wetness	1.00
	(slightly limited)		(slightly limited)		(moderately limited)		(limited)		(very limited)	
	too acid	0.18	too acid	0.18	depth to bedrock	0.18	slope	0.31	percs slowly	0.92
	(slightly limited)		(slightly limited)		(slightly limited)		(moderately limited)		(limited)	
73073:										
Scholten-------	Limited		Limited		Limited		Limited		Very limited	
	slope	0.76	slope	0.76	slope	0.99	slope	0.99	slope	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	droughty	0.70	droughty	0.70	droughty	0.70	wetness	0.58	wetness	1.00
	(limited)		(limited)		(limited)		(moderately limited)		(very limited)	
	wetness	0.58	wetness	0.58	wetness	0.58	too acid	0.42	percs slowly	0.96
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
Poynor---------	Limited		Limited		Limited		Limited		Very limited	
	slope	0.76	slope	0.76	slope	0.99	slope	0.99	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	droughty	0.75	droughty	0.75	droughty	0.75	too acid	0.42	slope	1.00
	(limited)		(limited)		(limited)		(moderately limited)		(very limited)	
	too acid	0.42	too acid	0.42	too acid	0.42			too acid	0.03
	(moderately limited)		(moderately limited)		(moderately limited)				(slightly limited)	
73076:										
Mano-----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	too acid	0.30	too acid	0.30	too acid	0.30	too acid	0.30	slope	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
	wetness	0.28	wetness	0.28	wetness	0.28	wetness	0.28	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73076:										
Ocie	Very limited slope (very limited) wetness (slightly limited)	 1.00 0.28 	Very limited slope (very limited) wetness (slightly limited)	 1.00 0.28 	Very limited slope (very limited) wetness (slightly limited)	 1.00 0.28 	Very limited slope (very limited) wetness (slightly limited) depth to bedrock (slightly limited)	 1.00 0.28 0.25	Very limited percs slowly (very limited) slope (very limited) depth to bedrock (very limited)	 1.00 1.00 1.00
73077:										
Eudy	Limited wetness (limited) depth to bedrock (slightly limited)	 0.86 0.13 	Limited wetness (limited) depth to bedrock (slightly limited)	 0.86 0.13 	Limited wetness (limited) slope (slightly limited) depth to bedrock (slightly limited)	 0.86 0.20 0.13	Very limited depth to bedrock (very limited) wetness (limited) slope (slightly limited)	 1.00 0.86 0.20	Very limited percs slowly (very limited) depth to bedrock (very limited) wetness (very limited)	 1.00 1.00 1.00
73080:										
Alred	Very limited slope (very limited) large surface stones (moderately limited) too acid (slightly limited)	 1.00 0.60 0.12 	Very limited slope (very limited) large surface stones (moderately limited) too acid (slightly limited)	 1.00 0.60 0.12 	Very limited slope (very limited) large surface stones (moderately limited) too acid (slightly limited)	 1.00 0.60 0.12 	Very limited slope (very limited) large surface stones (moderately limited) too acid (slightly limited)	 1.00 0.60 0.12 	Very limited percs slowly (very limited) slope (very limited) large surface stones (moderately limited)	 1.00 1.00 0.60
Bardley	Very limited slope (very limited) droughty (limited) large surface stones (moderately limited)	 1.00 0.72 0.60 	Very limited slope (very limited) droughty (limited) large surface stones (moderately limited)	 1.00 0.72 0.60 	Very limited slope (very limited) droughty (limited) large surface stones (moderately limited)	 1.00 0.72 0.60 	Very limited depth to bedrock (very limited) slope (very limited) large surface stones (moderately limited)	 1.00 1.00 0.60 	Very limited percs slowly (very limited) slope (very limited) depth to bedrock (very limited)	 1.00 1.00 1.00
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73081:										
Bender	Very limited droughty (very limited) slope (very limited) poor filter (very limited)	 1.00 1.00 1.00 	Very limited droughty (very limited) slope (very limited) poor filter (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) droughty (very limited) poor filter (very limited)	 1.00 1.00 1.00 	Very limited depth to bedrock (very limited) slope (very limited) poor filter (very limited)	 1.00 1.00 1.00 	Very limited slope (very limited) depth to bedrock (very limited) too cobbly (very limited)	 1.00 1.00 1.00

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73081:										
Alred----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones >35%	0.99	large stones >35%	0.99	large stones >35%	0.99	large stones >35%	0.99	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	0.43	large surface stones	0.43	large surface stones	0.43	large surface stones	0.43	large surface stones	0.43
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73087:										
Celt----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	too acid	0.18	too acid	0.18	too acid	0.18	too acid	0.18	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
									too acid	0.07
									(slightly limited)	
73159:										
Yelton---------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Very limited	
	wetness	0.58	wetness	0.58	wetness	0.58	wetness	0.58	percs slowly	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
					slope	0.20	slope	0.20	wetness	1.00
					(slightly limited)		(slightly limited)		(very limited)	
									slope	0.66
									(limited)	
73176:										
Bendavis-------	Limited		Limited		Limited		Very limited		Very limited	
	slope	0.76	slope	0.76	slope	0.99	depth to bedrock	1.00	slope	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	depth to bedrock	0.58	depth to bedrock	0.58	depth to bedrock	0.58	slope	0.99	depth to bedrock	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)		(very limited)	
	droughty	0.45	droughty	0.45	droughty	0.45	wetness	0.28	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(very limited)	
Poynor---------	Limited		Limited		Limited		Limited		Very limited	
	slope	0.76	slope	0.76	slope	0.99	slope	0.99	slope	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	too acid	0.30	too acid	0.30	too acid	0.30	too acid	0.30	percs slowly	0.32
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(moderately limited)	
	large surface stones	0.13	large surface stones	0.13	large surface stones	0.13	large surface stones	0.13	large surface stones	0.13
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73197:										
Viburnum-------	Limited		Limited		Limited		Limited		Very limited	
	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	wetness	0.60	wetness	0.60	wetness	0.60	wetness	0.60	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
					slope	0.10	slope	0.10	too acid	0.42
					(slightly limited)		(slightly limited)		(moderately limited)	
73198:										
Gressy---------	Not limited		Not limited		Slightly limited		Slightly limited		Very limited	
					slope	0.10	slope	0.10	percs slowly	1.00
					(slightly limited)		(slightly limited)		(very limited)	
									slope	0.31
									(moderately limited)	
Viraton--------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Very limited	
	wetness	0.44	wetness	0.44	wetness	0.44	wetness	0.44	percs slowly	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	too acid	0.42	too acid	0.42	too acid	0.42	too acid	0.42	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
					slope	0.10	slope	0.10	too acid	0.31
					(slightly limited)		(slightly limited)		(moderately limited)	
73199:										
Moko-----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	shallow to bedrock	1.00	droughty	1.00	droughty	1.00	depth to bedrock	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	shallow to bedrock	1.00	shallow to bedrock	1.00	large stones >35%	0.99	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones >35%	0.99	large stones >35%	0.99	large stones >35%	0.99	slope	0.70	too cobbly	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73220:										
Poynor---------	Limited		Limited		Limited		Limited		Very limited	
	slope	0.76	slope	0.76	slope	0.99	slope	0.99	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	droughty	0.57	droughty	0.57	droughty	0.57	too acid	0.42	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	too acid	0.42	too acid	0.42	too acid	0.42			too acid	0.03
	(moderately limited)		(moderately limited)		(moderately limited)				(slightly limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73221:										
Poynor---	Limited		Limited		Very limited		Very limited		Very limited	
	slope	0.99	slope	0.99	slope	1.00	slope	1.00	slope	1.00
	(limited)		(limited)		(very limited)		(very limited)		(very limited)	
	too acid	0.61	too acid	0.61	too acid	0.61	too acid	0.61	percs slowly	0.32
	(limited)		(limited)		(limited)		(limited)		(moderately limited)	
	droughty	0.57	droughty	0.57	droughty	0.57	large surface stones	0.31	large surface stones	0.31
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
73222:										
Splitlimb---	Very limited		Very limited		Very limited		Very limited		Very limited	
	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	ponded (wetness)	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	wetness	0.55	wetness	0.55	wetness	0.55	wetness	0.55	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
73223:										
Coulstone---	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	droughty	1.00	droughty	1.00	large surface stones	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	poor filter	1.00	percs slowly	0.32
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
Bender---	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	slope	1.00	depth to bedrock	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	droughty	1.00	slope	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	too cobbly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73224:										
Moko	Very limited shallow to bedrock (very limited) droughty (very limited) slope (very limited)	1.00 1.00 1.00	Very limited droughty (very limited) shallow to bedrock (very limited) slope (very limited)	1.00 1.00 1.00	Very limited droughty (very limited) slope (very limited) shallow to bedrock (very limited)	1.00 1.00 1.00	Very limited depth to bedrock (very limited) slope (very limited) large surface stones (moderately limited)	1.00 1.00 0.37	Very limited percs slowly (very limited) slope (very limited) depth to bedrock (very limited)	1.00 1.00 1.00
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
74626:										
Tanglenook	Very limited wetness (very limited) percs slowly (limited) flooding (slightly limited)	1.00 0.99 0.30	Very limited wetness (very limited) percs slowly (limited) flooding (slightly limited)	1.00 0.99 0.30	Very limited wetness (very limited) percs slowly (limited) flooding (slightly limited)	1.00 0.99 0.30	Very limited wetness (very limited) percs slowly (limited) flooding (slightly limited)	1.00 0.99 0.30	Very limited percs slowly (very limited) wetness (very limited)	1.00 1.00
74627:										
Hartville	Limited percs slowly (limited) wetness (moderately limited) flooding (slightly limited)	0.99 0.44 0.30	Limited percs slowly (limited) wetness (moderately limited) flooding (slightly limited)	0.99 0.44 0.30	Limited percs slowly (limited) wetness (moderately limited) flooding (slightly limited)	0.99 0.44 0.30	Limited percs slowly (limited) wetness (moderately limited) flooding (slightly limited)	0.99 0.44 0.30	Very limited percs slowly (very limited) wetness (very limited)	1.00 1.00
74629:										
Raftville	Limited depth to bedrock (limited) flooding (slightly limited) droughty (slightly limited)	0.66 0.30 0.23	Limited depth to bedrock (limited) flooding (slightly limited) droughty (slightly limited)	0.66 0.30 0.23	Limited depth to bedrock (limited) flooding (slightly limited) droughty (slightly limited)	0.66 0.30 0.23	Very limited depth to bedrock (very limited) flooding (slightly limited) slope (slightly limited)	1.00 0.30 0.20	Very limited depth to bedrock (very limited) slope (limited) percs slowly (limited)	1.00 0.66 0.62
74636:										
Lecoma	Not limited		Not limited		Moderately limited slope (moderately limited)	0.31	Moderately limited slope (moderately limited)	0.31	Very limited percs slowly (very limited) slope (limited)	1.00 0.91

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74637:										
Lecoma	Moderately limited slope (moderately limited)	0.60	Moderately limited slope (moderately limited)	0.60	Limited slope (limited)	0.80	Limited slope (limited)	0.80	Very limited percs slowly (very limited) slope (very limited)	1.00 1.00
74677:										
Deible	Very limited wetness (very limited) percs slowly (limited) flooding (slightly limited)	1.00 0.99 0.30	Very limited wetness (very limited) percs slowly (limited) flooding (slightly limited)	1.00 0.99 0.30	Very limited wetness (very limited) percs slowly (limited) flooding (slightly limited)	1.00 0.99 0.30	Very limited wetness (very limited) percs slowly (limited) flooding (slightly limited)	1.00 0.99 0.30	Very limited percs slowly (very limited) wetness (very limited)	1.00 1.00
74679:										
Higdon	Limited percs slowly (limited) wetness (moderately limited) flooding (slightly limited)	0.61 0.60 0.30	Limited percs slowly (limited) wetness (moderately limited) flooding (slightly limited)	0.61 0.60 0.30	Limited percs slowly (limited) wetness (moderately limited) flooding (slightly limited)	0.61 0.60 0.30	Limited percs slowly (limited) wetness (moderately limited) flooding (slightly limited)	0.61 0.60 0.30	Very limited percs slowly (very limited) wetness (very limited)	1.00 1.00
75381:										
Bearthicket	Slightly limited flooding (slightly limited)	0.30	Slightly limited flooding (slightly limited)	0.30	Slightly limited flooding (slightly limited)	0.30	Slightly limited flooding (slightly limited)	0.30	Very limited percs slowly (very limited)	1.00
75382:										
Cedargap	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited flooding (very limited)	1.00	Very limited percs slowly (very limited) flooding (very limited) wetness (limited)	1.00 1.00 0.61

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75388:										
Kaintuck-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
									percs slowly	0.32
									(moderately limited)	
Relfe----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	droughty	1.00	droughty	1.00	flooding	1.00	flooding	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	flooding	1.00	flooding	1.00	poor filter	1.00	percs slowly	0.32
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00				
	(very limited)		(very limited)		(very limited)					
75389:										
Dunning--------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	percs slowly	1.00	flooding	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	1.00	percs slowly	1.00	wetness	1.00	percs slowly	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00	flooding	1.00	flooding	1.00	wetness	1.00	flooding	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
Hercules-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	flooding	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	1.00	flooding	1.00	flooding	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.45	large stones	0.45	large stones	0.45	large stones	0.45	flooding	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
75390:										
Razort---------	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Very limited	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30	percs slowly	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
75391:										
Possumtrot-----	Limited		Limited		Limited		Limited		Very limited	
	flooding	0.90	flooding	0.90	flooding	0.90	flooding	0.90	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	too acid	0.54	too acid	0.54	too acid	0.54	too acid	0.54	flooding	0.60
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75392:										
Stultz	Very limited wetness (very limited) flooding (very limited) droughty (slightly limited)	 1.00 1.00 0.16 	Very limited wetness (very limited) flooding (very limited) droughty (slightly limited)	 1.00 1.00 0.16 	Very limited wetness (very limited) flooding (very limited) droughty (slightly limited)	 1.00 1.00 0.16 	Very limited flooding (very limited) wetness (very limited) depth to bedrock (limited)	 1.00 1.00 0.66 	Very limited percs slowly (very limited) depth to bedrock (very limited) wetness (very limited)	 1.00 1.00 1.00
75406:										
Racket	Very limited flooding (very limited)	 1.00 	Very limited flooding (very limited)	 1.00 	Very limited flooding (very limited)	 1.00 	Very limited flooding (very limited)	 1.00 	Very limited flooding (very limited) percs slowly (very limited) wetness (limited)	 1.00 1.00 0.61
75417:										
Relfe	Very limited flooding (very limited) droughty (very limited) poor filter (very limited)	 1.00 1.00 1.00 	Very limited flooding (very limited) droughty (very limited) poor filter (very limited)	 1.00 1.00 1.00 	Very limited flooding (very limited) droughty (very limited) poor filter (very limited)	 1.00 1.00 1.00 	Very limited flooding (very limited) poor filter (very limited)	 1.00 1.00 	Very limited flooding (very limited) percs slowly (moderately limited)	 1.00 0.50
Sandbur	Very limited flooding (very limited)	 1.00 	Very limited flooding (very limited)	 1.00 	Very limited flooding (very limited)	 1.00 	Very limited flooding (very limited)	 1.00 	Very limited flooding (very limited) percs slowly (moderately limited)	 1.00 0.32
75418:										
Tilk	Very limited poor filter (very limited) droughty (moderately limited) flooding (slightly limited)	 1.00 0.34 0.30 	Very limited poor filter (very limited) droughty (moderately limited) flooding (slightly limited)	 1.00 0.34 0.30 	Very limited poor filter (very limited) droughty (moderately limited) flooding (slightly limited)	 1.00 0.34 0.30 	Very limited poor filter (very limited) flooding (slightly limited)	 1.00 0.30 	Slightly limited percs slowly (moderately limited) too acid (slightly limited)	 0.32 0.01

Table 16.--Waste Management--Continued

Map symbol and soil name	Land application of manure and food-processing waste		Land application of municipal sewage sludge		Disposal of wastewater by irrigation		Treatment of wastewater by slow rate process		Treatment of wastewater by rapid infiltration process	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75419:										
Perche---	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	0.90	flooding	0.90	flooding	0.90	flooding	0.90	wetness	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	too acid	0.54	too acid	0.54	too acid	0.54	too acid	0.54	flooding	0.60
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
75420:										
Secesh---	Limited		Limited		Limited		Limited		Very limited	
	flooding	0.90	flooding	0.90	flooding	0.90	flooding	0.90	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
									flooding	0.60
									(moderately limited)	
Tilk---	Very limited		Very limited		Very limited		Very limited		Limited	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	flooding	0.60
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
	flooding	0.90	flooding	0.90	flooding	0.90	flooding	0.90	percs slowly	0.32
	(limited)		(limited)		(limited)		(limited)		(moderately limited)	
	droughty	0.34	droughty	0.34	droughty	0.34			too acid	0.01
	(moderately limited)		(moderately limited)		(moderately limited)				(slightly limited)	
99000:										
Pits, quarries-	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water---	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 17.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated. For an explanation of the abbreviations in the USDA texture column, see "Texture, soil" in the Glossary.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
70022:												
Tonti----------	0-8	SIL	CL, CL-ML	A-4, A-6	0	0-5	80-100	75-100	70-95	60-85	20-35	4-14
	8-20	GR-SICL, GR-SIL, SICL	CL, GC	A-4, A-6	0	0-5	65-100	60-100	55-100	45-95	25-40	8-20
	20-34	GRX-SIL, GRV-SIL, GRV-SICL, GRX-SICL	GC	A-2, A-4, A-6	0-5	0-10	30-55	25-50	20-45	20-40	25-40	7-20
	34-80	GRX-SIC, GRV-C, GR-C, GRX-C	CH, CL, GC, SC	A-2, A-7	0-5	0-10	15-80	10-75	10-70	10-65	45-80	25-50
70025:												
Branson---------	0-8	SIL	CL-ML	A-4	0	0	95-100	90-100	85-100	75-90	15-25	3-7
	8-26	SIL, SICL	CL, CL-ML	A-4	0	0	95-100	90-100	85-100	80-95	20-35	6-15
	26-40	SICL, SIL	CL	A-6	0	0	90-100	85-100	75-100	70-95	30-40	10-15
	40-80	SICL, SIC	CL	A-6, A-7	0	0-3	85-100	85-100	75-100	70-95	25-50	8-20
Splitlimb-------	0-10	SIL	CL-ML	A-4	0	0	100	95-100	85-100	70-90	15-25	3-7
	10-20	SIL, SICL	CL	A-6	0	0	100	95-100	80-100	75-95	20-35	5-15
	20-29	SIL, SICL	CL	A-6, A-7-6	0	0	95-100	90-100	80-100	75-95	25-45	8-20
	29-80	SICL, SIL	CL	A-6, A-7-6	0	0	95-100	90-100	80-100	75-95	30-45	10-25
70026:												
Tonti----------	0-8	SIL	CL, CL-ML, SC-SM	A-4, A-6	0	0-5	80-95	75-90	70-85	60-70	20-35	4-15
	8-20	GR-SICL, GR-SIL, SICL	CL, GC, SC	A-4, A-6	0	0-5	65-95	60-90	55-85	45-80	25-40	8-20
	20-34	GRX-SIL, GRV-SIL, GRV-SICL, GRX-SICL	GC	A-2, A-4, A-6	0-5	0-10	25-55	20-50	20-45	20-40	25-40	7-20
	34-80	GRX-SIC, GRV-C, GR-C, GRX-C	CH, CL, GC, SC	A-2, A-7	0-5	0-10	25-75	20-70	15-65	10-60	45-80	25-50
73000:												
Pomme----------	0-7	SIL	CL, CL-ML	A-4	0	0-5	80-100	75-100	70-95	50-90	20-30	6-10
	7-19	SICL, GR-SIL, GR-SICL, SIL	CL	A-4, A-6	0	0-10	70-95	65-90	50-85	50-75	30-40	9-15
	19-57	GRV-SICL, GR-SICL, SICL	GC, CL	A-2, A-6, A-7-6	0	0-10	50-95	45-90	35-85	30-75	30-45	15-25
	57-80	C, GR-C, GRV-CL	GC, CH, CL	A-7, A-2, A-6	0	0-15	40-95	35-90	30-85	25-80	37-60	15-30
73013:												
Lowassie--------	0-10	SIL	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	85-100	20-35	5-15
	10-18	SIL, SICL	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	85-100	25-40	5-20
	18-36	SIC, C	CH	A-7	0	0	100	100	90-100	85-95	50-70	25-40
	36-80	SIL, SICL	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	30-45	10-25
73017:												
Bendavis--------	0-3	GRV-SIL	GC, GC-GM, GM	A-2, A-2-4, A-4	0-5	0-5	30-55	25-50	20-45	15-40	10-20	2-8
	3-14	GR-SIL, GRV-SIL	GC, GM, ML, CL-ML	A-4	0-5	0-5	45-80	40-75	35-70	30-65	10-20	2-8
	14-34	GRV-SIL, GRV-SICL, GRX-SIL	GC, GC-GM	A-2, A-2-6, A-6	0-5	0-5	30-55	20-50	15-45	15-40	25-30	7-15
	34-80	BR	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
73017:												
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-2, A-1, A-2-4, A-4	0-5	0-20	30-55	25-50	20-45	20-40	20-30	2-8
	4-10	GRV-L, GRV-SIL, GRX-SIL	GC, GC-GM, GM	A-2, A-1-b, A-2-4, A-4	0-5	0-20	30-55	20-50	20-50	15-40	20-30	2-8
	10-28	GRV-SIL, GRV-CL, GRX-SICL	GC	A-2, A-2-6, A-6	0-5	0-20	25-55	20-50	20-50	15-45	25-40	10-20
	28-80	SIC, C	CH, MH	A-7	0	0-10	95-100	90-100	85-95	70-90	50-80	25-40
73019:												
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-2, A-1, A-2-4, A-4	0-5	0-20	30-55	25-50	20-45	20-40	20-30	2-8
	4-10	GRV-SIL, GR-SIL, GRX-SIL	GC, GC-GM, GM	A-2, A-1-b, A-2-4, A-4	0-5	0-20	25-60	20-55	20-50	15-40	20-30	2-8
	10-28	GRV-SICL, GRX-SICL, GRV-SIL, GRX-SIL	GC	A-2, A-2-6, A-6	0-5	0-20	25-55	20-50	20-50	15-45	25-40	10-20
	28-80	C, GR-C	CH, MH	A-7	0	0-10	65-100	60-100	55-95	50-90	50-70	25-35
73021:												
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-2, A-1, A-2-4, A-4	0-5	0-20	30-55	25-50	20-45	20-40	20-30	2-8
	4-10	GRV-SIL, GRX-SIL	GC, GC-GM, GM	A-2, A-1-b, A-2-4, A-4	0-5	0-20	25-55	20-50	20-50	15-40	20-30	2-8
	10-28	GRV-SICL, GRV-SIL, GRX-SIL	GC	A-2, A-2-6, A-6	0-5	0-20	25-55	20-50	20-50	15-45	25-40	10-20
	28-80	C, CB-C	CH, MH	A-7	0	0-15	95-100	90-100	85-95	70-90	50-80	25-40
73023:												
Mano----------	0-3	GR-SIL	CL, GC, GM, ML	A-4	0	0-5	55-80	50-75	45-75	40-70	15-25	3-8
	3-13	GRV-SIL, GR-SIL	CL, GC, GM, ML	A-4	0	0-5	30-80	25-75	25-75	15-70	15-25	3-8
	13-33	GRV-SIL, GRV-SICL	GC	A-2, A-6	0	0-5	30-55	25-50	25-45	15-40	20-30	5-15
	33-80	C, SIC, GR-C	CH	A-7	0	0	70-95	70-95	65-90	55-85	50-75	30-45
Ocie----------	0-5	GRV-SIL	GC, GC-GM	A-1, A-2, A-4	0	0-15	35-60	30-55	25-50	20-45	0-25	4-10
	5-11	GRV-SIL, GRV-L, GR-SIL	GC, GC-GM	A-2, A-1-b, A-2-4, A-2-6	0-5	0-20	40-80	25-75	20-60	15-55	20-30	5-15
	11-24	GRV-SICL, GRV-SIL	GC, GC-GM	A-2, A-1-b, A-2-4, A-2-6	0-5	0-20	35-55	25-50	20-45	15-35	20-30	5-15
	24-56	C, GR-C	CH	A-7	0-5	0-15	75-95	70-90	65-85	60-80	50-70	30-40
	56-80	BR	---	---	---	---	---	---	---	---	---	---
73024:												
Mano----------	0-3	GRV-SIL	GC-GM, GC, GM	A-1, A-2, A-4	0	0-5	30-55	25-50	25-45	15-40	15-25	3-8
	3-13	GRV-SIL, GR-SIL	CL, GC, GM, ML	A-4	0	0-5	30-80	25-75	25-75	15-70	15-25	3-8
	13-33	GRV-SIL, GRV-SICL	GC	A-2, A-6	0	0-5	30-55	25-50	25-45	15-40	20-30	5-15
	33-80	C, GR-C	CH	A-7	0	0	70-95	70-95	65-90	55-85	50-75	30-45

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
73024:												
Ocie	0-5	GRV-SIL	GC, GC-GM	A-1, A-2, A-4	0	0-15	35-60	30-55	25-50	20-45	0-25	4-10
	5-11	GRV-SIL	GC, GC-GM	A-2, A-1-b, A-2-4, A-2-6	0-5	0-20	40-60	25-55	20-45	15-35	20-30	5-15
	11-24	GRV-SIL, GRX-SIL, GRV-SICL	GC, GC-GM	A-2, A-1-b, A-2-4, A-2-6	0-5	0-20	25-55	20-50	20-45	15-35	20-30	5-15
	24-56	GR-C, C	CH	A-7	0-5	0-15	75-95	70-90	65-85	60-80	50-70	30-40
	56-80	BR	---	---	---	---	---	---	---	---	---	---
73032:												
Gatewood	0-2	GRV-SIL	GC-GM, GC, SC	A-2, A-4, A-6	0	0-15	55-80	35-55	30-50	30-45	25-35	7-15
	2-5	GRV-SIL, GR-SIL	CL, GC, SC	A-2, A-4, A-6	0	0-15	40-90	35-85	30-75	30-70	25-35	7-15
	5-36	C, GR-C	CH	A-7	0-5	0-10	80-95	60-90	55-90	50-80	55-75	30-45
	36-80	BR	---	---	---	---	---	---	---	---	---	---
73033:												
Gatewood	0-2	GRX-SIL	GC-GM, GC	A-2-6, A-2-4	0	0-15	20-40	15-35	15-35	10-30	25-35	7-15
	2-5	GRV-SIL, GR-SIL	CL, GC, SC	A-2, A-4, A-6	0	0-15	40-90	35-80	30-75	30-70	25-35	7-15
	5-36	C, CB-C	CH	A-7	0-5	0-15	80-95	75-95	70-90	55-85	55-75	30-45
	36-80	BR	---	---	---	---	---	---	---	---	---	---
73051:												
Winnipeg	0-6	SIL	CL	A-4	0	0	95-100	90-100	85-95	75-85	25-35	7-15
	6-16	SIL, SICL	CL	A-6	0	0	95-100	90-100	85-95	70-90	30-40	10-20
	16-44	SICL, SIL	CL	A-6	0	0	85-100	75-100	70-95	65-90	35-45	15-25
	44-80	C, GR-SIC, GRV-SICL	GC, SC, CL	A-7, A-2-6, A-6	0	0	45-100	35-100	35-95	30-85	35-70	15-40
73052:												
Lily	0-3	L	CL-ML, ML	A-4	0	0	90-100	85-100	75-90	55-65	10-35	2-15
	3-10	L, CL	CL	A-6	0	0	90-100	85-100	75-90	55-70	30-45	10-20
	10-24	GR-L, GR-CL	GC	A-7, A-6	0	0	60-80	55-75	50-70	40-50	25-45	10-20
	24-80	BR	---	---	---	---	---	---	---	---	---	---
73053:												
Lily	0-3	L	CL-ML, ML	A-4	0	0-5	90-100	85-100	75-90	55-65	10-35	2-15
	3-15	L, CL	CL	A-6	0	0-5	90-100	85-100	75-90	55-70	30-45	10-20
	15-21	GR-L, GR-CL	GC	A-7, A-6	0	0-10	60-80	55-75	50-70	40-50	25-45	10-20
	21-60	BR	---	---	---	---	---	---	---	---	---	---
Bender	0-4	CBV-FSL	SC, SC-SM, SM	A-2, A-2-4	0-2	20-40	50-75	45-70	35-60	20-35	10-30	2-10
	4-12	CBV-FSL	SC-SM, SC, SM	A-2	0	20-40	50-80	45-70	35-60	20-35	10-30	2-10
	12-23	CBX-L, GRX-SL	GC, GC-GM, GW-GC	A-2, A-1-a, A-1	0-2	10-55	25-75	20-70	10-60	5-45	25-30	5-10
	23-60	BR	---	---	---	---	---	---	---	---	---	---
73054:												
Viburnum	0-7	SIL	CL, CL-ML	A-4	0	0	90-100	80-100	75-95	60-90	20-30	5-10
	7-20	SICL, GR-SICL	CL	A-6, A-7	0	0-5	70-100	60-100	55-90	55-85	35-50	15-25
	20-38	SICL, SIC, GRV-SIC	CH, CL, GC, SC	A-2-7, A-7	0	0-5	50-95	45-90	35-85	30-80	45-60	20-35
	38-80	GRV-SIC, GR-C, GRX-C	GC, SC, SP-SC	A-2-7	0	0-10	20-75	15-60	10-60	5-55	45-70	20-40

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
73056:												
Viburnum--------	0-6	GRV-SIL	GC, GC-GM, GM	A-1, A-2-4, A-4, A-2	0-2	0	30-55	25-50	20-45	20-40	20-30	2-8
	6-18	SICL, GR-SICL	CL	A-6, A-7	0	0-5	70-100	60-100	55-90	55-85	35-50	15-25
	18-35	GR-SICL, GR-SIC, GRV-SIC	CH, CL, GC, SC	A-2-7, A-7	0	0-15	50-85	40-75	35-70	30-65	45-60	20-35
	35-80	GR-C, GRV-C, GRX-C, GR-SIC, GRX-SIC	CH, CL	A-7	0-15	0-30	25-85	20-75	15-70	15-65	40-80	20-35
73057:												
Jerktail--------	0-5	SIL	CL, CL-ML	A-4	0-2	0-5	80-100	75-100	70-95	65-90	20-30	4-9
	5-17	SIL, SICL, GR-SIL, GR-SICL	CL	A-6, A-7	0-2	0-5	65-100	60-100	55-95	50-90	30-50	10-25
	17-63	GR-C, C, GR-SIC, SIC	GC, SC, CH	A-2-7	0-5	0-10	55-100	50-100	45-95	30-90	60-80	30-50
	63-80	BR	---	---	---	---	---	---	---	---	---	---
73058:												
Gunlock---------	0-5	SIL	CL, CL-ML	A-4, A-6	0	0	90-100	85-100	80-95	70-90	25-35	5-15
	5-25	SICL, SIC	CH, CL	A-6, A-7	0	0	80-100	75-95	70-90	65-85	35-55	15-30
	25-43	SICL, GR-SICL, SIL, GRV-SICL	CL, GC, SC	A-6, A-7	0	0-5	50-95	45-90	40-85	35-80	30-45	10-20
	43-80	GR-C, C, GR-SIC	GC, CH	A-7-6	0	0-5	55-100	50-95	45-80	40-75	55-75	30-50
73063:												
Bendavis--------	0-8	GR-SIL	GC-GM, GM, ML	A-4	0	0-5	55-80	50-75	45-70	40-60	15-20	2-8
	8-10	GRV-SIL, GR-SIL, SIL	GM, ML	A-4	0	0-15	40-85	35-80	35-80	30-65	15-20	2-8
	10-31	GRV-SIL, GRV-L, GRX-SICL, GRV-SICL	GC, SC, GC-GM	A-2-4, A-4	0-5	0-25	25-60	20-55	20-50	15-45	20-30	5-15
	31-80	BR	---	---	---	---	---	---	---	---	---	---
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-2, A-1, A-2-4, A-4	0-5	0-20	30-55	25-50	20-45	20-40	20-30	2-8
	4-10	GRV-SIL, GR-SIL	GC, GC-GM, GM	A-2, A-1-b, A-2-4, A-4	0-5	0-20	30-60	25-55	20-50	15-40	20-30	2-8
	10-28	GRV-SICL, GRX-SIL	GC	A-2, A-2-6, A-6	0-5	0-20	25-55	20-50	20-50	15-45	25-40	10-20
	28-80	GR-C, C	MH, CH	A-7	0	0-10	60-100	55-100	50-95	40-90	51-70	25-35
73066:												
Bender----------	0-1	MPM	---	---	---	---	---	---	---	---	---	---
	1-3	CBV-FSL	GM, SC-SM, SM	A-2, A-2-4	0	25-55	55-80	50-75	40-60	25-35	10-20	2-5
	3-14	CB-SL, CBV-SL, CBV-L	SC, SC-SM	A-2, A-1	0	10-40	55-85	50-80	35-55	20-30	10-20	2-8
	14-30	CBX-SL, CBV-SL, CBV-L, GRX-SL	SC-SM	A-2	0-2	30-65	45-90	40-85	25-60	15-30	15-25	4-12
	30-80	BR	---	---	---	---	---	---	---	---	---	---
73067:												
Bender----------	0-4	CBV-FSL	SC, SC-SM, SM	A-2, A-2-4	0-2	20-50	55-80	50-75	40-60	25-35	10-30	2-10
	4-12	CBV-FSL	SC-SM, SC, SM	A-2	0	20-50	65-80	60-75	50-60	30-35	10-30	2-10
	12-23	CBX-L, GRX-SL	GC, GC-GM, GW-GC	A-2, A-1-a, A-1	0-2	10-55	25-75	20-70	10-60	5-45	25-30	5-10
	23-60	BR	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
73068:												
Tick----------	0-5	GRV-SIL	GC-GM, GM	A-1, A-2-4, A-4	0-2	0-15	30-60	25-50	20-50	15-40	14-23	2-7
	5-10	GRV-SIL, GR-SIL, SIL, GR-L	GC, GC-GM, GM	A-1-b, A-2-4, A-4	0-15	0-15	35-100	30-90	25-85	20-70	15-30	2-11
	10-18	SICL, GR-SICL, CL	CL	A-7-6, A-6	0-15	0-10	60-100	50-100	45-95	35-90	20-42	5-18
	18-42	C, SIC, GR-SIC, GR-C	CH, CL	A-7	0-15	0-10	55-100	50-100	50-100	45-95	41-74	20-45
	42-80	C, GR-C, GR-SIC, SIC	CH, CL	A-7	0-15	0-15	60-100	55-100	55-100	45-95	43-77	18-36
73069:												
Tick----------	0-5	GRX-SIL	GC-GM, GM	A-1-a, A-2-4	0-2	0-15	25-40	15-30	10-30	10-25	14-23	2-7
	5-10	GRV-SIL, GR-SIL, SIL, GR-L	GC, GC-GM, GM	A-1-b, A-2-4, A-4	0-15	0-15	50-100	35-100	30-95	25-85	15-30	2-11
	10-18	SICL, GR-SICL, CL, GR-L	CL	A-7-6, A-6	0-15	0-10	60-100	55-100	45-100	35-90	20-42	5-18
	18-42	C, SIC, GR-C	CH, CL	A-7	0-15	0-10	55-100	50-100	50-95	45-90	41-74	20-45
	42-80	C, GR-C, GR-SIC, SIC	CH, CL	A-7	0-15	0-15	60-100	55-100	55-100	50-95	43-77	18-36
73071:												
Hogcreek--------	0-5	SIL	ML, CL-ML	A-4	0	0	80-100	75-100	70-95	60-95	16-20	3-5
	5-16	SIL, GR-SIL, SICL	CL, CL-ML	A-4, A-6	0	0-4	60-100	55-100	55-95	45-95	20-34	5-13
	16-22	GR-SICL, GR-SIL, SICL	CL, GC, SC	A-4, A-6	0	0-10	55-90	45-85	35-85	30-80	23-41	7-17
	22-34	GRX-SIL, GRV-L, GRV-SICL	GW-GC, GC	A-2, A-4, A-6	0	0	20-55	15-50	10-45	10-40	20-36	5-14
	34-80	BR	---	---	---	---	---	---	---	---	---	---
73072:												
Hogcreek--------	0-5	SIL	ML, CL-ML	A-4	0	0	80-100	75-100	70-100	60-90	16-20	3-5
	5-16	SIL, GR-SIL, SICL	CL, CL-ML	A-4, A-6	0	0-4	65-100	55-100	55-100	45-90	20-34	5-13
	16-22	GR-SICL, GR-SIL, SICL	CL, GC, SC	A-4, A-6	0	0-10	60-90	50-85	50-80	40-75	23-41	7-17
	22-34	GRX-SIL, GRV-L, GRV-SICL	GW-GC, GC	A-2, A-4, A-6	0	0	20-55	15-50	15-50	10-45	20-36	5-14
	34-80	BR	---	---	---	---	---	---	---	---	---	---
73073:												
Scholten--------	0-7	GRV-SIL	GM, GC-GM, GC	A-2, A-4	0-3	0-15	35-55	25-50	25-45	20-40	15-25	NP-10
	7-21	GRV-SIL, CBV-SIL, GRV-SICL	GC-GM, GC, GM	A-2	0-4	0-30	30-55	25-50	20-45	15-40	15-25	NP-10
	21-34	GRX-SIL, GRV-SIL, GRX-SICL	GC-GM, GC	A-2, A-4, A-6	0-3	0-30	20-60	20-55	20-50	20-40	20-40	5-20
	34-80	GR-C, GRV-C, GRV-CL, CBX-C	CH, CL, GC	A-2, A-7	0-10	0-35	30-65	25-60	20-60	15-55	40-70	20-40
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-1, A-2-4, A-4	0-3	0-25	30-60	25-50	25-45	20-40	20-30	NP-10
	4-10	GRV-SIL, GRX-SIL	GC, GC-GM, GM	A-1-b, A-2-4, A-4	0-3	0-15	25-55	20-50	20-45	15-40	20-30	NP-10
	10-28	GRV-SICL, GRV-SIL, GRX-SIL	GC	A-2-6, A-6	0-5	0-30	25-55	20-50	20-45	15-45	25-40	10-20
	28-80	C, CB-C	CH, MH	A-7	0-5	0-30	80-100	70-100	65-95	60-95	50-70	25-35

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
73076:												
Mano	0-3	GRV-SIL	GC-GM, GC, GM	A-1, A-2, A-4	0	0-5	30-60	25-50	25-45	15-40	16-25	3-8
	3-13	GRV-SIL	GC-GM, GC, GM	A-2	0	0-5	30-60	25-50	25-45	15-40	16-25	3-8
	13-33	GRV-SIL, GRV-SICL	GC	A-2, A-6	0	0-5	25-55	25-50	25-50	25-45	20-30	5-15
	33-80	C, GR-C	CH	A-7	0	0	70-100	70-95	65-90	55-85	50-75	30-45
Ocie	0-5	GRV-SIL	GC, GC-GM	A-1, A-2, A-4	0	0-15	30-60	25-50	25-45	20-40	0-25	4-10
	5-11	GRV-SIL	GC, GC-GM	A-1-b, A-2-4, A-2-6, A-2	0-5	0-20	30-55	25-50	20-45	15-35	20-30	5-15
	11-24	GRV-SIL, GRX-SIL, GRV-SICL	GC, GC-GM	A-1-b, A-2-4, A-2-6, A-2	0-5	0-20	25-55	20-50	20-45	15-35	20-30	5-15
	24-56	GR-C, C	CH	A-7	0-5	0-15	75-95	70-90	65-85	60-80	50-70	30-40
	56-80	BR	---	---	---	---	---	---	---	---	---	---
73077:												
Eudy	0-6	SIL	CL, CL-ML	A-4	0	0	85-100	80-100	70-95	65-85	20-30	4-9
	6-14	SIL, GR-SIL, GR-SICL, SICL	CL	A-6, A-7	0	0-5	60-100	50-100	50-95	40-90	30-48	11-25
	14-36	C, GR-C	CH	A-7	0	0-10	70-95	60-90	55-90	50-85	55-75	30-45
	36-80	BR	---	---	---	---	---	---	---	---	---	---
73080:												
Alred	0-4	CBX-L	GC-GM	A-6, A-4, A-2	0	40-65	45-60	40-55	35-50	25-40	20-35	5-15
	4-17	GRX-SIL, GR-SIL, GRV-SIL	GC-GM, GC	A-1, A-1-a	0	0-15	20-65	15-60	15-55	10-45	20-35	5-15
	17-27	CBX-SICL, GRX-SICL	GC	A-2-6, A-2	0	30-50	30-55	25-50	20-50	20-45	30-45	10-20
	27-80	C, GR-C	CH	A-7, A-7-6	0	0-10	75-100	70-100	65-95	60-85	65-95	40-70
Bardley	0-4	CBX-L	GC-GM	A-6, A-4, A-2	0-5	25-50	40-60	35-55	30-50	25-40	20-35	5-15
	4-8	GRX-SIL	GC	A-2-6, A-2	0-5	0-15	20-35	15-30	15-30	10-25	25-40	10-15
	8-27	C, GR-C	CH	A-7, A-7-6	0	0-10	75-100	70-100	65-95	60-85	65-95	40-70
	27-80	BR	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												
73081:												
Bender	0-1	SL MPM	---	---	---	---	---	---	---	---	---	---
	1-5	CBX-SL	GC-GM, GM	A-1-b	0-5	30-55	50-65	40-55	30-45	15-25	2-12	1-4
	5-21	CBX-SL, GRV-FSL, GRV-SIL, GRV-LS	SC-SM, SM	A-2	0-10	0-55	45-65	40-55	40-55	20-30	2-20	1-5
	21-31	CBX-SL, GRV-FSL, GRV-COSL, GRV-SCL, GRV-L	GC, GC-GM, GM	A-2	0-15	0-55	45-65	35-60	25-50	10-30	3-34	1-13
	31-80	BR	---	---	---	---	---	---	---	---	---	---
Alred	0-4	CBX-L	GC-GM	A-6, A-4	0	45-65	45-60	40-55	35-50	25-40	20-35	5-15
	4-17	GRX-SIL, GR-SIL	GC-GM, GC	A-1, A-1-a	0	0-15	20-60	15-55	15-55	10-45	20-35	5-15
	17-27	CBX-SICL, GRX-SICL	GC	A-2-6	0	30-50	30-55	25-50	20-50	20-45	30-45	10-20
	27-80	C, GR-C	CH	A-7, A-7-6	0	0-10	75-100	70-100	65-95	60-85	65-95	40-70
Rock outcrop.												

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
73087:												
Celt	0-4	SIL	CL-ML, CL	A-4	0	0	100	95-100	90-95	70-90	20-30	5-10
	4-22	SIC, SICL	CL, GC-GM, CH	A-6, A-7	0	0	95-100	90-100	85-100	80-95	35-55	15-30
	22-39	GR-SIL, GR-SICL	GC, GC-GM, CL	A-6	0	0-10	60-75	55-70	55-65	45-60	30-40	10-20
	39-80	GR-C, GRV-C, GR-SIC	CH, GC, SC	A-2-7, A-7, A-7-6	0	0-5	35-80	30-75	30-70	25-65	50-80	25-50
73159:												
Yelton	0-3	SIL	CL-ML, ML	A-4	0	0	95-100	90-100	85-95	75-85	10-30	2-10
	3-8	SIL, L	CL, ML, CL-ML	A-4	0	0	95-100	90-100	75-95	55-85	10-30	2-10
	8-19	SICL, L	CL	A-6	0	0	85-100	80-100	75-95	55-90	30-45	10-20
	19-38	L, SL, GR-L, GRV-SL	CL, SC	A-6, A-4	0	0-5	40-95	35-90	25-80	15-60	20-35	5-15
	38-65	SCL, L, GR-L, GRV-CL	SC, CL	A-6	0	0-5	40-95	35-90	30-80	15-60	30-40	10-20
73176:												
Bendavis	0-5	GRV-SIL	GC, GC-GM, GM	A-2, A-2-4	0-5	0-5	35-50	30-45	30-45	25-35	10-25	2-10
	5-9	GRV-SIL, GR-SIL	GC, GM, GC-GM	A-2, A-2-4	0-5	0-5	35-65	30-60	30-60	25-50	10-25	2-10
	9-25	GRV-SIL, GRV-SICL	GC	A-2, A-2-6, A-2-4	0-5	0-5	35-50	30-45	30-45	25-35	25-35	5-15
	25-80	BR	---	---	---	---	---	---	---	---	---	---
Poynor	0-5	GRV-SIL	GC, GC-GM, GM	A-4, A-2-4	0-5	0-20	35-55	30-50	30-50	25-40	10-30	2-10
	5-11	GRV-SIL	GC, GC-GM, GM	A-2, A-2-4, A-4	0-5	0-20	35-55	30-50	30-50	25-40	10-30	2-10
	11-17	GRV-SIL	GC	A-2, A-2-6, A-6	0-5	0-20	35-55	30-50	30-50	25-40	25-35	10-15
	17-80	C	CH	A-7, A-7-6	0	0-5	90-100	85-100	80-95	70-85	50-75	30-50
73197:												
Viburnum	0-6	SIL	CL, CL-ML	A-4	0	0	90-100	80-100	75-95	60-90	20-30	5-10
	6-18	SICL, GR-SICL	CL	A-6, A-7	0	0-5	70-100	60-100	55-90	55-85	35-50	15-25
	18-35	GR-SICL, SIC, GR-SIC, GRV-SIC	CH, CL, GC, SC	A-2-7, A-7	0	0-10	50-95	40-90	35-85	30-75	45-60	20-35
	35-80	GRV-SIC, GR-C, GRX-C	GC, SC, SP-SC	A-2-7	0	0-7	20-75	15-60	10-60	5-55	45-70	20-40
73198:												
Gressy	0-7	SIL	CL, CL-ML	A-4	0	0	80-100	75-100	70-95	55-85	15-25	3-8
	7-31	SIL, GR-SIL, SICL, GR-L	CL	A-4, A-6	0	0	65-100	50-90	45-85	30-75	20-34	5-13
	31-49	GR-CL, GRV-CL, CL	GC	A-2, A-6, A-7-6	0	0-35	60-100	40-90	30-85	25-75	28-50	9-27
	49-80	GR-C, GRV-C, C	GC	A-7-6, A-7-5	0-10	0-30	55-100	45-100	45-95	40-90	43-83	22-49
Viraton	0-3	SIL	CL, CL-ML	A-4, A-6	0	0	85-100	80-100	80-95	65-85	20-35	5-15
	3-7	SIL	CL	A-4, A-6	0	0	85-100	80-100	80-95	65-85	20-35	5-15
	7-23	GR-SICL, GRV-SIL	CL	A-6	0	0-15	30-80	25-75	25-75	20-70	30-40	10-20
	23-48	GRX-SIL	GC	A-2, A-2-4	0	0-20	20-30	15-25	15-25	10-20	25-35	5-15
	48-80	C, GR-C	CH	A-7, A-7-6	0	0-15	65-95	60-90	60-90	55-80	50-75	25-50
73199:												
Moko	0-7	FLX-L	GC	A-2	0-10	35-60	15-50	10-40	10-35	5-30	25-45	10-20
	7-12	CNX-SICL, CNV-CL, FLX-SIL, CNV-SIL	GW-GC, GC	A-2	0-10	30-65	15-40	10-35	10-30	5-20	25-45	10-20
	12-80	BR	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
73220:												
Poynor----------	0-4	GRX-SIL	GC, GC-GM, GM	A-1-a, A-2-4	0-3	0-10	25-40	15-30	10-25	10-20	20-30	2-8
	4-10	GRV-SIL, GRX-SIL	GC, GC-GM, GM	A-1-b, A-2-4, A-1-a	0-3	0-15	25-60	15-50	15-45	10-40	20-30	2-8
	10-28	GRV-SICL, GRX-SIL	GC	A-2-6, A-2-4	0-5	0-25	25-60	15-55	15-50	10-45	25-40	10-20
	28-80	C, CB-C	CH, MH	A-7	0-5	0-30	80-100	75-100	70-95	65-85	51-70	25-35
73221:												
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-1, A-2-4, A-4	0-5	0-20	30-55	25-50	20-45	20-40	20-30	2-8
	4-10	GRV-L, GRV-SIL	GC-GM, GM, GC	A-1-b, A-2-4, A-4	0-5	0-20	30-55	25-50	20-50	15-40	20-30	2-8
	10-28	GRV-SIL, GRV-CL	GC	A-2-6, A-6	0-5	0-20	30-55	25-50	20-50	15-45	25-40	10-20
	28-80	C, GR-C, SIC	CH, MH	A-7	0	0-10	70-100	60-100	55-95	50-90	51-80	25-40
73222:												
Splitlimb-------	0-10	SIL	ML, CL-ML	A-4	0	0	95-100	95-100	90-100	75-90	16-23	3-7
	10-20	SIL, SICL	CL	A-6	0	0	95-100	95-100	90-100	75-95	20-35	5-14
	20-29	SIL, SICL	CL	A-6, A-7-6	0	0	95-100	90-100	85-100	70-95	25-44	8-22
	29-80	SICL, SIL	CL	A-6, A-7-6	0	0	90-100	85-100	80-100	65-95	30-45	11-23
73223:												
Coulstone-------	0-1	MPM	---	---	---	---	---	---	---	---	---	---
	1-6	GRV-FSL	GC-GM, GM	A-1, A-2-4	0-10	0-15	30-55	25-50	15-40	10-25	10-20	NP-10
	6-29	FSL, GR-SL, CBV-L, GRV-L	GC, GC-GM, GM	A-1, A-2-4	0-25	0-40	35-90	30-85	15-55	5-35	10-30	NP-10
	29-42	CBV-L, GRV-L, GRV-SCL, CBV-CL	GC, GC-GM, GM	A-2-6, A-6, A-2-4	0-25	0-45	30-60	25-55	15-50	10-40	20-50	5-20
	42-80	GRV-CL, GRV-C, CBV-SC, GRV-SCL	GC, GC-GM, GM	A-2-6, A-6, A-2-4	0-20	0-35	30-60	25-55	20-50	15-40	25-50	7-20
Bender----------	0-1	SL MPM	---	---	---	---	---	---	---	---	---	---
	1-5	CBX-SL	GC-GM, GM	A-1, A-1-a	0-20	30-55	20-50	15-40	10-25	5-15	5-10	NP-5
	5-21	CBX-SL, CBX-FSL, GRV-L	SM	A-2	0-30	0-55	25-60	20-50	10-40	5-30	5-20	NP-5
	21-31	CBX-SL, GRV-FSL, GRX-COSL, GRX-L	GC, GC-GM, GM	A-2	0-20	0-60	20-55	15-50	10-40	5-20	5-35	NP-10
	31-80	BR	---	---	---	---	---	---	---	---	---	---
73224:												
Moko------------	0-7	FLX-L	GC	A-2	0-5	5-40	40-60	35-55	30-50	25-35	25-45	10-20
	7-12	CNX-SICL, CNV-CL, FLX-SIL, CNV-SIL	CL, GC, SC	A-6, A-7	0-10	40-80	65-90	60-85	55-80	40-80	25-45	10-20
	12-80	BR	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												
74626:												
Tanglenook------	0-6	SIL	CL	A-4	0	0	100	100	95-100	80-90	27-32	7-10
	6-17	SICL, SIL	CL	A-6, A-7	0	0	100	100	95-100	85-90	35-45	16-25
	17-30	SIC, SICL, C	CH, CL	A-7	0	0	100	100	95-100	95-100	45-55	25-32
	30-56	SIC, SICL, C	CH, CL	A-7	0	0	100	100	95-100	95-100	45-55	25-32
	56-80	SIC, C, SICL	CH, CL	A-7	0	0	100	100	95-100	95-100	45-55	25-32

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
74627:												
Hartville-------	0-7	SIL	CL	A-4, A-6	0	0	95-100	90-100	80-95	70-90	15-30	7-15
	7-11	SIL	CL	A-6	0	0	95-100	90-100	85-98	75-90	15-30	15-25
	11-40	SIC, SICL	CH	A-7	0	0	95-100	85-100	80-98	75-95	50-60	30-40
	40-80	SICL	CL	A-7	0	0	85-95	75-95	65-95	60-90	40-50	25-40
74629:												
Raftville-------	0-2	L	ML, GC-GM	A-4	0	0-5	80-100	75-100	65-95	50-75	13-17	NP-3
	2-8	FSL, L	ML, CL-ML	A-4	0	0-5	75-100	70-100	65-95	35-80	13-19	NP-4
	8-24	L, CL, GR-L, CB-FSL	CL, CL-ML, SC, SC-SM, GC-GM	A-2, A-4, A-6	0	0-40	60-100	55-100	40-95	25-80	22-40	5-15
	24-80	BR	---	---	---	---	---	---	---	---	---	---
74636:												
Lecoma----------	0-9	L	CL-ML, ML, SC-SM, CL	A-4	0	0	90-100	90-100	80-95	55-65	15-25	NP-10
	9-31	L, CL	CL	A-6	0	0	90-100	90-100	65-100	55-80	25-35	10-15
	31-80	L, SCL, CL	CL, SC	A-6	0	0	90-100	85-100	70-95	45-80	25-40	10-20
74637:												
Lecoma----------	0-7	L	CL-ML, ML, SC-SM, SM	A-4	0	0	90-100	90-100	65-95	40-65	15-25	NP-10
	7-24	L, CL	CL	A-6	0	0	90-100	90-100	65-100	55-80	25-35	10-15
	24-80	L, SCL, CL	CL, SC	A-6	0	0	85-100	80-100	65-95	40-75	25-40	10-20
74677:												
Deible----------	0-10	SIL	CL, CL-ML, ML	A-4, A-6	0	0	85-100	80-100	75-100	75-95	17-32	3-11
	10-15	SIL	CL-ML, CL	A-4	0	0	85-100	80-100	65-100	65-95	20-30	4-10
	15-37	SIC, C, SICL	CH, CL	A-4	0	0	95-100	95-100	95-100	85-95	28-59	8-26
	37-80	C, SIC	CL, CH	A-7	0	0	85-100	80-100	75-100	65-95	31-54	10-23
74679:												
Higdon----------	0-8	SIL	CL-ML, CL	A-6, A-4	0	0	100	95-100	90-100	70-90	23-30	6-11
	8-22	SIL	CL	A-6, A-4	0	0	100	95-100	90-100	70-90	27-35	9-15
	22-44	SIL, SICL	CL	A-6, A-7	0	0	100	80-100	75-100	70-95	30-50	11-27
	44-80	SIL, GR-L, SICL, L, GR-SIL	CL	A-6, A-7	0	0	55-100	50-95	45-90	35-70	30-52	11-28
75381:												
Bearthicket-----	0-10	SIL	ML	A-4	0	0	100	95-100	90-100	75-90	25-35	3-10
	10-48	SIL, SICL	CL, CL-ML	A-4, A-6	0	0	100	95-100	90-100	80-90	25-40	5-15
	48-80	SIL, SICL, GR-SICL	CL, CL-ML	A-4, A-6	0	0	60-100	55-100	45-100	40-95	25-40	5-15
75382:												
Cedargap--------	0-8	GR-L	GM, SM, ML	A-4	0	0-5	60-85	50-75	45-70	35-50	25-35	3-9
	8-46	GRV-L, GRV-CL, GR-SIL, GRX-SCL	GM, SM	A-4, A-1, A-2	0	0-15	25-60	20-55	20-50	15-40	25-35	3-9
	46-80	GRV-CL, GRX-L, GRV-L, GRX-SCL	GC, GC-GM	A-2, A-1-b, A-2-4, A-2-6	0-10	0-20	30-60	25-55	20-50	15-40	20-35	5-20
75388:												
Kaintuck--------	0-6	FSL	CL-ML, ML, SC-SM, SM	A-4	0	0	80-100	75-100	60-80	35-55	10-30	NP-10
	6-80	SR- FS SIL	CL-ML, SC-SM, ML, SM	A-4	0	0-5	80-100	75-100	55-95	20-85	10-30	NP-10

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
75388:												
Relfe----------	0-6	GRV-SL	GC-GM, GM	A-1, A-1-a	0	0-5	35-50	30-45	20-30	10-15	10-25	2-5
	6-60	GRX-LCOS, GRV-LCOS, GRV-SL	GC-GM, GW-GM	A-1-a, A-1	0	0-15	15-40	10-35	5-20	5-10	10-25	2-5
75389:												
Dunning---------	0-8	SIL	CL, CL-ML, ML	A-4, A-6	0	0	95-100	90-100	85-100	70-95	17-32	3-11
	8-23	SICL	CL, CL-ML, ML	A-4, A-6	0	0	95-100	90-100	90-100	80-95	17-32	3-11
	23-46	SIC, C	CH, CL	A-4	0	0	95-100	95-100	90-100	80-95	28-59	8-26
	46-80	SIC, GR-SIC, C	CL, CH	A-7	0-5	0-20	70-100	65-100	55-95	50-90	31-54	10-23
Hercules--------	0-8	CBV-L	CL, GC, SC	A-2, A-6, A-7	0-2	10-40	55-80	50-75	40-75	30-70	30-45	11-20
	8-24	GRV-CL, GRV-SICL	GC	A-2, A-7	0-2	0-25	35-55	30-50	30-50	25-50	45-60	20-30
	24-80	CBV-C, GRX-SIC, GRX-C	GC	A-2, A-7	0-2	5-30	20-50	15-45	15-45	10-45	45-65	25-40
75390:												
Razort----------	0-7	SIL	CL-ML	A-4	0	0	80-100	75-100	70-100	55-90	20-35	5-15
	7-34	SIL, L, CL	CL	A-6	0	0	80-100	75-100	70-95	50-75	30-45	10-20
	34-80	GR-L, GRV-L	CL, CL-ML, GC	A-6, A-4	0	0	35-80	30-75	25-70	20-50	20-35	5-15
75391:												
Possumtrot------	0-6	FSL	CL-ML, ML, SM	A-4	0	0	85-100	80-100	60-90	35-65	0-20	NP-5
	6-45	FSL, SL, L	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	85-100	80-100	55-90	30-65	0-20	NP-5
	45-80	SR- GRV-S GR-LS	GM	A-1	0	0-30	30-80	25-80	15-50	5-20	0-15	NP-5
75392:												
Stultz----------	0-8	CBV-L	GC-GM, GC, SC	A-2-7, A-2-6, A-7	0-2	20-45	40-70	35-65	30-60	25-45	30-45	11-20
	8-20	GR-CL, GRV-CL, GRV-SICL	GC	A-2, A-7	0-2	0-5	35-85	30-80	30-75	25-55	45-60	20-30
	20-51	GRX-C, GRX-SIC, CBV-C	GC	A-2, A-7	0-2	0-25	20-55	15-50	15-50	10-45	45-65	25-40
	51-80	BR	---	---	---	---	---	---	---	---	---	---
75406:												
Racket----------	0-10	L	CL, CL-ML	A-4, A-6	0	0	90-100	85-100	75-95	60-70	25-40	5-20
	10-30	L, GR-L, SIL	CL, CL-ML	A-4, A-6	0	0	75-100	70-100	60-95	45-85	25-40	5-20
	30-45	L, GR-L, GRV-L	CL, CL-ML	A-4, A-6	0	0	45-100	40-100	35-95	25-70	25-40	5-20
	45-80	SR- GRX-S GR-SL	GM, GP-GM, SM, SP-SM	A-1	0	0	15-90	10-85	5-60	5-35	10-40	2-25
75417:												
Relfe----------	0-6	GRV-SL	GW-GM, GC, GC-GM	A-2-4, A-1-b	0-1	0-10	30-55	25-50	15-35	10-20	10-25	3-9
	6-80	SR- CBX-COS GRV-LS	GC-GM, GW-GM, SP-SM, GW-GC	A-1-b, A-2-4	0-5	0-40	25-60	10-55	5-40	3-15	8-20	2-10
Sandbur---------	0-8	FSL	SC-SM, SM	A-4	0	0	80-100	75-100	60-80	35-50	10-30	NP-10
	8-50	SR- FS SIL	CL-ML, SC-SM, ML, SM	A-4	0	0-5	80-100	75-100	55-95	20-85	10-30	NP-10
	50-80	GRX-LCOS, GRX-COSL, GRV-SL, GR-L	GW-GC, SW-SC	A-2	0-5	0-30	30-60	20-55	10-30	5-20	10-30	NP-10

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
75418:												
Tilk----------	0-8	GRV-L	GC-GM, GM	A-1-b, A-2, A-2-4	0	0-15	35-55	25-45	20-40	15-35	16-23	2-6
	8-47	GRX-COSL, CBV-SIL	GW-GC, GC-GM, SP-SM, SC-SM, SC	A-1-a, A-2-4	0-5	0-40	20-55	10-45	5-40	5-35	17-30	3-10
	47-80	SR- CBX-LCOS GRV-SCL	GW-GM, GW-GC, SC, GC, SP-SM	A-1, A-2	0-25	0-40	15-55	5-50	5-40	5-35	16-36	2-13
75419:												
Perche----------	0-6	L	CL-ML, ML, SM	A-4	0	0	85-100	80-100	60-85	40-55	0-20	NP-5
	6-47	SR- SL L	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	85-100	80-100	55-90	30-65	0-20	NP-5
	47-80	SR- GRV-S GR-LS	SC-SM, SM	A-1	0	0-30	40-80	35-75	20-45	5-20	0-15	NP-5
75420:												
Secesh----------	0-8	SIL	ML	A-4	0	0-10	85-100	80-100	75-95	60-85	20-30	NP-7
	8-11	SICL, SIL	CL, CL-ML	A-4, A-6	0	0-10	80-100	75-100	70-95	60-90	25-40	5-12
	11-27	GR-SICL, GR-SIL, L	CL, GC, SC	A-6	0	0-10	60-90	55-85	50-75	40-65	30-40	11-20
	27-80	GR-CL, GRV-L, GRV-SC	GC, SC	A-2-6, A-6	0	0-15	45-70	35-65	30-60	20-40	30-45	11-20
Tilk----------	0-8	GRV-L	GC-GM, GM	A-1, A-2	0	0-15	30-55	25-50	25-45	20-35	10-25	2-8
	8-47	GRV-SL, GRX-L	GW-GM, GC-GM, SC-SM, SC	A-1, A-2	0-5	0-30	25-60	15-50	10-45	5-35	10-20	3-10
	47-80	SR- CBX-LCOS GRX-COSL	GW-GC, GW-GM, SC, SP, SP-SM	A-1, A-2	0-25	0-40	15-55	10-50	5-30	3-20	10-20	2-10
99000. Pits, quarries												
99001. Water												

Table 18.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
70022:														
Tonti	0-8	8-20	60-82	10-20	1.30-1.50	4.00-14.00	0.15-0.20	0.1-2.9	1.0-4.0	.37	.43	4	5	56
	8-20	6-18	47-74	20-35	1.30-1.50	4.00-14.00	0.12-0.18	0.1-2.9	0.1-1.0	.32	.37			
	20-34	10-30	40-75	15-35	1.60-1.90	0.01-0.42	0.02-0.08	0.1-2.9	0.1-0.5	.28	.37			
	34-80	5-15	5-55	40-80	1.20-1.40	0.42-1.40	0.05-0.10	3.0-5.9	0.1-0.5	.24	.32			
70025:														
Branson	0-8	10-30	52-81	9-18	1.25-1.45	4.00-14.00	0.24-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	8-26	8-22	45-77	15-32	1.25-1.45	4.00-14.00	0.18-0.20	0.0-2.9	0.5-1.0	.37	.37			
	26-40	10-22	43-67	23-35	1.25-1.45	4.00-14.00	0.16-0.20	0.0-2.9	0.1-0.5	.43	.43			
	40-80	8-22	40-72	27-45	1.20-1.40	4.00-14.00	0.05-0.18	3.0-5.9	0.1-0.2	.43	.43			
Splitlimb	0-10	11-19	65-77	9-18	1.30-1.50	4.00-14.00	0.23-0.24	0.0-2.9	1.0-3.0	.37	.37	5	5	56
	10-20	9-12	58-74	14-32	1.30-1.65	4.00-14.00	0.20-0.22	3.0-5.9	0.3-1.0	.43	.43			
	20-29	5-18	56-78	15-35	1.50-1.70	4.00-14.00	0.16-0.20	3.0-5.9	0.2-0.5	.32	.32			
	29-80	4-14	54-73	21-37	1.50-1.70	4.00-14.00	0.15-0.19	3.0-5.9	0.1-0.3	.32	.32			
70026:														
Tonti	0-8	8-20	60-82	10-20	1.30-1.50	4.00-14.00	0.15-0.20	0.1-2.9	1.0-3.0	.37	.43	4	5	56
	8-20	6-18	47-74	20-35	1.30-1.50	4.00-14.00	0.12-0.18	0.1-2.9	0.1-1.0	.32	.37			
	20-34	10-30	40-75	15-35	1.60-1.90	0.01-0.42	0.02-0.08	0.1-2.9	0.1-0.5	.28	.37			
	34-80	5-15	5-55	40-80	1.20-1.40	1.40-4.00	0.05-0.10	3.0-5.9	0.1-0.5	.24	.32			
73000:														
Pomme	0-7	10-35	50-80	10-20	1.35-1.45	4.00-14.00	0.16-0.21	0.1-2.9	1.0-4.0	.37	.37	5	5	56
	7-19	5-35	40-77	18-30	1.30-1.45	4.00-14.00	0.14-0.21	0.1-2.9	0.2-1.0	.32	.43			
	19-57	5-35	40-67	28-40	1.30-1.45	4.00-14.00	0.08-0.14	0.1-2.9	0.1-1.0	.28	.43			
	57-80	5-25	10-50	27-70	1.25-1.40	1.40-14.00	0.04-0.14	3.0-5.9	0.1-0.5	.20	.28			
73013:														
Lowassie	0-10	1-10	63-89	10-27	1.30-1.50	4.00-14.00	0.22-0.24	0.1-2.9	1.0-4.0	.37	.37	5	5	56
	10-18	1-10	55-84	15-35	1.30-1.50	4.00-14.00	0.20-0.22	0.1-2.9	0.2-2.0	.43	.43			
	18-36	1-10	25-60	40-65	1.35-1.60	0.42-1.40	0.09-0.15	6.0-8.9	0.2-1.0	.32	.32			
	36-80	1-20	45-91	8-35	1.40-1.65	1.40-4.00	0.18-0.22	0.1-2.9	0.1-0.5	.43	.43			
73017:														
Bendavis	0-3	14-35	50-81	5-15	1.30-1.50	14.00-42.00	0.09-0.12	0.1-2.9	1.0-3.0	.15	.37	2	5	56
	3-14	15-35	50-77	8-18	1.30-1.50	14.00-42.00	0.09-0.17	0.1-2.9	0.5-2.0	.24	.37			
	14-34	12-30	43-78	10-30	1.30-1.50	4.00-14.00	0.10-0.15	0.1-2.9	0.1-0.8	.17	.37			
	34-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Poynor	0-4	10-25	55-84	6-20	1.20-1.45	14.00-42.00	0.04-0.12	0.1-2.9	1.0-3.0	.28	.37	3	8	0
	4-10	15-25	45-77	8-15	1.25-1.45	14.00-42.00	0.02-0.09	0.1-2.9	0.5-2.0	.28	.43			
	10-28	10-30	45-75	15-35	1.40-1.55	4.00-14.00	0.02-0.09	0.1-2.9	0.1-0.8	.28	.43			
	28-80	1-15	5-50	45-80	1.50-1.65	4.00-14.00	0.08-0.12	3.0-5.9	0.1-0.5	.28	.28			
73019:														
Poynor	0-4	15-30	50-80	5-20	1.20-1.45	14.00-42.00	0.04-0.12	0.1-2.9	0.5-1.0	.28	.37	3	8	0
	4-10	5-25	60-90	5-15	1.25-1.45	14.00-42.00	0.02-0.09	0.1-2.9	0.5-1.0	.28	.43			
	10-28	5-15	50-80	15-35	1.40-1.55	4.00-14.00	0.02-0.09	0.1-2.9	0.1-0.5	.28	.43			
	28-80	2-20	5-53	45-75	1.50-1.65	4.00-14.00	0.08-0.12	3.0-5.9	0.1-0.5	.28	.28			
73021:														
Poynor	0-4	10-25	55-84	6-20	1.20-1.45	14.00-42.00	0.04-0.12	0.1-2.9	2.0-8.0	.28	.37	3	8	0
	4-10	15-25	50-77	8-15	1.25-1.45	14.00-42.00	0.02-0.09	0.1-2.9	0.5-2.0	.28	.43			
	10-28	10-20	45-75	15-35	1.40-1.55	4.00-14.00	0.02-0.09	0.1-2.9	0.1-0.8	.28	.43			
	28-80	1-15	5-40	40-80	1.50-1.65	4.00-14.00	0.08-0.12	3.0-5.9	0.1-0.5	.28	.28			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73023:														
Mano	0-3	20-30	52-75	5-18	1.20-1.40	4.00-14.00	0.13-0.18	0.1-2.9	1.0-4.0	.28	.43	4	8	0
	3-13	20-30	55-75	5-15	1.20-1.40	4.00-14.00	0.13-0.18	0.1-2.9	0.5-2.0	.28	.43			
	13-33	8-20	50-80	12-30	1.30-1.40	4.00-14.00	0.04-0.14	0.1-2.9	0.2-1.0	.28	.43			
	33-80	1-20	5-44	55-75	1.30-1.60	0.42-1.40	0.06-0.12	6.0-8.9	0.1-0.8	.28	.28			
Ocie	0-5	10-35	50-85	5-20	1.10-1.40	4.00-14.00	0.12-0.17	0.1-2.9	1.0-4.0	.28	.37	3	8	0
	5-11	10-35	45-85	5-20	1.10-1.35	4.00-14.00	0.12-0.15	0.1-2.9	0.5-2.0	.32	.43			
	11-24	5-25	40-75	20-35	1.10-1.35	4.00-14.00	0.12-0.15	0.1-2.9	0.1-1.0	.32	.43			
	24-56	2-10	4-33	65-86	1.10-1.30	0.42-1.40	0.07-0.10	6.0-8.9	0.1-1.0	.24	.28			
	56-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73024:														
Mano	0-3	20-30	52-75	5-18	1.20-1.40	4.00-14.00	0.13-0.18	0.1-2.9	1.0-4.0	.28	.43	4	8	0
	3-13	20-30	55-75	5-15	1.20-1.40	4.00-14.00	0.13-0.18	0.1-2.9	0.5-1.0	.28	.43			
	13-33	8-20	50-80	12-30	1.30-1.40	4.00-14.00	0.04-0.14	0.1-2.9	0.2-1.0	.28	.43			
	33-80	1-20	5-40	55-75	1.30-1.60	0.42-1.40	0.06-0.12	6.0-8.9	0.1-0.8	.24	.28			
Ocie	0-5	10-35	50-85	5-20	1.10-1.40	4.00-14.00	0.12-0.17	0.1-2.9	1.0-4.0	.28	.37	3	8	0
	5-11	10-35	50-85	5-20	1.10-1.35	4.00-14.00	0.12-0.15	0.1-2.9	0.5-2.0	.32	.43			
	11-24	5-25	40-75	20-35	1.10-1.35	4.00-14.00	0.12-0.15	0.1-2.9	0.1-1.0	.32	.43			
	24-56	2-10	4-33	65-86	1.10-1.30	0.42-1.40	0.07-0.10	6.0-8.9	0.1-1.0	.24	.28			
	56-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73032:														
Gatewood	0-2	15-30	50-75	10-20	1.10-1.40	4.00-14.00	0.12-0.17	0.1-2.9	2.0-8.0	.28	.37	2	8	0
	2-5	15-30	50-78	7-20	1.10-1.40	4.00-14.00	0.12-0.17	0.1-2.9	0.5-2.0	.28	.37			
	5-36	2-20	5-35	60-85	1.10-1.30	0.42-1.40	0.09-0.12	6.0-8.9	0.5-1.0	.24	.28			
	36-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73033:														
Gatewood	0-2	15-30	50-75	10-20	1.10-1.40	4.00-14.00	0.12-0.17	0.1-2.9	2.0-8.0	.28	.37	2	8	0
	2-5	15-30	50-78	7-20	1.10-1.40	4.00-14.00	0.12-0.17	0.1-2.9	0.5-2.0	.32	.37			
	5-36	2-20	5-35	60-85	1.10-1.30	0.42-1.40	0.09-0.12	6.0-8.9	0.5-1.0	.24	.28			
	36-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73051:														
Winnipeg	0-6	5-20	60-87	8-20	1.20-1.40	4.00-14.00	0.20-0.22	0.1-2.9	1.0-4.0	.37	.37	5	5	56
	6-16	5-15	58-80	15-30	1.20-1.40	4.00-14.00	0.18-0.22	0.1-2.9	0.5-1.0	.43	.43			
	16-44	5-20	45-70	25-35	1.20-1.50	4.00-14.00	0.16-0.20	3.0-5.9	0.1-0.5	.43	.43			
	44-80	15-25	30-65	27-50	1.30-1.55	4.00-14.00	0.12-0.16	3.0-5.9	0.1-0.5	.28	.32			
73052:														
Lily	0-3	30-50	30-50	10-27	1.25-1.35	14.00-42.00	0.17-0.19	0.1-2.9	0.5-4.0	.28	.28	2	5	56
	3-10	25-50	25-50	20-35	1.25-1.35	14.00-42.00	0.12-0.16	0.1-2.9	0.1-0.5	.28	.28			
	10-24	35-50	25-50	15-35	1.20-1.35	14.00-42.00	0.12-0.16	0.1-2.9	0.1-0.5	.17	.28			
	24-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73053:														
Lily	0-3	30-50	30-50	10-27	1.25-1.35	14.00-42.00	0.17-0.19	0.1-2.9	0.5-4.0	.28	.28	2	3	56
	3-15	25-50	25-50	20-35	1.25-1.35	14.00-42.00	0.12-0.16	0.1-2.9	0.1-0.5	.28	.28			
	15-21	35-50	25-50	15-35	1.20-1.35	14.00-42.00	0.12-0.16	0.1-2.9	0.1-0.5	.15	.28			
	21-60	---	---	---	---	0.00-0.11	---	---	---	---	---			
Bender	0-4	50-65	25-45	5-18	1.20-1.50	14.00-42.00	0.07-0.11	0.1-2.9	0.5-2.0	.10	.24	2	8	0
	4-12	50-65	25-45	5-18	1.20-1.50	14.00-42.00	0.07-0.11	0.1-2.9	0.2-1.0	.10	.24			
	12-23	40-65	25-45	12-20	1.20-1.50	14.00-42.00	0.03-0.09	0.1-2.9	0.2-1.0	.10	.32			
	23-60	---	---	---	---	0.00-0.11	---	---	---	---	---			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73054:														
Viburnum---	0-7	13-35	50-70	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	1.0-3.0	.37	.37	4	6	48
	7-20	10-20	40-53	30-40	1.30-1.50	4.00-14.00	0.11-0.21	3.0-5.9	0.3-1.0	.32	.43			
	20-38	5-20	40-53	35-55	1.10-1.40	1.40-4.00	0.08-0.16	3.0-5.9	0.2-0.5	.24	.37			
	38-80	5-20	20-45	45-70	1.10-1.40	1.40-4.00	0.03-0.12	3.0-5.9	0.1-0.3	.24	.32			
73056:														
Viburnum---	0-6	13-35	50-80	5-20	1.20-1.45	4.00-14.00	0.04-0.12	0.1-2.9	0.5-1.0	.28	.37	4	6	48
	6-18	10-20	40-53	30-40	1.30-1.50	4.00-14.00	0.11-0.21	3.0-5.9	0.3-1.0	.32	.43			
	18-35	5-20	40-53	35-55	1.10-1.40	4.00-14.00	0.08-0.16	6.0-8.9	0.2-0.5	.24	.37			
	35-80	1-20	20-45	40-78	1.50-1.65	0.01-1.40	0.01-0.04	3.0-5.9	0.0-0.5	.20	.28			
73057:														
Jerktail---	0-5	10-35	50-80	10-18	1.30-1.50	4.00-14.00	0.19-0.24	0.0-2.9	2.0-4.0	.37	.37	4	6	48
	5-17	8-35	40-72	20-40	1.30-1.50	4.00-14.00	0.11-0.20	3.0-5.9	0.4-1.0	.32	.43			
	17-63	2-15	5-48	50-80	1.10-1.40	0.42-1.40	0.03-0.10	6.0-8.9	0.2-0.5	.24	.28			
	63-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73058:														
Gunlock---	0-5	3-15	55-80	15-27	1.20-1.50	4.00-14.00	0.20-0.22	0.1-2.9	1.0-2.0	.37	.37	4	5	56
	5-25	4-10	45-65	27-45	1.30-1.50	1.40-4.00	0.12-0.18	3.0-5.9	0.5-1.0	.37	.43			
	25-43	5-20	50-65	20-35	1.50-1.70	0.42-1.40	0.08-0.14	0.1-2.9	0.1-0.5	.37	.43			
	43-80	2-15	15-48	50-80	1.10-1.40	0.42-1.40	0.03-0.10	6.0-8.9	0.2-0.5	.24	.28			
73063:														
Bendavis---	0-8	14-35	52-78	8-13	1.30-1.50	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.15	.37	2	5	56
	8-10	14-35	52-78	8-13	1.30-1.50	14.00-42.00	0.06-0.20	0.0-2.9	0.5-2.0	.24	.37			
	10-31	12-31	40-77	11-29	1.30-1.50	4.00-14.00	0.03-0.14	0.0-2.9	0.2-0.8	.17	.37			
	31-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Poynor---	0-4	15-30	50-80	5-20	1.20-1.45	14.00-42.00	0.04-0.12	0.1-2.9	1.0-3.0	.28	.37	3	8	0
	4-10	5-25	60-90	5-15	1.25-1.45	14.00-42.00	0.06-0.12	0.1-2.9	0.5-1.0	.28	.43			
	10-28	5-15	50-80	15-35	1.40-1.55	4.00-14.00	0.02-0.09	0.1-2.9	0.1-0.5	.28	.43			
	28-80	2-20	5-40	45-75	1.50-1.65	4.00-14.00	0.08-0.12	3.0-5.9	0.1-0.5	.24	.28			
73066:														
Bender---	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	2	8	0
	1-3	43-80	17-45	5-10	1.30-1.50	14.00-42.00	0.07-0.11	0.1-2.9	1.0-3.0	.17	.24			
	3-14	45-80	17-45	5-15	1.30-1.50	42.00-141.00	0.03-0.09	0.1-2.9	0.1-1.0	.17	.32			
	14-30	45-80	10-45	10-18	1.20-1.40	42.00-141.00	0.03-0.07	3.0-5.9	0.1-0.5	.24	.32			
	30-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73067:														
Bender---	0-4	50-65	25-45	5-18	1.20-1.50	14.00-42.00	0.07-0.11	0.1-2.9	0.5-2.0	.10	.24	2	8	0
	4-12	50-65	25-45	5-18	1.20-1.50	14.00-42.00	0.07-0.11	0.1-2.9	0.2-1.0	.10	.24			
	12-23	40-65	25-45	12-20	1.20-1.50	14.00-42.00	0.03-0.09	0.1-2.9	0.2-1.0	.10	.32			
	23-60	---	---	---	---	0.00-0.11	---	---	---	---	---			
Rock outcrop.														
73068:														
Tick---	0-5	22-45	50-64	8-18	1.20-1.45	14.00-42.00	0.06-0.22	0.0-2.9	1.0-3.0	.28	.37	5	8	0
	5-10	14-45	45-68	9-25	1.25-1.45	14.00-42.00	0.08-0.22	0.0-2.9	0.7-2.0	.28	.43			
	10-18	11-50	32-64	27-40	1.40-1.55	0.42-14.00	0.05-0.20	0.0-2.9	0.2-0.7	.28	.43			
	18-42	1-36	20-50	40-70	1.40-1.55	0.42-4.00	0.04-0.11	3.0-5.9	0.1-0.5	.28	.28			
	42-80	1-27	19-42	40-80	1.50-1.65	0.42-1.40	0.01-0.04	3.0-5.9	0.0-0.5	.28	.28			
73069:														
Tick---	0-5	22-45	50-64	8-18	1.20-1.45	14.00-42.00	0.06-0.22	0.0-2.9	1.0-3.0	.28	.37	5	8	0
	5-10	14-45	45-68	9-20	1.25-1.45	14.00-42.00	0.08-0.22	0.0-2.9	0.7-2.0	.28	.43			
	10-18	11-50	32-64	14-40	1.40-1.55	0.42-14.00	0.05-0.20	0.0-2.9	0.2-0.7	.28	.43			
	18-42	1-36	21-49	40-69	1.40-1.55	0.42-4.00	0.04-0.11	3.0-5.9	0.1-0.5	.28	.28			
	42-80	1-27	19-42	40-78	1.50-1.65	0.42-1.40	0.01-0.04	3.0-5.9	0.0-0.5	.28	.28			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73071:														
Hogcreek---------	0-5	8-30	60-80	9-14	1.30-1.50	14.00-42.00	0.20-0.22	0.0-2.9	2.0-6.0	.37	.43	2	5	56
	5-16	5-24	46-77	13-29	1.30-1.50	14.00-42.00	0.14-0.20	0.0-2.9	0.5-1.0	.32	.37			
	16-22	6-31	41-70	17-38	1.60-1.90	4.00-14.00	0.09-0.17	0.0-2.9	0.2-0.7	.28	.37			
	22-34	10-42	35-72	13-31	1.20-1.40	0.42-1.40	0.02-0.06	3.0-5.9	0.1-0.3	.24	.32			
	34-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73072:														
Hogcreek---------	0-5	8-30	60-80	9-14	1.30-1.50	14.00-42.00	0.20-0.22	0.0-2.9	2.0-6.0	.37	.43	2	5	56
	5-16	5-24	46-77	13-29	1.30-1.50	14.00-42.00	0.14-0.20	0.0-2.9	0.5-1.0	.32	.37			
	16-22	6-31	41-70	17-38	1.60-1.90	4.00-14.00	0.09-0.17	0.0-2.9	0.2-0.7	.28	.37			
	22-34	10-42	35-72	13-31	1.20-1.40	0.42-1.40	0.02-0.06	3.0-5.9	0.1-0.3	.24	.32			
	34-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73073:														
Scholten---------	0-7	17-33	54-74	9-13	1.20-1.40	14.00-42.00	0.07-0.19	0.1-2.9	1.0-3.0	.28	.37	4	8	0
	7-21	13-25	47-75	12-28	1.30-1.50	4.00-14.00	0.02-0.11	0.1-2.9	0.2-0.7	.32	.43			
	21-34	11-32	40-72	17-40	1.60-1.90	0.00-0.42	0.01-0.05	0.1-5.9	0.1-0.3	.32	.43			
	34-80	6-40	10-50	35-80	1.30-1.60	4.00-14.00	0.01-0.03	3.0-5.9	0.1-0.3	.20	.28			
Poynor-----------	0-4	12-37	50-80	6-15	1.20-1.45	4.00-14.00	0.04-0.12	0.1-2.9	1.0-3.0	.28	.37	3	8	0
	4-10	15-30	50-70	8-16	1.25-1.45	4.00-14.00	0.02-0.09	0.1-2.9	0.2-1.0	.28	.43			
	10-28	5-15	50-80	15-35	1.40-1.55	4.00-14.00	0.02-0.09	0.1-2.9	0.1-1.0	.28	.43			
	28-80	2-40	5-40	45-86	1.50-1.65	1.40-4.00	0.07-0.09	3.0-5.9	0.1-0.9	.28	.28			
73076:														
Mano-------------	0-3	20-30	52-75	5-18	1.20-1.40	4.00-14.00	0.13-0.18	0.1-2.9	1.0-4.0	.28	.43	4	8	0
	3-13	20-30	55-75	5-15	1.20-1.40	4.00-14.00	0.13-0.18	0.1-2.9	0.5-1.0	.28	.43			
	13-33	8-20	50-80	12-30	1.30-1.40	4.00-14.00	0.04-0.14	0.1-2.9	0.3-1.0	.32	.43			
	33-80	1-20	5-40	55-75	1.30-1.60	0.42-1.40	0.06-0.12	6.0-8.9	0.1-0.8	.24	.28			
Ocie-------------	0-5	10-35	50-85	5-20	1.10-1.40	4.00-14.00	0.12-0.17	0.1-2.9	1.0-4.0	.28	.37	3	8	0
	5-11	10-35	50-85	5-20	1.10-1.35	4.00-14.00	0.12-0.15	0.1-2.9	0.5-2.0	.32	.43			
	11-24	5-25	40-75	20-35	1.10-1.35	4.00-14.00	0.12-0.15	0.1-2.9	0.1-1.0	.32	.43			
	24-56	2-10	4-33	65-86	1.10-1.30	0.42-1.40	0.07-0.10	6.0-8.9	0.1-1.0	.24	.28			
	56-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73077:														
Eudy-------------	0-6	10-35	50-80	10-18	1.30-1.50	4.00-14.00	0.19-0.24	0.0-2.9	1.0-4.0	.37	.37	2	8	0
	6-14	8-35	40-72	20-40	1.30-1.50	4.00-14.00	0.11-0.20	3.0-5.9	0.4-1.0	.32	.43			
	14-36	2-20	5-35	60-85	1.10-1.30	0.42-1.40	0.09-0.12	6.0-8.9	0.5-1.0	.24	.28			
	36-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73080:														
Alred------------	0-4	30-50	35-45	8-22	1.20-1.45	4.00-14.00	0.09-0.13	0.1-2.9	1.0-4.0	.10	.28	4	8	0
	4-17	10-30	60-80	11-27	1.20-1.45	4.00-14.00	0.04-0.08	0.1-2.9	0.2-1.0	.10	.32			
	17-27	10-20	50-70	27-35	1.40-1.55	0.42-1.40	0.09-0.13	0.1-2.9	0.2-0.5	.10	.28			
	27-80	1-10	5-30	60-90	1.20-1.40	0.42-1.40	0.08-0.12	3.0-5.9	0.2-0.5	.24	.28			
Bardley----------	0-4	30-50	30-50	8-27	1.20-1.45	4.00-14.00	0.09-0.13	0.1-2.9	1.0-4.0	.10	.28	2	8	0
	4-8	10-30	55-75	18-27	1.40-1.55	4.00-14.00	0.06-0.08	0.1-2.9	0.5-2.0	.28	.37			
	8-27	1-10	5-30	60-90	1.20-1.40	0.42-1.40	0.08-0.12	3.0-5.9	0.5-1.0	.24	.28			
	27-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Rock outcrop.														
73081:														
Bender-----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	2	8	0
	1-5	50-75	17-49	1-8	1.30-1.50	14.00-42.00	0.01-0.09	0.0-2.9	1.0-5.0	.17	.24			
	5-21	45-75	10-54	1-15	1.30-1.50	14.00-42.00	0.01-0.06	0.0-2.9	0.2-2.0	.17	.32			
	21-31	50-85	5-48	2-30	1.30-1.50	14.00-42.00	0.01-0.06	0.0-2.9	0.0-0.5	.17	.32			
	31-80	---	---	---	---	0.00-0.11	0.01-0.01	---	---	---	---			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73081:														
Alred	0-4	30-50	35-45	8-27	1.20-1.45	4.00-14.00	0.09-0.13	0.1-2.9	1.0-3.0	.10	.28	4	8	0
	4-17	10-30	60-80	11-27	1.20-1.45	4.00-14.00	0.04-0.08	0.1-2.9	0.2-1.0	.10	.32			
	17-27	10-20	50-70	27-35	1.40-1.55	0.42-1.40	0.09-0.13	0.1-2.9	0.2-1.0	.10	.28			
	27-80	1-10	5-30	60-90	1.20-1.40	0.42-1.40	0.08-0.12	3.0-5.9	0.2-1.0	.24	.28			
Rock outcrop.														
73087:														
Celt	0-4	2-10	60-80	12-20	1.20-1.50	4.00-14.00	0.20-0.24	0.1-2.9	0.5-2.0	.43	.43	4	5	56
	4-22	2-10	45-70	27-45	1.30-1.50	1.40-4.00	0.11-0.14	6.0-8.9	0.2-1.0	.32	.32			
	22-39	5-15	50-75	20-32	1.60-1.90	0.14-0.42	0.03-0.08	0.1-2.9	0.1-0.5	.28	.43			
	39-80	2-10	18-45	40-75	1.30-1.50	0.42-1.40	0.06-0.10	6.0-8.9	0.1-0.5	.20	.28			
73159:														
Yelton	0-3	15-35	60-80	5-20	1.20-1.40	4.00-14.00	0.22-0.24	0.1-2.9	0.5-3.0	.43	.43	3	5	56
	3-8	15-35	45-65	5-20	1.20-1.40	4.00-14.00	0.20-0.22	0.1-2.9	0.5-2.0	.43	.43			
	8-19	15-35	40-65	20-35	1.30-1.50	1.40-4.00	0.15-0.17	3.0-5.9	0.2-1.0	.37	.37			
	19-38	35-60	30-50	10-27	1.60-1.90	0.42-1.40	0.03-0.05	0.1-2.9	0.1-0.5	.24	.28			
	38-65	30-60	20-45	20-35	1.20-1.40	1.40-4.00	0.14-0.16	3.0-5.9	0.1-0.5	.24	.28			
73176:														
Bendavis	0-5	10-30	60-80	5-15	1.20-1.40	14.00-42.00	0.09-0.13	0.1-2.9	1.0-3.0	.15	.37	2	8	0
	5-9	10-30	60-80	5-15	1.20-1.40	14.00-42.00	0.09-0.13	0.1-2.9	0.5-2.0	.15	.37			
	9-25	15-35	50-70	15-30	1.20-1.40	4.00-14.00	0.09-0.15	0.1-2.9	0.1-1.0	.15	.37			
	25-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Poynor	0-5	15-35	55-75	5-22	1.20-1.45	14.00-42.00	0.09-0.15	0.1-2.9	1.0-3.0	.28	.43	3	8	0
	5-11	15-35	55-75	5-22	1.25-1.45	14.00-42.00	0.08-0.13	0.1-2.9	0.5-1.0	.28	.43			
	11-17	15-30	55-75	18-27	1.40-1.55	4.00-14.00	0.08-0.13	0.1-2.9	0.1-0.8	.28	.43			
	17-80	5-20	10-30	42-70	1.50-1.65	4.00-14.00	0.08-0.10	3.0-5.9	0.1-0.5	.28	.28			
73197:														
Viburnum	0-6	13-35	50-70	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	1.0-3.0	.37	.37	4	6	48
	6-18	10-20	40-53	30-40	1.30-1.50	4.00-14.00	0.11-0.21	3.0-5.9	0.3-1.0	.32	.43			
	18-35	5-20	40-53	35-55	1.10-1.40	1.40-4.00	0.08-0.16	3.0-5.9	0.2-0.5	.24	.37			
	35-80	5-20	20-45	40-70	1.10-1.40	1.40-4.00	0.03-0.12	3.0-5.9	0.1-0.3	.24	.32			
73198:														
Gressy	0-7	15-35	50-76	9-20	1.35-1.45	14.00-42.00	0.19-0.24	0.0-2.9	1.0-4.0	.37	.37	5	5	56
	7-31	15-40	30-71	14-30	1.30-1.45	4.00-14.00	0.12-0.18	0.0-2.9	0.1-0.7	.37	.43			
	31-49	15-45	25-50	27-40	1.30-1.45	4.00-14.00	0.08-0.14	3.0-5.9	0.1-0.5	.28	.43			
	49-80	10-35	10-40	45-75	1.25-1.40	0.42-1.40	0.05-0.12	6.0-8.9	0.0-0.4	.20	.28			
Viraton	0-3	5-20	60-80	10-20	1.30-1.50	4.00-14.00	0.20-0.22	0.1-2.9	1.0-4.0	.43	.43	4	6	48
	3-7	5-20	60-80	10-20	1.30-1.50	4.00-14.00	0.18-0.20	0.1-2.9	0.5-2.0	.43	.43			
	7-23	5-20	55-75	18-30	1.30-1.50	4.00-14.00	0.13-0.15	3.0-5.9	0.5-0.8	.28	.43			
	23-48	15-35	50-75	15-25	1.60-1.90	0.00-0.42	0.01-0.05	0.1-2.9	0.1-0.5	.15	.32			
	48-80	5-25	10-35	45-70	1.40-1.60	0.42-4.20	0.06-0.08	6.0-8.9	0.1-0.5	.20	.24			
73199:														
Moko	0-7	10-50	30-50	8-27	1.25-1.50	4.00-14.00	0.08-0.13	0.0-2.9	2.0-10	.24	.37	1	8	0
	7-12	10-50	25-70	10-35	1.25-1.60	4.00-14.00	0.03-0.14	0.0-2.9	1.0-8.0	.28	.43			
	12-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Rock outcrop.														
73220:														
Poynor	0-4	12-37	50-80	6-14	1.20-1.45	4.00-14.00	0.04-0.12	0.1-2.9	0.7-6.0	.28	.37	3	8	0
	4-10	20-31	50-70	8-27	1.25-1.45	4.00-14.00	0.02-0.09	0.1-2.9	0.2-1.0	.28	.43			
	10-28	5-15	50-80	10-35	1.40-1.55	4.00-14.00	0.02-0.09	0.1-2.9	0.1-1.0	.28	.43			
	28-80	2-41	5-40	40-86	1.50-1.65	1.40-4.00	0.08-0.12	3.0-5.9	0.1-0.5	.28	.28			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73221:														
Poynor	0-4	10-25	55-84	6-20	1.20-1.45	14.00-42.00	0.04-0.12	0.1-2.9	1.0-3.0	.28	.37	3	8	0
	4-10	15-25	45-77	8-15	1.25-1.45	14.00-42.00	0.02-0.09	0.1-2.9	0.5-2.0	.28	.43			
	10-28	10-40	45-75	15-35	1.40-1.55	4.00-14.00	0.02-0.09	0.1-2.9	0.1-0.8	.28	.43			
	28-80	1-15	5-50	45-80	1.50-1.65	1.40-4.00	0.08-0.12	3.0-5.9	0.1-0.5	.28	.28			
73222:														
Splitlimb	0-10	11-19	65-77	9-18	1.30-1.50	4.00-14.00	0.23-0.24	0.0-2.9	1.0-4.0	.37	.37	5	5	56
	10-20	9-12	58-74	14-32	1.30-1.65	4.00-14.00	0.20-0.22	3.0-5.9	0.3-1.0	.43	.43			
	20-29	5-18	56-78	15-35	1.50-1.70	1.40-14.00	0.16-0.20	3.0-5.9	0.2-0.5	.32	.32			
	29-80	4-14	54-73	21-37	1.50-1.70	1.40-4.00	0.15-0.19	3.0-5.9	0.1-0.3	.32	.32			
73223:														
Coulstone	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	0
	1-6	40-70	25-50	5-12	1.20-1.45	14.00-42.00	0.03-0.10	0.1-2.9	1.0-3.0	.28	.37			
	6-29	35-70	25-50	6-24	1.25-1.45	14.00-42.00	0.02-0.09	0.1-2.9	0.2-1.0	.28	.43			
	29-42	35-60	15-55	14-50	1.40-1.55	1.40-42.00	0.02-0.10	0.1-2.9	0.1-0.3	.28	.43			
	42-80	30-55	8-40	20-55	1.50-1.65	1.40-42.00	0.02-0.11	0.1-5.9	0.1-0.3	.28	.28			
Bender	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	2	8	0
	1-5	50-75	15-50	1-8	1.30-1.50	14.00-42.00	0.01-0.09	0.0-2.9	1.5-3.0	.17	.24			
	5-21	45-75	10-55	1-15	1.30-1.50	14.00-42.00	0.01-0.06	0.0-2.9	0.2-1.5	.17	.32			
	21-31	40-85	5-50	2-30	1.30-1.50	14.00-42.00	0.01-0.06	0.0-2.9	0.0-0.5	.17	.32			
	31-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73224:														
Moko	0-7	10-50	25-50	10-27	1.25-1.50	4.00-14.00	0.08-0.13	0.0-2.9	2.0-10	.24	.37	1	8	0
	7-12	10-50	25-70	10-35	1.25-1.60	4.00-14.00	0.03-0.14	0.0-2.9	1.0-8.0	.28	.43			
	12-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Rock outcrop.														-
74626:														
Tanglenook	0-6	5-12	60-80	15-27	1.25-1.30	4.00-14.00	0.21-0.25	0.1-2.9	3.0-6.0	.37	.37	5	6	48
	6-17	5-12	48-80	15-40	1.30-1.40	1.40-4.00	0.18-0.21	3.0-5.9	2.0-4.0	.37	.37			
	17-30	1-25	15-54	35-60	1.40-1.45	0.42-1.40	0.10-0.13	6.0-8.9	0.5-2.0	.32	.32			
	30-56	1-25	15-54	35-60	1.40-1.45	0.42-1.40	0.10-0.13	6.0-8.9	0.5-2.0	.32	.32			
	56-80	1-25	15-54	35-60	1.40-1.45	0.42-1.40	0.10-0.13	6.0-8.9	0.5-2.0	.32	.32			
74627:														
Hartville	0-7	8-15	60-82	10-25	1.10-1.30	4.00-14.00	0.22-0.24	0.1-2.9	1.0-4.0	.43	.43	5	6	48
	7-11	8-15	60-82	10-25	1.20-1.40	4.00-14.00	0.18-0.21	3.0-5.9	0.5-1.0	.43	.43			
	11-40	5-15	40-60	35-55	1.20-1.50	0.42-1.40	0.10-0.16	6.0-8.9	0.1-0.5	.32	.32			
	40-80	5-15	45-68	27-40	1.20-1.50	1.40-4.00	0.08-0.14	6.0-8.9	0.1-0.5	.32	.32			
74629:														
Raftville	0-2	27-50	39-50	10-18	1.05-1.35	14.00-42.00	0.13-0.18	0.0-2.9	2.0-6.0	.28	.28	2	5	56
	2-8	25-54	40-50	6-18	1.25-1.50	14.00-42.00	0.12-0.18	0.0-2.9	1.0-2.0	.28	.28			
	8-24	20-57	26-50	15-34	1.25-1.50	14.00-42.00	0.08-0.17	0.0-2.9	0.3-0.9	.24	.28			
	24-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
74636:														
Lecoma	0-9	23-52	28-50	6-18	1.40-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.32	.32	5	3	86
	9-31	21-50	15-50	15-30	1.50-1.60	4.00-14.00	0.17-0.21	3.0-5.9	0.1-0.5	.43	.43			
	31-80	23-60	14-50	18-35	1.50-1.60	4.00-14.00	0.16-0.20	3.0-5.9	0.0-0.5	.37	.37			
74637:														
Lecoma	0-7	23-52	28-50	6-18	1.40-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	7-24	21-50	15-50	15-30	1.50-1.60	4.00-14.00	0.17-0.21	3.0-5.9	0.0-0.5	.43	.43			
	24-80	23-60	14-50	18-35	1.50-1.60	4.00-14.00	0.16-0.20	3.0-5.9	0.0-0.5	.37	.37			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
74677:														
Deible	0-10	4-24	64-81	7-27	1.30-1.45	4.00-14.00	0.22-0.24	0.0-2.9	1.0-4.0	.43	.43	5	5	56
	10-15	4-21	60-79	13-27	1.30-1.45	4.00-14.00	0.20-0.22	0.0-2.9	0.3-2.0	.43	.43			
	15-37	2-15	39-69	27-60	1.35-1.50	0.42-1.40	0.09-0.20	6.0-8.9	0.3-1.0	.32	.32			
	37-80	1-28	39-62	40-60	1.35-1.50	0.42-1.40	0.08-0.12	6.0-8.9	0.1-0.5	.37	.37			
74679:														
Higdon	0-8	10-20	62-75	12-20	1.20-1.45	4.00-14.00	0.22-0.24	0.1-2.9	1.0-4.0	.37	.37	5	6	48
	8-22	9-25	60-73	17-26	1.40-1.50	4.00-14.00	0.20-0.22	0.1-2.9	0.5-2.0	.37	.37			
	22-44	10-25	53-65	20-40	1.40-1.50	1.40-14.00	0.19-0.21	3.0-5.9	0.4-1.0	.37	.37			
	44-80	10-40	40-62	20-35	1.35-1.50	1.40-14.00	0.08-0.21	3.0-5.9	0.1-0.8	.37	.37			
75381:														
Bearthicket	0-10	10-30	50-82	8-20	1.20-1.40	4.00-14.00	0.20-0.24	0.1-2.9	1.0-4.0	.37	.37	5	5	56
	10-48	8-15	55-77	15-30	1.20-1.50	4.00-14.00	0.18-0.22	0.1-2.9	0.2-1.0	.28	.28			
	48-80	3-20	48-82	15-32	1.20-1.50	4.00-14.00	0.12-0.22	0.1-2.9	0.2-1.0	.28	.28			
75382:														
Cedargap	0-8	30-55	27-50	10-20	1.20-1.45	4.00-14.00	0.11-0.18	0.1-2.9	2.0-8.0	.24	.32	5	8	0
	8-46	30-55	15-55	15-32	1.30-1.50	4.00-14.00	0.10-0.15	0.1-2.9	2.0-6.0	.24	.32			
	46-80	30-55	15-50	18-35	1.40-1.55	4.00-14.00	0.04-0.12	0.1-2.9	0.5-3.0	.10	.43			
75388:														
Kaintuck	0-6	55-75	20-45	5-18	1.30-1.50	14.00-42.00	0.09-0.17	0.1-2.9	0.5-2.0	.24	.24	5	3	86
	6-80	40-90	10-55	5-18	1.20-1.50	14.00-42.00	0.06-0.20	0.1-2.9	0.1-1.0	.28	.28			
Relfe	0-6	55-75	15-35	5-15	1.10-1.30	14.00-42.00	0.06-0.10	0.1-2.9	0.5-2.0	.10	.17	5	8	0
	6-60	65-90	2-15	5-15	1.20-1.40	42.00-140.00	0.01-0.02	0.1-2.9	0.0-1.0	.05	.15			
75389:														
Dunning	0-8	4-24	50-81	20-27	1.30-1.45	4.00-14.00	0.22-0.24	0.0-2.9	1.0-4.0	.43	.43	5	4	86
	8-23	4-24	50-70	27-35	1.30-1.45	4.00-14.00	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43			
	23-46	2-15	39-60	40-45	1.35-1.50	0.01-0.42	0.09-0.11	6.0-8.9	0.3-1.0	.32	.32			
	46-80	1-20	35-60	40-65	1.35-1.50	1.40-4.00	0.18-0.20	3.0-5.9	0.1-0.5	.28	.32			
Hercules	0-8	20-52	28-50	12-27	1.25-1.40	14.00-42.00	0.13-0.20	0.0-2.9	2.0-6.0	.24	.32	5	8	0
	8-24	10-46	20-60	35-40	1.45-1.55	4.00-14.00	0.04-0.13	3.0-5.9	1.0-3.0	.28	.43			
	24-80	10-40	15-50	40-60	1.45-1.60	1.40-4.00	0.02-0.08	3.0-5.9	0.5-1.0	.24	.32			
75390:														
Razort	0-7	15-35	50-75	9-20	1.35-1.60	4.00-14.00	0.20-0.22	0.0-2.9	1.0-4.0	.43	.43	5	5	56
	7-34	10-40	35-70	16-30	1.35-1.60	4.00-14.00	0.17-0.22	0.0-2.9	0.5-1.0	.32	.32			
	34-80	20-50	30-50	15-27	1.35-1.50	14.00-42.00	0.08-0.20	0.0-2.9	0.5-1.0	.32	.43			
75391:														
Possumtrot	0-6	43-70	17-49	5-18	1.30-1.50	4.00-14.00	0.17-0.19	0.0-2.9	1.0-4.0	.24	.24	4	3	86
	6-45	40-75	15-45	5-18	1.30-1.50	4.00-14.00	0.09-0.17	0.0-2.9	0.5-1.0	.24	.24			
	45-80	75-95	1-10	1-10	1.20-1.50	4.00-42.00	0.02-0.10	0.0-2.9	0.0-0.3	.10	.17			
75392:														
Stultz	0-8	23-52	28-50	15-27	1.25-1.40	14.00-42.00	0.13-0.20	0.0-2.9	1.0-4.0	.24	.32	4	8	0
	8-20	15-46	16-60	35-40	1.45-1.55	4.00-14.00	0.04-0.13	3.0-5.9	0.5-1.0	.28	.43			
	20-51	10-35	10-50	40-60	1.45-1.60	1.40-4.00	0.02-0.08	3.0-5.9	0.5-1.0	.20	.28			
	51-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
75406:														
Racket	0-10	26-41	40-50	19-23	1.25-1.45	4.00-14.00	0.19-0.24	0.1-2.9	1.0-4.0	.32	.32	5	5	56
	10-30	13-37	39-53	14-27	1.25-1.45	4.00-14.00	0.19-0.24	3.0-5.9	1.0-3.0	.32	.32			
	30-45	31-60	31-50	20-24	1.25-1.45	4.00-42.00	0.04-0.24	3.0-5.9	0.3-1.0	.32	.32			
	45-80	45-90	4-19	3-20	1.35-1.55	14.00-42.00	0.01-0.14	0.1-2.9	0.2-0.5	.10	.17			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
75417:														
Relfe	0-6	48-80	15-45	4-15	1.10-1.50	14.00-42.00	0.05-0.09	0.0-2.9	1.0-4.0	.05	.05	5	8	0
	6-80	85-96	2-35	1-13	1.10-1.30	42.00-141.00	0.03-0.05	0.0-2.9	0.0-1.0	.02	.10			
Sandbur	0-8	55-75	20-45	5-18	1.30-1.50	14.00-42.00	0.09-0.17	0.1-2.9	1.0-4.0	.24	.24	5	3	86
	8-50	40-90	10-55	5-18	1.20-1.50	14.00-42.00	0.06-0.20	0.1-2.9	0.1-1.0	.28	.28			
	50-80	52-85	5-35	5-15	1.35-1.60	4.00-14.00	0.04-0.10	0.0-2.9	0.1-0.5	.05	.15			
75418:														
Tilk	0-8	31-64	27-50	7-15	1.00-1.30	14.00-42.00	0.04-0.12	0.0-2.9	1.0-4.0	.10	.20	5	8	0
	8-47	24-63	20-59	6-20	1.25-1.50	14.00-42.00	0.04-0.14	0.0-2.9	0.2-1.0	.15	.32			
	47-80	47-86	7-31	4-22	1.35-1.60	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.02	.17			
75419:														
Perche	0-6	43-75	17-49	5-18	1.30-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-2.0	.24	.24	5	5	56
	6-47	45-75	23-50	5-18	1.30-1.50	4.00-14.00	0.09-0.17	0.0-2.9	0.5-1.0	.24	.24			
	47-80	85-98	1-10	1-10	1.20-1.50	4.00-42.00	0.02-0.10	0.0-2.9	0.0-0.3	.10	.17			
75420:														
Secesh	0-8	20-50	50-65	10-20	1.10-1.30	4.00-14.00	0.16-0.20	0.0-2.9	1.0-4.0	.32	.32	5	5	56
	8-11	20-60	40-65	10-30	1.20-1.40	4.00-14.00	0.13-0.19	0.0-2.9	0.5-1.0	.32	.37			
	11-27	20-65	30-70	15-35	1.20-1.40	4.00-14.00	0.09-0.14	0.0-2.9	0.2-0.5	.32	.37			
	27-80	35-65	15-50	15-40	1.30-1.50	4.00-14.00	0.05-0.09	0.0-2.9	0.2-0.5	.24	.32			
Tilk	0-8	31-64	27-50	7-15	1.00-1.30	14.00-42.00	0.04-0.12	0.0-2.9	1.0-4.0	.10	.20	5	6	48
	8-47	24-63	27-50	6-20	1.25-1.50	14.00-42.00	0.04-0.14	0.0-2.9	0.2-1.0	.15	.32			
	47-80	47-86	7-31	4-18	1.35-1.60	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.02	.17			
99000.														
Pits, quarries														
99001.														
Water														

Table 19.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	In	meq/100 g	meq/100 g	pH
70022:				
Tonti	0-8	5.0-15	4.0-10	5.0-6.5
	8-20	12-22	10-25	3.6-6.0
	20-34	5.0-14	5.0-15	3.6-5.0
	34-80	12-22	10-20	3.6-5.0
70025:				
Branson	0-8	6.0-11	4.0-8.0	4.5-6.5
	8-26	7.0-14	4.0-12	4.5-6.5
	26-40	8.0-17	7.0-14	4.5-6.5
	40-80	8.0-17	7.0-14	4.5-5.5
Splitlimb	0-10	8.0-12	4.0-12	5.1-6.5
	10-20	8.0-17	5.0-14	4.5-6.5
	20-29	7.0-17	4.0-13	4.5-6.5
	29-80	7.0-16	4.0-12	4.5-5.5
70026:				
Tonti	0-8	5.0-15	4.0-10	4.5-6.5
	8-20	6.0-15	4.0-12	3.5-6.0
	20-34	5.0-14	5.0-15	3.5-5.5
	34-80	12-22	10-20	3.5-5.5
73000:				
Pomme	0-7	5.0-12	2.0-15	4.5-6.5
	7-19	8.0-16	3.0-15	4.5-6.5
	19-57	8.0-16	3.0-15	4.5-6.5
	57-80	10-30	5.0-20	4.5-7.3
73013:				
Lowassie	0-10	5.0-12	4.0-10	4.5-6.5
	10-18	5.0-15	5.0-11	4.5-6.0
	18-36	12-35	5.0-25	3.5-5.5
	36-80	8.0-31	6.0-32	3.5-5.5
73017:				
Bendavis	0-3	4.0-13	2.0-6.0	3.5-6.0
	3-14	4.0-15	2.0-7.0	4.5-6.0
	14-34	8.0-16	1.0-9.0	3.5-5.5
	34-80	---	---	---
Poynor	0-4	5.0-12	2.0-8.0	4.5-6.5
	4-10	2.0-8.0	2.0-8.0	4.5-6.0
	10-28	3.0-10	3.0-12	3.5-6.0
	28-80	15-25	12-25	3.5-5.5
73019:				
Poynor	0-4	8.0-18	3.0-9.0	3.5-6.5
	4-10	4.0-10	3.0-10	3.5-6.0
	10-28	5.0-15	3.0-12	3.5-6.0
	28-80	15-25	10-20	3.5-5.0
73021:				
Poynor	0-4	5.0-12	2.0-8.0	3.5-6.5
	4-10	2.0-8.0	2.0-8.0	3.5-6.0
	10-28	3.0-10	3.0-12	3.5-6.0
	28-80	15-25	12-25	3.5-5.0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	In	meq/100 g	meq/100 g	pH
73023:				
Mano	0-3	5.0-15	4.0-9.0	4.5-6.5
	3-13	4.0-13	2.0-8.0	4.5-7.3
	13-33	5.0-12	3.0-10	4.5-6.5
	33-80	18-30	15-30	4.5-7.3
Ocie	0-5	10-18	4.0-12	4.5-6.5
	5-11	4.0-10	1.0-6.0	4.5-6.0
	11-24	6.0-12	3.0-10	4.5-6.0
	24-56	28-42	20-40	6.6-7.8
	56-80	---	---	---
73024:				
Mano	0-3	5.0-15	4.0-9.0	4.5-6.5
	3-13	4.0-13	2.0-8.0	4.5-7.3
	13-33	5.0-12	3.0-10	4.5-6.5
	33-80	18-30	15-30	4.5-7.3
Ocie	0-5	10-18	4.0-12	4.5-6.5
	5-11	4.0-10	1.0-6.0	4.5-6.0
	11-24	6.0-12	3.0-10	4.5-6.0
	24-56	28-42	20-40	6.6-7.8
	56-80	---	---	---
73032:				
Gatewood	0-2	8.0-18	4.0-15	5.1-7.3
	2-5	3.0-10	4.0-12	5.1-7.3
	5-36	20-38	15-35	4.5-7.3
	36-80	---	---	---
73033:				
Gatewood	0-2	8.0-18	4.0-15	5.1-7.3
	2-5	3.0-10	4.0-12	5.1-7.3
	5-36	20-38	15-35	4.5-7.3
	36-80	---	---	---
73051:				
Winnipeg	0-6	7.0-14	5.0-15	5.1-7.3
	6-16	5.0-14	4.0-10	4.5-7.3
	16-44	10-18	6.0-12	4.5-7.3
	44-80	10-20	6.0-12	4.5-7.3
73052:				
Lily	0-3	3.0-12	2.0-10	3.5-5.5
	3-10	9.0-15	5.0-12	3.5-5.5
	10-24	9.0-15	5.0-12	3.5-5.5
	24-80	---	---	---
73053:				
Lily	0-3	3.0-12	2.0-10	3.5-5.5
	3-15	9.0-15	5.0-12	3.5-5.5
	15-21	9.0-15	5.0-12	3.5-5.5
	21-60	---	---	---
Bender	0-4	3.0-10	2.0-8.0	3.5-6.5
	4-12	3.0-10	2.0-8.0	3.5-6.5
	12-23	5.0-14	3.0-12	3.5-6.0
	23-60	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	In	meq/100 g	meq/100 g	pH
73054:				
Viburnum	0-7	8.0-18	3.0-9.0	4.5-6.5
	7-20	4.0-10	3.0-10	4.5-5.5
	20-38	5.0-15	3.0-12	3.5-5.5
	38-80	15-25	10-20	3.5-5.5
73056:				
Viburnum	0-6	8.0-18	3.0-9.0	3.5-6.5
	6-18	4.0-10	3.0-10	4.5-5.5
	18-35	5.0-15	3.0-12	3.5-5.0
	35-80	15-25	10-20	3.5-5.0
73057:				
Jerktail	0-5	7.0-12	3.0-10	5.5-6.5
	5-17	8.0-20	6.0-12	4.5-6.5
	17-63	20-35	15-35	4.5-7.8
	63-80	---	---	---
73058:				
Gunlock	0-5	8.0-15	5.0-12	5.1-7.3
	5-25	18-24	14-20	4.5-6.5
	25-43	10-18	7.0-14	5.1-6.5
	43-80	20-35	15-35	4.5-7.8
73063:				
Bendavis	0-8	4.0-11	2.0-5.0	4.5-5.5
	8-10	4.0-10	1.0-8.0	4.5-5.5
	10-31	4.0-10	1.0-8.0	3.5-5.5
	31-80	---	---	---
Poynor	0-4	8.0-18	3.0-9.0	3.5-6.5
	4-10	4.0-10	3.0-10	3.5-6.0
	10-28	5.0-15	3.0-12	3.5-6.0
	28-80	15-25	10-20	3.5-5.0
73066:				
Bender	0-1	10-40	5.0-30	3.5-6.5
	1-3	3.0-10	2.0-8.0	3.5-6.0
	3-14	3.0-10	2.0-8.0	3.5-5.5
	14-30	5.0-14	3.0-12	3.5-5.5
	30-80	---	---	---
73067:				
Bender	0-4	3.0-10	2.0-8.0	3.5-6.5
	4-12	3.0-10	2.0-8.0	3.5-6.5
	12-23	5.0-14	3.0-12	3.5-6.0
	23-60	---	---	---
Rock outcrop.				
73068:				
Tick	0-5	5.5-11	1.7-4.6	4.5-6.5
	5-10	4.0-5.9	1.7-2.9	3.5-5.5
	10-18	4.4-8.5	3.5-7.9	3.5-5.5
	18-42	4.9-19	3.8-15	3.5-5.5
	42-80	3.1-15	2.2-12	3.5-5.5

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	In	meq/100 g	meq/100 g	pH
73069:				
Tick	0-5	5.5-11	1.7-4.6	4.5-6.5
	5-10	4.0-5.9	1.7-2.9	4.5-5.5
	10-18	4.4-8.5	3.5-7.9	4.5-5.5
	18-42	4.9-19	3.8-15	4.5-5.5
	42-80	3.1-15	2.2-12	4.5-5.5
73071:				
Hogcreek	0-5	8.0-18	3.0-13	4.5-6.5
	5-16	5.0-15	3.0-12	4.5-6.5
	16-22	5.0-20	3.0-18	4.5-5.5
	22-34	6.0-18	5.0-14	4.5-5.5
	34-80	---	---	---
73072:				
Hogcreek	0-5	8.0-18	3.0-13	4.5-6.5
	5-16	5.0-15	3.0-12	4.5-6.5
	16-22	5.0-20	3.0-18	4.5-5.5
	22-34	6.0-18	5.0-14	4.5-5.5
	34-80	---	---	---
73073:				
Scholten	0-7	4.3-8.8	2.0-4.0	4.5-6.5
	7-21	4.6-10	2.5-7.1	4.5-5.5
	21-34	6.1-11	3.9-7.5	4.5-5.5
	34-80	6.8-21	6.1-16	3.5-5.5
Poynor	0-4	3.0-10	3.0-8.0	4.5-6.5
	4-10	3.0-10	3.0-8.0	4.5-6.5
	10-28	3.0-10	3.0-8.0	4.5-6.5
	28-80	15-25	10-20	3.5-5.5
73076:				
Mano	0-3	5.0-15	4.0-9.0	4.5-6.5
	3-13	4.0-13	2.0-8.0	4.5-7.3
	13-33	5.0-12	3.0-10	4.5-6.5
	33-80	18-30	15-30	4.5-7.3
Ocie	0-5	10-18	4.0-12	4.5-6.5
	5-11	4.0-10	1.0-6.0	4.5-6.0
	11-24	6.0-12	3.0-10	4.5-6.0
	24-56	28-42	20-40	6.6-7.8
	56-80	---	---	---
73077:				
Eudy	0-6	7.0-12	3.0-10	4.5-6.5
	6-14	8.0-20	6.0-12	4.5-6.5
	14-36	20-38	15-35	6.6-7.8
	36-80	---	---	---
73080:				
Alred	0-4	5.0-18	4.0-16	4.5-7.3
	4-17	5.0-12	3.0-10	4.5-6.5
	17-27	8.0-13	6.0-11	4.5-6.5
	27-80	30-50	21-40	4.5-7.8
Bardley	0-4	5.0-18	4.0-16	5.1-7.3
	4-8	5.0-10	2.0-7.0	5.1-6.5
	8-27	30-50	21-40	6.6-7.8
	27-80	---	---	---
Rock outcrop.				

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	In	meq/100 g	meq/100 g	pH
73081:				
Bender	0-1	10-40	5.0-30	3.5-6.5
	1-5	4.0-18	2.0-8.0	4.5-6.0
	5-21	2.0-5.0	1.0-15	4.5-6.0
	21-31	1.0-7.0	1.0-30	4.5-6.0
	31-80	---	---	---
Alred	0-4	5.0-18	4.0-16	5.1-6.5
	4-17	5.0-12	3.0-10	5.1-6.5
	17-27	8.0-13	6.0-11	4.5-6.5
	27-80	30-50	21-40	4.5-7.3
Rock outcrop.				
73087:				
Celt	0-4	7.0-18	4.0-12	4.5-7.3
	4-22	20-35	15-35	3.5-5.0
	22-39	7.0-20	5.0-18	3.5-5.0
	39-80	20-35	15-30	3.5-5.0
73159:				
Yelton	0-3	3.0-12	2.0-9.0	3.5-6.5
	3-8	3.0-12	2.0-9.0	3.5-6.5
	8-19	8.0-20	5.0-16	3.5-5.5
	19-38	5.0-15	3.0-10	3.5-5.5
	38-65	8.0-20	5.0-18	3.5-5.5
73176:				
Bendavis	0-5	3.0-10	2.0-8.0	4.5-6.0
	5-9	3.0-10	2.0-8.0	4.5-6.0
	9-25	8.0-16	3.0-12	3.5-5.5
	25-80	---	---	---
Poynor	0-5	3.0-12	3.0-10	4.5-6.5
	5-11	4.0-12	3.0-10	4.5-6.0
	11-17	7.0-15	5.0-15	3.5-6.0
	17-80	20-35	15-30	3.5-5.5
73197:				
Viburnum	0-6	8.0-18	3.0-9.0	4.5-6.5
	6-18	4.0-10	3.0-10	4.5-5.5
	18-35	5.0-15	3.0-12	3.5-5.5
	35-80	15-25	10-20	3.5-5.5
73198:				
Gressy	0-7	5.0-12	3.0-7.0	5.1-7.3
	7-31	5.0-12	3.0-8.0	5.1-7.3
	31-49	5.0-12	4.0-13	4.5-6.0
	49-80	12-20	8.0-17	4.5-6.5
Viraton	0-3	5.0-15	3.0-10	4.5-7.3
	3-7	5.0-15	3.0-10	4.5-5.5
	7-23	10-20	8.0-18	3.5-5.5
	23-48	5.0-15	3.0-12	3.5-5.5
	48-80	10-20	8.0-18	4.5-6.5
73199:				
Moko	0-7	15-30	12-25	6.6-7.8
	7-12	15-30	12-25	6.6-7.8
	12-80	---	---	---
Rock outcrop.				

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	In	meq/100 g	meq/100 g	pH
73220:				
Poynor	0-4	8.0-18	3.0-9.0	4.5-7.3
	4-10	4.0-10	3.0-10	4.5-6.5
	10-28	5.0-15	3.0-12	4.5-6.5
	28-80	15-25	10-20	3.5-5.5
73221:				
Poynor	0-4	5.0-12	2.0-8.0	4.5-6.5
	4-10	2.0-8.0	2.0-8.0	3.5-6.0
	10-28	3.0-10	3.0-12	3.5-6.0
	28-80	15-25	12-25	3.5-5.5
73222:				
Splitlimb	0-10	8.0-12	4.0-12	4.5-6.5
	10-20	8.0-17	5.0-14	4.5-6.5
	20-29	7.0-17	4.0-13	4.5-5.5
	29-80	7.0-16	4.0-12	3.5-5.5
73223:				
Coulstone	0-1	10-40	5.0-30	3.5-6.5
	1-6	3.0-12	2.0-9.0	4.5-6.0
	6-29	2.0-10	1.0-5.0	4.5-6.0
	29-42	3.0-18	1.0-9.0	4.5-6.0
	42-80	4.0-18	1.0-9.0	3.5-5.5
Bender	0-1	10-40	5.0-30	3.5-6.5
	1-5	4.0-18	2.0-8.0	4.5-6.0
	5-21	2.0-8.0	1.0-5.0	4.5-6.0
	21-31	2.0-15	1.0-10	3.5-6.0
	31-80	---	---	---
73224:				
Moko	0-7	15-30	12-25	6.6-7.8
	7-12	15-30	12-25	6.6-7.8
	12-80	---	---	---
Rock outcrop.				
74626:				
Tanglenook	0-6	15-35	8.0-20	6.1-7.3
	6-17	14-35	8.0-20	6.1-7.3
	17-30	14-40	15-35	6.1-7.3
	30-56	14-40	15-35	6.1-7.3
	56-80	20-40	15-35	6.6-7.3
74627:				
Hartville	0-7	8.0-16	4.0-10	5.6-7.3
	7-11	8.0-16	5.0-12	5.6-7.3
	11-40	18-30	15-24	5.6-6.5
	40-80	12-25	10-25	5.6-6.5
74629:				
Raftville	0-2	5.5-12	2.9-5.4	3.5-5.5
	2-8	4.1-6.4	2.0-4.1	3.5-5.0
	8-24	6.5-17	4.5-13	3.5-5.5
	24-80	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	In	meq/100 g	meq/100 g	pH
74636:				
Lecoma	0-9	5.0-15	2.0-12	5.6-7.3
	9-31	10-15	8.0-15	5.1-7.3
	31-80	10-15	8.0-15	4.5-6.0
74637:				
Lecoma	0-7	5.0-15	2.0-10	5.6-7.3
	7-24	10-15	8.0-15	5.1-7.3
	24-80	10-15	8.0-15	4.5-6.0
74677:				
Deible	0-10	7.2-14	3.5-13	6.1-7.3
	10-15	8.3-12	3.5-9.5	6.1-7.3
	15-37	12-33	9.3-29	6.1-7.3
	37-80	13-35	5.9-33	6.6-8.4
74679:				
Higdon	0-8	8.0-14	5.0-10	5.1-6.5
	8-22	8.0-15	5.0-12	5.1-6.5
	22-44	9.0-20	5.0-15	5.6-6.5
	44-80	9.0-20	5.0-15	5.6-7.3
75381:				
Bearthicket	0-10	5.0-12	3.0-12	5.1-7.3
	10-48	5.0-12	4.0-10	5.1-7.3
	48-80	7.0-12	4.0-10	5.1-6.5
75382:				
Cedargap	0-8	8.0-22	3.0-20	5.6-7.8
	8-46	8.0-16	5.0-15	5.6-7.8
	46-80	8.0-20	7.0-20	5.6-7.8
75388:				
Kaintuck	0-6	4.0-10	2.0-10	5.6-7.3
	6-80	5.0-8.0	2.0-8.0	5.6-7.3
Relfe	0-6	6.0-12	4.0-10	5.6-7.8
	6-60	4.0-10	2.0-6.0	5.1-7.8
75389:				
Dunning	0-8	7.2-14	3.5-13	5.1-7.3
	8-23	7.2-14	3.5-13	5.1-7.3
	23-46	12-33	9.3-29	5.6-7.3
	46-80	13-35	5.9-33	5.6-8.4
Hercules	0-8	10-18	5.0-13	6.1-7.3
	8-24	15-20	10-15	6.1-7.3
	24-80	20-30	15-25	6.1-7.8
75390:				
Razort	0-7	6.0-25	6.0-27	6.1-7.3
	7-34	5.0-20	5.0-20	5.6-7.3
	34-80	5.0-20	5.0-20	5.6-7.3
75391:				
Possumtrot	0-6	5.0-15	3.0-10	4.5-7.3
	6-45	5.0-10	3.0-10	4.5-6.5
	45-80	1.0-5.0	1.0-5.0	4.5-6.5

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	In	meq/100 g	meq/100 g	pH
75392:				
Stultz	0-8	10-18	5.0-13	6.1-7.3
	8-20	15-20	10-15	6.1-7.3
	20-51	20-30	15-25	6.1-7.8
	51-80	---	---	---
75406:				
Racket	0-10	13-17	8.0-14	6.1-7.3
	10-30	11-16	8.0-16	6.1-7.8
	30-45	9.0-14	8.0-16	6.1-7.8
	45-80	2.0-8.0	3.0-10	5.6-7.8
75417:				
Relfe	0-6	6.4-12	3.9-10	5.1-7.3
	6-80	1.5-6.3	0.5-4.3	5.1-7.3
Sandbur	0-8	4.0-10	2.0-10	5.6-7.3
	8-50	5.0-8.0	2.0-8.0	5.6-7.3
	50-80	2.0-10	0.5-5.0	5.1-6.5
75418:				
Tilk	0-8	5.0-14	2.0-12	5.1-6.5
	8-47	3.3-8.0	1.0-5.9	4.5-7.3
	47-80	2.4-10	0.5-6.2	5.1-7.3
75419:				
Perche	0-6	5.0-12	3.0-12	4.5-7.3
	6-47	5.0-12	3.0-10	4.5-6.5
	47-80	1.0-10	1.0-5.0	4.5-6.5
75420:				
Secesh	0-8	10-16	8.0-14	5.6-7.3
	8-11	10-16	8.0-14	5.1-6.5
	11-27	12-18	8.0-14	5.1-6.0
	27-80	12-18	8.0-14	5.1-6.0
Tilk	0-8	7.0-11	1.0-10	5.1-6.5
	8-47	5.0-11	1.0-6.0	4.5-7.3
	47-80	5.0-14	0.5-6.2	5.1-7.3
99000.				
Pits, quarries				
99001.				
Water				

Table 20.--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 symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
70022:									
Tonti	C								
		January	1.5-2.5	2.0-3.0	---	---	None	---	None
		February	1.5-2.5	2.0-3.0	---	---	None	---	None
		March	1.5-2.5	2.0-3.0	---	---	None	---	None
		December	1.5-2.5	2.0-3.0	---	---	None	---	None
70025:									
Branson	B								
		Jan-Dec	---	---	---	---	None	---	None
Splitlimb	B								
		January	1.0-2.5	3.0-5.0	---	---	None	---	None
		February	1.0-2.5	3.0-5.0	---	---	None	---	None
		March	1.0-2.5	3.0-5.0	---	---	None	---	None
		April	1.0-2.5	3.0-5.0	---	---	None	---	None
		December	1.0-2.5	3.0-5.0	---	---	None	---	None
70026:									
Tonti	C								
		January	1.5-2.5	2.5-3.5	---	---	None	---	None
		February	1.5-2.5	2.5-3.5	---	---	None	---	None
		March	1.5-2.5	2.5-3.5	---	---	None	---	None
		April	1.5-2.5	2.5-3.5	---	---	None	---	None
		December	1.5-2.5	2.5-3.5	---	---	None	---	None
73000:									
Pomme	B								
		Jan-Dec	---	---	---	---	None	---	None
73013:									
Lowassie	D								
		January	0.0	4.0-6.0	0.0-0.5	Brief	Frequent	---	None
		February	0.0	4.0-6.0	0.0-0.5	Brief	Frequent	---	None
		March	0.0	4.0-6.0	0.0-0.5	Brief	Frequent	---	None
		April	0.0	4.0-6.0	0.0-0.5	Brief	Frequent	---	None
		May	---	---	0.0-0.5	Brief	Frequent	---	None
		June	---	---	0.0-0.5	Very brief	Occasional	---	None
		July	---	---	0.0-0.5	Very brief	Rare	---	None
		August	---	---	0.0-0.5	Very brief	Rare	---	None
		September	---	---	0.0-0.5	Very brief	Rare	---	None
		October	---	---	0.0-0.5	Very brief	Occasional	---	None
		November	0.0	4.0-6.0	0.0-0.5	Brief	Frequent	---	None
		December	0.0	4.0-6.0	0.0-0.5	Brief	Frequent	---	None
73017:									
Bendavis	C								
		January	2.0-3.0	2.3-3.4	---	---	None	---	None
		February	2.0-3.0	2.3-3.4	---	---	None	---	None
		December	2.0-3.0	2.3-3.4	---	---	None	---	None
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73019:									
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
73021:									
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73023:									
Mano	C								
		January	2.0-3.0	>6.0	---	---	None	---	None
		February	2.0-3.0	>6.0	---	---	None	---	None
		March	2.0-3.0	>6.0	---	---	None	---	None
		April	2.0-3.0	>6.0	---	---	None	---	None
		December	2.0-3.0	>6.0	---	---	None	---	None
Ocie	C								
		January	2.0-3.0	3.3-5.0	---	---	None	---	None
		February	2.0-3.0	3.3-5.0	---	---	None	---	None
		March	2.0-3.0	3.3-5.0	---	---	None	---	None
		April	2.0-3.0	3.3-5.0	---	---	None	---	None
		December	2.0-3.0	3.3-5.0	---	---	None	---	None
73024:									
Mano	C								
		January	2.0-3.0	>6.0	---	---	None	---	None
		February	2.0-3.0	>6.0	---	---	None	---	None
		March	2.0-3.0	>6.0	---	---	None	---	None
		April	2.0-3.0	>6.0	---	---	None	---	None
		December	2.0-3.0	>6.0	---	---	None	---	None
Ocie	C								
		January	2.0-3.0	3.3-5.0	---	---	None	---	None
		February	2.0-3.0	3.3-5.0	---	---	None	---	None
		March	2.0-3.0	3.3-5.0	---	---	None	---	None
		April	2.0-3.0	3.3-5.0	---	---	None	---	None
		December	2.0-3.0	3.3-5.0	---	---	None	---	None
73032:									
Gatewood	C								
		January	1.5-3.0	1.7-3.3	---	---	None	---	None
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	5.9-5.9	---	---	None	---	None
		December	1.5-3.0	1.7-3.3	---	---	None	---	None
73033:									
Gatewood	C								
		January	1.5-3.0	1.7-3.3	---	---	None	---	None
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	5.9-5.9	---	---	None	---	None
		December	1.5-3.0	1.7-3.3	---	---	None	---	None
73051:									
Winnipeg	B								
		Jan-Dec	---	---	---	---	None	---	None
73052:									
Lily	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
73053:									
Lily	B								
		Jan-Dec	---	---	---	---	None	---	None
Bender	B								
		Jan-Dec	---	---	---	---	None	---	None
73054:									
Viburnum	C								
		December	1.5-1.8	2.9-3.7	---	---	None	---	None
		January	1.5-1.8	2.9-3.7	---	---	None	---	None
		February	1.5-1.8	2.9-3.7	---	---	None	---	None
		March	1.5-1.8	2.9-3.7	---	---	None	---	None
		April	1.5-1.8	2.9-3.7	---	---	None	---	None
73056:									
Viburnum	C								
		January	1.2-1.7	2.6-3.2	---	---	None	---	None
		February	1.5-2.5	5.9-5.9	---	---	None	---	None
		March	1.5-2.5	5.9-5.9	---	---	None	---	None
		April	1.5-2.5	5.9-5.9	---	---	None	---	None
		December	1.5-2.5	5.9-5.9	---	---	None	---	None
73057:									
Jerktail	C								
		January	0.9-2.0	5.0-6.7	---	---	None	---	None
		February	1.5-2.5	5.9-5.9	---	---	None	---	None
		March	1.5-2.5	5.9-5.9	---	---	None	---	None
		April	1.5-2.5	5.9-5.9	---	---	None	---	None
		December	1.5-2.5	5.9-5.9	---	---	None	---	None
73058:									
Gunlock	C								
		February	1.5-3.0	2.0-3.5	---	---	None	---	None
		March	1.5-3.0	2.0-3.5	---	---	None	---	None
		April	1.5-3.0	2.0-3.5	---	---	None	---	None
		May	1.5-3.0	2.0-3.5	---	---	None	---	None
		November	1.5-3.0	2.0-3.5	---	---	None	---	None
		December	1.5-3.0	2.0-3.5	---	---	None	---	None
73063:									
Bendavis	C								
		January	2.0-3.0	2.3-3.4	---	---	None	---	None
		February	2.0-3.0	2.3-3.4	---	---	None	---	None
		December	2.0-3.0	2.3-3.4	---	---	None	---	None
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73066:									
Bender	B								
		Jan-Dec	---	---	---	---	None	---	None
73067:									
Bender	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									
73068:									
Tick	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
73069:									
Tick	C								
		Jan-Dec	---	---	---	---	None	---	None
73071:									
Hogcreek	C								
		January	0.9-1.7	1.5-2.7	---	---	None	---	None
		February	1.5-2.5	5.9-5.9	---	---	None	---	None
		March	1.5-2.5	5.9-5.9	---	---	None	---	None
		April	1.5-2.5	5.9-5.9	---	---	None	---	None
		December	1.5-2.5	5.9-5.9	---	---	None	---	None
73072:									
Hogcreek	C								
		January	0.9-1.7	1.5-2.7	---	---	None	---	None
		February	1.5-2.5	5.9-5.9	---	---	None	---	None
		March	1.5-2.5	5.9-5.9	---	---	None	---	None
		April	1.5-2.5	5.9-5.9	---	---	None	---	None
		December	1.5-2.5	5.9-5.9	---	---	None	---	None
73073:									
Scholten	C								
		January	1.3-2.2	1.5-2.3	---	---	None	---	None
		February	1.3-2.2	1.5-2.3	---	---	None	---	None
		March	1.3-2.2	1.5-2.3	---	---	None	---	None
		April	1.3-2.2	1.5-2.3	---	---	None	---	None
		December	1.3-2.2	1.5-2.3	---	---	None	---	None
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73076:									
Mano	C								
		January	2.0-3.0	>6.0	---	---	None	---	None
		February	2.0-3.0	>6.0	---	---	None	---	None
		March	2.0-3.0	>6.0	---	---	None	---	None
		April	2.0-3.0	>6.0	---	---	None	---	None
		December	2.0-3.0	>6.0	---	---	None	---	None
Ocie	C								
		January	2.0-3.0	3.3-5.0	---	---	None	---	None
		February	2.0-3.0	3.3-5.0	---	---	None	---	None
		March	2.0-3.0	3.3-5.0	---	---	None	---	None
		April	2.0-3.0	3.3-5.0	---	---	None	---	None
		December	2.0-3.0	3.3-5.0	---	---	None	---	None
73077:									
Eudy	C								
		January	0.9-1.7	1.7-3.3	---	---	None	---	None
		February	0.9-1.7	1.7-3.3	---	---	None	---	None
		March	0.9-1.7	1.7-3.3	---	---	None	---	None
		April	0.9-1.7	1.7-3.3	---	---	None	---	None
		December	0.9-1.7	1.7-3.3	---	---	None	---	None
73080:									
Alred	B								
		Jan-Dec	---	---	---	---	None	---	None
Bardley	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
73081:									
Bender	B								
		Jan-Dec	---	---	---	---	None	---	None
Alred	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									
73087:									
Celt	C								
		January	1.0-2.0	1.5-2.7	---	---	None	---	None
		February	1.0-2.0	1.5-2.7	---	---	None	---	None
		March	1.0-2.0	1.5-2.7	---	---	None	---	None
		April	1.0-2.0	1.5-2.7	---	---	None	---	None
		May	1.0-2.0	1.5-2.7	---	---	None	---	None
		November	1.0-2.0	1.5-2.7	---	---	None	---	None
		December	1.0-2.0	1.5-2.7	---	---	None	---	None
73159:									
Yelton	C								
		January	1.5-2.0	2.0-3.5	---	---	None	---	None
		February	1.5-2.0	2.0-3.5	---	---	None	---	None
		March	1.5-2.0	2.0-3.5	---	---	None	---	None
		April	1.5-2.0	2.0-3.5	---	---	None	---	None
		May	1.5-2.0	2.0-3.5	---	---	None	---	None
		November	1.5-2.0	2.0-3.5	---	---	None	---	None
		December	1.5-2.0	2.0-3.5	---	---	None	---	None
73176:									
Bendavis	C								
		January	2.0-3.0	2.3-3.4	---	---	None	---	None
		February	2.0-3.0	2.3-3.4	---	---	None	---	None
		December	2.0-3.0	2.3-3.4	---	---	None	---	None
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73197:									
Viburnum	C								
		December	1.2-1.7	2.6-3.2	---	---	None	---	None
		January	1.2-1.7	2.6-3.2	---	---	None	---	None
		February	1.2-1.7	2.6-3.2	---	---	None	---	None
		March	1.2-1.7	2.6-3.2	---	---	None	---	None
		April	1.2-1.7	2.6-3.2	---	---	None	---	None
73198:									
Gressy	B								
		Jan-Dec	---	---	---	---	None	---	None
Viraton	C								
		January	1.5-2.5	2.5-3.5	---	---	None	---	None
		February	1.5-2.5	2.5-3.5	---	---	None	---	None
		March	1.5-2.5	2.5-3.5	---	---	None	---	None
		April	1.5-2.5	2.5-3.5	---	---	None	---	None
		December	1.5-2.5	2.5-3.5	---	---	None	---	None
73199:									
Moko	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
73220:									
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73221:									
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73222:									
Splitlimb	C								
		January	1.0-1.7	>6.0	0.0-0.5	Brief	Frequent	---	None
		February	1.0-1.7	>6.0	0.0-0.5	Brief	Frequent	---	None
		March	1.0-1.7	>6.0	0.0-0.5	Brief	Frequent	---	None
		April	1.0-1.7	>6.0	0.0-0.5	Brief	Frequent	---	None
		May	---	---	0.0-0.5	Brief	Frequent	---	None
		June	---	---	0.0-0.5	Very brief	Occasional	---	None
		July	---	---	0.0-0.5	Very brief	Rare	---	None
		August	---	---	0.0-0.5	Very brief	Rare	---	None
		September	---	---	0.0-0.5	Very brief	Rare	---	None
		October	---	---	0.0-0.5	Very brief	Occasional	---	None
		November	---	---	0.0-0.5	Brief	Frequent	---	None
		December	1.0-1.7	>6.0	0.0-0.5	Brief	Frequent	---	None
73223:									
Coulstone	B								
		Jan-Dec	---	---	---	---	None	---	None
Bender	B								
		Jan-Dec	---	---	---	---	None	---	None
73224:									
Moko	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									
74626:									
Tanglenook	D								
		January	0.0-1.5	>6.0	---	---	None	Very brief	Rare
		February	0.0-1.5	>6.0	---	---	None	Very brief	Rare
		March	0.0-1.5	>6.0	---	---	None	Very brief	Rare
		April	0.0-1.5	>6.0	---	---	None	Very brief	Rare
		May	0.0-1.5	>6.0	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Very rare
		July	---	---	---	---	None	Very brief	Very rare
		August	---	---	---	---	None	Very brief	Very rare
		September	---	---	---	---	None	Very brief	Very rare
		October	---	---	---	---	None	Very brief	Very rare
		November	0.0-1.5	>6.0	---	---	None	Very brief	Rare
		December	0.0-1.5	>6.0	---	---	None	Very brief	Rare

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
74627:									
Hartville	C								
		January	1.0-2.5	>6.0	---	---	None	Very brief	Rare
		February	1.0-2.5	>6.0	---	---	None	Very brief	Rare
		March	1.0-2.5	>6.0	---	---	None	Very brief	Rare
		April	1.0-2.5	>6.0	---	---	None	Very brief	Rare
		May	1.0-2.5	>6.0	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Very rare
		July	---	---	---	---	None	Very brief	Very rare
		August	---	---	---	---	None	Very brief	Very rare
		September	---	---	---	---	None	Very brief	Very rare
		October	---	---	---	---	None	Very brief	Very rare
		November	1.0-2.5	>6.0	---	---	None	Very brief	Rare
		December	1.0-2.5	>6.0	---	---	None	Very brief	Rare
74629:									
Raftville	B								
		January	---	---	---	---	None	Very brief	Rare
		February	---	---	---	---	None	Very brief	Rare
		March	---	---	---	---	None	Very brief	Rare
		April	---	---	---	---	None	Very brief	Rare
		May	---	---	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Very rare
		July	---	---	---	---	None	Very brief	Very rare
		August	---	---	---	---	None	Very brief	Very rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Rare
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
74636:									
Lecoma	B								
		Jan-Dec	---	---	---	---	None	---	None
74637:									
Lecoma	B								
		Jan-Dec	---	---	---	---	None	---	None
74677:									
Deible	D								
		January	0.0-1.0	>6.0	---	---	None	Very brief	Rare
		February	0.0-1.0	>6.0	---	---	None	Very brief	Rare
		March	0.0-1.0	>6.0	---	---	None	Very brief	Rare
		April	0.0-1.0	>6.0	---	---	None	Very brief	Rare
		May	0.0-1.0	>6.0	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Very rare
		July	---	---	---	---	None	Very brief	Very rare
		August	---	---	---	---	None	Very brief	Very rare
		September	---	---	---	---	None	Very brief	Very rare
		October	---	---	---	---	None	Very brief	Very rare
		November	0.0-1.0	>6.0	---	---	None	Very brief	Rare
		December	0.0-1.0	>6.0	---	---	None	Very brief	Rare

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
74679:									
Higdon	C								
		January	1.0-2.0	>6.0	---	---	None	Very brief	Rare
		February	1.0-2.0	>6.0	---	---	None	Very brief	Rare
		March	1.0-2.0	>6.0	---	---	None	Very brief	Rare
		April	1.0-2.0	>6.0	---	---	None	Very brief	Rare
		May	1.0-2.0	>6.0	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Very rare
		July	---	---	---	---	None	Very brief	Very rare
		August	---	---	---	---	None	Very brief	Very rare
		September	---	---	---	---	None	Very brief	Very rare
		October	---	---	---	---	None	Very brief	Very rare
		November	1.0-2.0	>6.0	---	---	None	Very brief	Rare
		December	1.0-2.0	>6.0	---	---	None	Very brief	Rare
75381:									
Bearthicket	B								
		January	---	---	---	---	None	Very brief	Rare
		February	---	---	---	---	None	Very brief	Rare
		March	---	---	---	---	None	Very brief	Rare
		April	---	---	---	---	None	Very brief	Rare
		May	---	---	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Very rare
		July	---	---	---	---	None	Very brief	Very rare
		August	---	---	---	---	None	Very brief	Very rare
		September	---	---	---	---	None	Very brief	Very rare
		October	---	---	---	---	None	Very brief	Very rare
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
75382:									
Cedargap	B								
		January	4.0-6.0	>6.0	---	---	None	Very brief	Frequent
		February	4.0-6.0	>6.0	---	---	None	Very brief	Frequent
		March	4.0-6.0	>6.0	---	---	None	Very brief	Frequent
		April	---	---	---	---	None	Very brief	Frequent
		May	---	---	---	---	None	Very brief	Occasional
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Occasional
		November	---	---	---	---	None	Very brief	Frequent
		December	4.0-6.0	>6.0	---	---	None	Very brief	Frequent
75388:									
Kaintuck	B								
		January	---	---	---	---	None	Brief	Frequent
		February	---	---	---	---	None	Brief	Frequent
		March	---	---	---	---	None	Brief	Frequent
		April	---	---	---	---	None	Brief	Frequent
		May	---	---	---	---	None	Brief	Frequent
		June	---	---	---	---	None	Brief	Occasional
		July	---	---	---	---	None	Brief	Occasional
		August	---	---	---	---	None	Brief	Occasional
		September	---	---	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
		November	---	---	---	---	None	Brief	Frequent
		December	---	---	---	---	None	Brief	Frequent

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
75388:									
Relfe	A								
		January	---	---	---	---	None	Brief	Frequent
		February	---	---	---	---	None	Brief	Frequent
		March	---	---	---	---	None	Brief	Frequent
		April	---	---	---	---	None	Brief	Frequent
		May	---	---	---	---	None	Brief	Frequent
		June	---	---	---	---	None	Brief	Occasional
		July	---	---	---	---	None	Brief	Occasional
		August	---	---	---	---	None	Brief	Occasional
		September	---	---	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
		November	---	---	---	---	None	Brief	Frequent
		December	---	---	---	---	None	Brief	Frequent
75389:									
Dunning	D								
		January	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
		February	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
		March	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
		April	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
		May	---	---	---	---	None	Very brief	Frequent
		June	---	---	---	---	None	Very brief	Occasional
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Occasional
		October	---	---	---	---	None	Very brief	Occasional
		November	---	---	---	---	None	Very brief	Frequent
		December	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
Hercules	C								
		January	1.8-2.3	>6.0	---	---	None	Very brief	Frequent
		February	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
		March	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
		April	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
		May	---	---	---	---	None	Very brief	Frequent
		June	---	---	---	---	None	Very brief	Occasional
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Occasional
		October	---	---	---	---	None	Very brief	Occasional
		November	---	---	---	---	None	Very brief	Frequent
		December	0.0-0.5	>6.0	---	---	None	Very brief	Frequent
75390:									
Razort	B								
		January	---	---	---	---	None	Very brief	Rare
		February	---	---	---	---	None	Very brief	Rare
		March	---	---	---	---	None	Very brief	Rare
		April	---	---	---	---	None	Very brief	Rare
		May	---	---	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Very rare
		July	---	---	---	---	None	Very brief	Very rare
		August	---	---	---	---	None	Very brief	Very rare
		September	---	---	---	---	None	Very brief	Very rare
		October	---	---	---	---	None	Very brief	Very rare
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
75391:									
Possumtrot	B								
		January	---	---	---	---	None	Very brief	Occasional
		February	---	---	---	---	None	Very brief	Occasional
		March	---	---	---	---	None	Very brief	Occasional
		April	---	---	---	---	None	Very brief	Occasional
		May	---	---	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Rare
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional
75392:									
Stultz	B								
		January	0.3-1.1	3.3-4.9	---	---	None	Very brief	Frequent
		February	0.3-1.1	3.3-4.9	---	---	None	Very brief	Frequent
		March	0.3-1.1	3.3-4.9	---	---	None	Very brief	Frequent
		April	0.3-1.1	3.3-4.9	---	---	None	Very brief	Frequent
		May	---	---	---	---	None	Very brief	Frequent
		June	---	---	---	---	None	Very brief	Occasional
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Occasional
		October	---	---	---	---	None	Very brief	Occasional
		November	---	---	---	---	None	Very brief	Frequent
		December	0.3-1.1	3.3-4.9	---	---	None	Very brief	Frequent
75406:									
Racket	B								
		January	4.0-6.0	>6.0	---	---	None	Very brief	Frequent
		February	4.0-6.0	>6.0	---	---	None	Very brief	Frequent
		March	4.0-6.0	>6.0	---	---	None	Very brief	Frequent
		April	---	---	---	---	None	Very brief	Frequent
		May	---	---	---	---	None	Very brief	Occasional
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Occasional
		November	---	---	---	---	None	Very brief	Frequent
		December	4.0-6.0	>6.0	---	---	None	Very brief	Frequent
75417:									
Relfe	A								
		December	---	---	---	---	None	Very brief	Frequent
		January	---	---	---	---	None	Very brief	Frequent
		February	---	---	---	---	None	Very brief	Frequent
		March	---	---	---	---	None	Very brief	Frequent
		April	---	---	---	---	None	Very brief	Frequent
		May	---	---	---	---	None	Very brief	Occasional
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Rare
		November	---	---	---	---	None	Very brief	Occasional

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
75417:									
Sandbur	A								
		December	---	---	---	---	None	Very brief	Frequent
		January	---	---	---	---	None	Very brief	Frequent
		February	---	---	---	---	None	Very brief	Frequent
		March	---	---	---	---	None	Very brief	Frequent
		April	---	---	---	---	None	Very brief	Frequent
		May	---	---	---	---	None	Very brief	Occasional
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Rare
		November	---	---	---	---	None	Very brief	Occasional
75418:									
Tilk	B								
		January	---	---	---	---	None	Very brief	Rare
		February	---	---	---	---	None	Very brief	Rare
		March	---	---	---	---	None	Very brief	Rare
		April	---	---	---	---	None	Very brief	Rare
		May	---	---	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Very rare
		July	---	---	---	---	None	Very brief	Very rare
		August	---	---	---	---	None	Very brief	Very rare
		September	---	---	---	---	None	Very brief	Very rare
		October	---	---	---	---	None	Very brief	Very rare
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
75419:									
Perche	B								
		January	0.3-0.7	>6.0	---	---	None	Very brief	Occasional
		February	0.3-0.7	>6.0	---	---	None	Very brief	Occasional
		March	0.3-0.7	>6.0	---	---	None	Very brief	Occasional
		April	0.3-0.7	>6.0	---	---	None	Very brief	Occasional
		May	---	---	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Rare
		November	---	---	---	---	None	Very brief	Occasional
		December	0.3-0.7	>6.0	---	---	None	Very brief	Occasional
75420:									
Secesh	B								
		January	---	---	---	---	None	Very brief	Occasional
		February	---	---	---	---	None	Very brief	Occasional
		March	---	---	---	---	None	Very brief	Occasional
		April	---	---	---	---	None	Very brief	Occasional
		May	---	---	---	---	None	Very brief	Occasional
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Rare
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
75420:									
Tilk	B								
		January	---	---	---	---	None	Very brief	Occasional
		February	---	---	---	---	None	Very brief	Occasional
		March	---	---	---	---	None	Very brief	Occasional
		April	---	---	---	---	None	Very brief	Occasional
		May	---	---	---	---	None	Very brief	Occasional
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Rare
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional
99000.									
Pits, quarries									
99001.									
Water									

Table 21.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
70022:							
Tonti	Fragipan	16-28	10-25	Noncemented	Moderate	High	High
70025:							
Branson	---	---	---	---	High	Moderate	Moderate
Splitlimb	---	---	---	---	High	High	Moderate
70026:							
Tonti	Fragipan	13-25	10-36	Noncemented	Moderate	High	High
73000:							
Pomme	---	---	---	---	Moderate	Moderate	Moderate
73013:							
Lowassie	---	---	---	---	High	High	High
73017:							
Bendavis	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73019:							
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73021:							
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73023:							
Mano	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	High	Moderate
Ocie	Strongly contrasting textural stratification	15-39	---	Noncemented	Moderate	High	Moderate
	Bedrock (lithic)	40-60	---	Indurated			
73024:							
Mano	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	High	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
73024:							
Ocie	Strongly contrasting textural stratification	15-39	---	Noncemented	Moderate	High	Moderate
	Bedrock (lithic)	40-60	---	Indurated			
73032:							
Gatewood	Bedrock (lithic)	20-40	---	Indurated	Moderate	High	Moderate
73033:							
Gatewood	Bedrock (lithic)	20-40	---	Indurated	Moderate	High	Moderate
73051:							
Winnipeg	---	---	---	---	High	Moderate	Moderate
73052:							
Lily	Bedrock (lithic)	20-39	46-60	Indurated	Moderate	Moderate	High
73053:							
Lily	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
Bender	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
73054:							
Viburnum	---	---	---	---	Moderate	High	Moderate
73056:							
Viburnum	---	---	---	---	Moderate	High	Moderate
73057:							
Jerktail	Bedrock (lithic)	60-80	0-20	Indurated	Moderate	High	Low
73058:							
Gunlock	---	---	---	---	Moderate	High	Moderate
73063:							
Bendavis	Bedrock (lithic)	20-39	41-60	Indurated	Moderate	Moderate	High
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73066:							
Bender	Bedrock (lithic)	20-40	40-60	Indurated	Moderate	Low	High
73067:							
Bender	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	---	---	---
73068:							
Tick	Dense material	22-66	14-58	Noncemented	Moderate	High	High
73069:							
Tick	Dense material	22-66	14-58	Noncemented	Moderate	High	High
73071:							
Hogcreek	Fragipan	18-32	7-14	Noncemented	Moderate	High	High
	Bedrock (lithic)	28-42	38-58	Indurated			

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
73072:							
Hogcreek	Fragipan	18-32	7-14	Noncemented	Moderate	High	High
	Bedrock (lithic)	28-42	38-58	Indurated			
73073:							
Scholten	Fragipan	7-31	6-29	Noncemented	Moderate	High	High
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	High	High
73076:							
Mano	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	High	Moderate
Ocie	Strongly contrasting textural stratification	15-39	---	Noncemented	Moderate	High	Moderate
	Bedrock (lithic)	40-60	---	Indurated			
73077:							
Eudy	Bedrock (lithic)	20-40	40-60	Indurated	Moderate	High	Moderate
73080:							
Alred	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	High	Moderate
Bardley	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	---	---	---
73081:							
Bender	Bedrock (lithic)	20-39	41-61	Indurated	Moderate	Moderate	High
Alred	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
Rock outcrop.							
73087:							
Celt	Fragipan	20-36	8-24	Noncemented	Moderate	High	High
73159:							
Yelton	Fragipan	18-27	16-40	Noncemented	Moderate	High	High
73176:							
Bendavis	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73197:							
Viburnum	---	---	---	---	Moderate	High	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
73198:							
Gressy	---	---	---	---	Moderate	Low	Moderate
Viraton	Fragipan	16-41	10-30	Noncemented	Moderate	Moderate	High
73199:							
Moko	Bedrock (lithic)	6-20	60-76	Indurated	Moderate	Low	Low
Rock outcrop.							
73220:							
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73221:							
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73222:							
Splitlimb	---	---	---	---	High	High	Moderate
73223:							
Coulstone	---	---	---	---	Moderate	Moderate	High
Bender	Bedrock (lithic)	20-39	41-61	Indurated	Moderate	Moderate	High
73224:							
Moko	Bedrock (lithic)	6-20	60-76	Indurated	Moderate	Low	Low
Rock outcrop.							
74626:							
Tanglenook	---	---	---	---	High	High	Moderate
74627:							
Hartville	---	---	---	---	Moderate	High	Moderate
74629:							
Raftville	Bedrock (lithic)	20-40	40-60	Indurated	Moderate	Moderate	Moderate
74636:							
Lecoma	---	---	---	---	Moderate	Moderate	High
74637:							
Lecoma	---	---	---	---	Moderate	Moderate	High
74677:							
Deible	---	---	---	---	High	High	Moderate
74679:							
Higdon	---	---	---	---	High	High	High
75381:							
Bearthicket	---	---	---	---	High	Moderate	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
75382:							
Cedargap	---	---	---	---	Moderate	Low	Low
75388:							
Kaintuck	---	---	---	---	Moderate	Low	Moderate
Relfe	---	---	---	---	Low	Low	Moderate
75389:							
Dunning	---	---	---	---	High	High	Moderate
Hercules	---	---	---	---	Moderate	High	Moderate
75390:							
Razort	---	---	---	---	Moderate	Low	Low
75391:							
Possumtrot	---	---	---	---	Moderate	Low	Moderate
75392:							
Stultz	Bedrock (lithic)	40-59	21-40	Indurated	Moderate	High	Low
75406:							
Racket	---	---	---	---	Moderate	Low	Moderate
75417:							
Relfe	---	---	---	---	Low	Low	Moderate
Sandbur	---	---	---	---	Moderate	Low	Low
75418:							
Tilk	---	---	---	---	Moderate	Low	Moderate
75419:							
Perche	---	---	---	---	Moderate	Moderate	Moderate
75420:							
Secesh	---	---	---	---	Moderate	Low	Moderate
Tilk	---	---	---	---	Moderate	Low	Moderate
99000. Pits, quarries							
99001. Water							

Table 22.--Classification of the Soils

Soil name	Family or higher taxonomic class
Alred	Loamy-skeletal over clayey, siliceous, semiactive, mesic Typic Paleudalfs
Bardley	Very fine, mixed, active, mesic Typic Hapludalfs
Bearthicket	Fine-silty, mixed, active, mesic Ultic Hapludalfs
Bendavis	Loamy-skeletal, siliceous, active, mesic Typic Hapludults
Bender	Loamy-skeletal, siliceous, active, mesic Typic Hapludults
Branson	Fine-silty, mixed, active, mesic Typic Paleudults
Cedargap	Loamy-skeletal, mixed, superactive, mesic Cumulic Hapludolls
Celt	Fine, mixed, active, mesic Aquic Fragiudults
Coulstone	Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults
Deible	Fine, mixed, active, mesic Typic Albaqualfs
Dunning	Fine, mixed, active, mesic Fluvaquentic Endoaquolls
Eudy	Fine, mixed, active, mesic Aquic Hapludalfs
Gatewood	Very fine, mixed, active, mesic Oxyaquic Hapludalfs
Gressy	Fine-loamy, siliceous, semiactive, mesic Typic Paleudalfs
Gunlock	Fine, mixed, active, mesic Fragic Oxyaquic Hapludalfs
Hartville	Fine, mixed, active, mesic Aquic Hapludalfs
Hercules	Clayey-skeletal, mixed, superactive, mesic Cumulic Hapludolls
Higdon	Fine-silty, mixed, active, mesic Aquic Hapludalfs
Hogcreek	Fine-loamy, siliceous, active, mesic Typic Fragiudults
Jerktail	Fine, mixed, active, mesic Aquic Hapludalfs
Kaintuck	Coarse-loamy, siliceous, superactive, nonacid, mesic Typic Udifluvents
Lecoma	Fine-loamy, siliceous, active, mesic Typic Paleudalfs
Lily	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Lowassie	Fine, smectitic, mesic Vertic Epiaquults
Mano	Loamy-skeletal over clayey, mixed, semiactive, mesic Oxyaquic Hapludalfs
Moko	Loamy-skeletal, mixed, superactive, mesic Lithic Hapludolls
Ocie	Loamy-skeletal over clayey, mixed, semiactive, mesic Oxyaquic Hapludalfs
Perche	Coarse-loamy, mixed, superactive, nonacid, mesic Aquic Udifluvents
Pomme	Fine-loamy, mixed, semiactive, mesic Typic Paleudalfs
Possumtrot	Coarse-loamy, siliceous, superactive, mesic Fluventic Dystrudepts
Poynor	Loamy-skeletal over clayey, siliceous, semiactive, mesic Typic Paleudults
Racket	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
Raftville	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Razort	Fine-loamy, mixed, active, mesic Mollic Hapludalfs
Relfe	Sandy-skeletal, siliceous, mesic Mollic Udifluvents
Sandbur	Coarse-loamy, siliceous, superactive, nonacid, mesic Mollic Udifluvents
Scholten	Loamy-skeletal, siliceous, active, mesic Typic Fragiudults
Secesh	Fine-loamy, siliceous, active, mesic Ultic Hapludalfs
Splitlimb	Fine-silty, mixed, active, mesic Aquic Paleudults
Stultz	Clayey-skeletal, mixed, superactive, mesic Fluvaquentic Hapludolls
Tanglenook	Fine, mixed, superactive, mesic Typic Argiaquolls
Tick	Fine, mixed, subactive, mesic Typic Hapludults
Tilk	Loamy-skeletal, siliceous, active, mesic Ultic Hapludalfs
Tonti	Fine-loamy, mixed, active, mesic Typic Fragiudults
Viburnum	Fine, mixed, active, mesic Aquic Paleudults
Viraton	Fine-loamy, siliceous, active, mesic Oxyaquic Fragiudalfs
Winnipeg	Fine-silty, mixed, active, mesic Typic Paleudalfs
Yelton	Fine-loamy, siliceous, active, mesic Typic Fragiudults