United States Department of Agriculture

Natural Resources Conservation Service

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

Soil Survey of Shannon County, Missouri, North and West Parts

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.

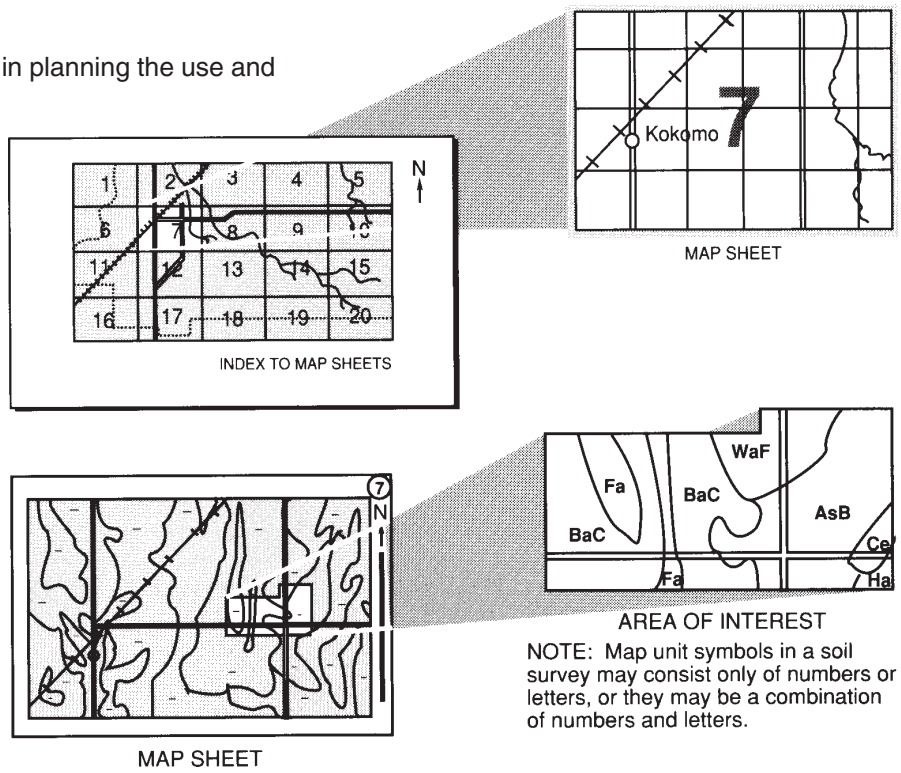
Detailed Soil Maps

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.



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 1999. Soil names and descriptions were approved in 1999. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1999. This survey was made cooperatively by the Natural Resources Conservation Service and the United States Department of Agriculture, Forest Service; National Park Service; Missouri Department of Natural Resources; Missouri Agricultural Experiment Station; and Missouri Department of Conservation. The survey is part of the technical assistance furnished to the Shannon County Soil and Water Conservation District.

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

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Cover: The Current River flows adjacent to an area of Alred-Rueter complex, 15 to 35 percent slopes, very stony.

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

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

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

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

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Soil Survey of Shannon County, Missouri, North and West Parts

By Melvin Simmons and J. Daniel Childress, Natural Resources Conservation Service

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United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
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SHANNON COUNTY is located in the southeastern part of Missouri, about 100 miles south of St. Louis and 90 miles west of the Mississippi River (fig. 1). It is bordered on the east by Reynolds County, on the south by Carter and Oregon Counties, on the west by Howell and Texas Counties, and on the north by Dent County. The total area of the county is 548,283 acres, or about 857 square miles. Eminence is the county seat. The population of the county was 8,324 in 2000.

Figure 1.—Location of Shannon County, Missouri, north and west parts.

General Nature of the County

This section gives general information concerning the county. It describes climate; physiography, relief, and drainage; history and development; and agriculture.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at West Plains 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 38.2 degrees F and the average daily minimum temperature is 23.3 degrees. The lowest temperature on record, which occurred at West Plains on February 2, 1951, was –21 degrees. In summer, the average temperature is 75.4 degrees and the average daily maximum temperature is 87.5 degrees. The highest temperature, which occurred at West Plains on July 12, 1980, was 107 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 45.05 inches. Of this total, about 27 inches, or 60 percent, usually falls in April through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 5.35 inches at West Plains on April 3, 1957. Thunderstorms occur on about 52 days each year, and most occur between May and August.

The average seasonal snowfall is 13 inches. The greatest snow depth at any one time during the period of record was 16 inches recorded on February 8, 1980. On an average, 13 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 March 9, 1984.

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, except from the northwest during February and March. Average windspeed is highest, between 11 and 12 miles per hour, from November to April.

Physiography, Relief, and Drainage

Shannon County is located within the Ozark Plateau physiographic province. Small parts of the St. Francois Mountains and Basins are in the eastern part of the survey area. The Salem Plateau makes up the remainder.

The St. Francois Mountains in Shannon County are comprised of rhyolite, a type of igneous rock. The highest elevation in the county is about 1,359 feet above sea level on the top of Thorny Mountain located in the southeastern part of the county. Other well-known mountains are Coot, Stegall, and Jerktail. The tops of these mountains are about 200 to 300 feet above the surrounding Salem Plateau. These mountains are conic-shaped. The basins are underlain by Cambrian dolomite and are similar to larger basins in nearby counties, e.g., Patterson Basin in Wayne County or Belleview Valley in Iron County.

The Salem Plateau is underlain by Ordovician cherty dolomite, sandstone, or dolomite (Bridge, 1930). The Salem Plateau is less dissected along the western edge of the county and along the divide between the Eleven Point River and the Jacks Fork River (generally along U.S. Route 60). The summits of the ridges are about 1,100 to 1,200 feet in elevation. A more dissected part of the Salem Plateau is in the larger part of the county. This area is highly dissected with narrow, winding ridges separated by narrow valleys having a dendritic pattern. The local relief is about 200 to 300 feet.

The Current River flows in a southeastern direction through the central part of the county. The Jacks Fork drains the west-central part of the county and flows eastward before the confluence with the Current River near Coot Mountain. The southwestern part of the area (roughly south of U.S. Route 60) is drained by tributaries of the Eleven Point River.

History and Development

Shannon County was organized in 1841 from Ripley and Washington Counties. The county is named for George Shannon of the Lewis and Clark expedition. The county seat is at Eminence.

Rivers in the area were used for early transportation. Water from springs and creeks was used to power mills and generate electricity.

Mining and logging interest brought roads and railroads into the area. Several small iron or copper mines were developed in the 1800s. In the early 1900s, a large sawmill operated at West Eminence.

The natural beauty of the area was mentioned by early visitors. Round Spring, the first State park in Missouri, and Alley Spring were established as State parks. The Ozark National Scenic Riverways was established in 1964.

Agriculture

Clearing of the forests began in the early 1800s with the first European settlements in the river valleys and on the basin areas. Several decades ago, significant acreages of corn and wheat were grown in the county. At the present time, very few acres in the county are devoted to annual crops. The cleared land is used to produce grass or grass and legume mixtures for pasture and hay. Nearly all of the pasture and hay is consumed by beef cattle. Many of the farmers in the county supplement their incomes with off-farm employment. Nearly 70 percent of the county is used for timber production. The harvesting of saw logs, primarily oak, is an important segment of the local economy. Most of the logs are processed locally into ties, pallet lumber, and flooring.

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.

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

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. Coulstone-Bender-Alred Association

Composition

Extent of the association in the survey area: 34 percent
Extent of the components in the association (fig. 2):
Coulstone and similar soils—42 percent
Bender and similar soils—33 percent
Alred and similar soils, such as Poynor—12 percent
Soils of minor extent—13 percent

Soils of Minor Extent

- Lily, Tonti, Scholten, and Viburnum

Landscape

Coulstone—hills
Bender—hills
Alred—hills

Parent Material

Coulstone—colluvium and residuum from sandstone with lenses of cherty dolostone
Bender—residuum from sandstone
Alred—gravelly colluvium derived from cherty dolostone over clayey residuum derived from dolostone

Slope Range

Coulstone—15 to 50 percent
Bender—8 to 50 percent
Alred—8 to 50 percent

Major Land Uses

- Woodland

2. Clarksville-Scholten-Gepp Association

Composition

Extent of the association in the survey area: 25 percent
Extent of the components in the association (fig. 3):
Clarksville and similar soils, such as Alred and Poynor—45 percent
Scholten and similar soils—28 percent
Gepp and similar soils, such as Arkana—20 percent
Soils of minor extent—7 percent

Soils of Minor Extent

- Gasconade, Hobson, Lecoma, and Portia

Landscape

Clarksville—narrow, rounded hills
Scholten—narrow, rounded hills
Gepp—hills

Parent Material

Clarksville—gravelly colluvium derived from cherty dolostone
Scholten—gravelly colluvium derived from cherty dolostone
Gepp—clayey residuum from dolostone

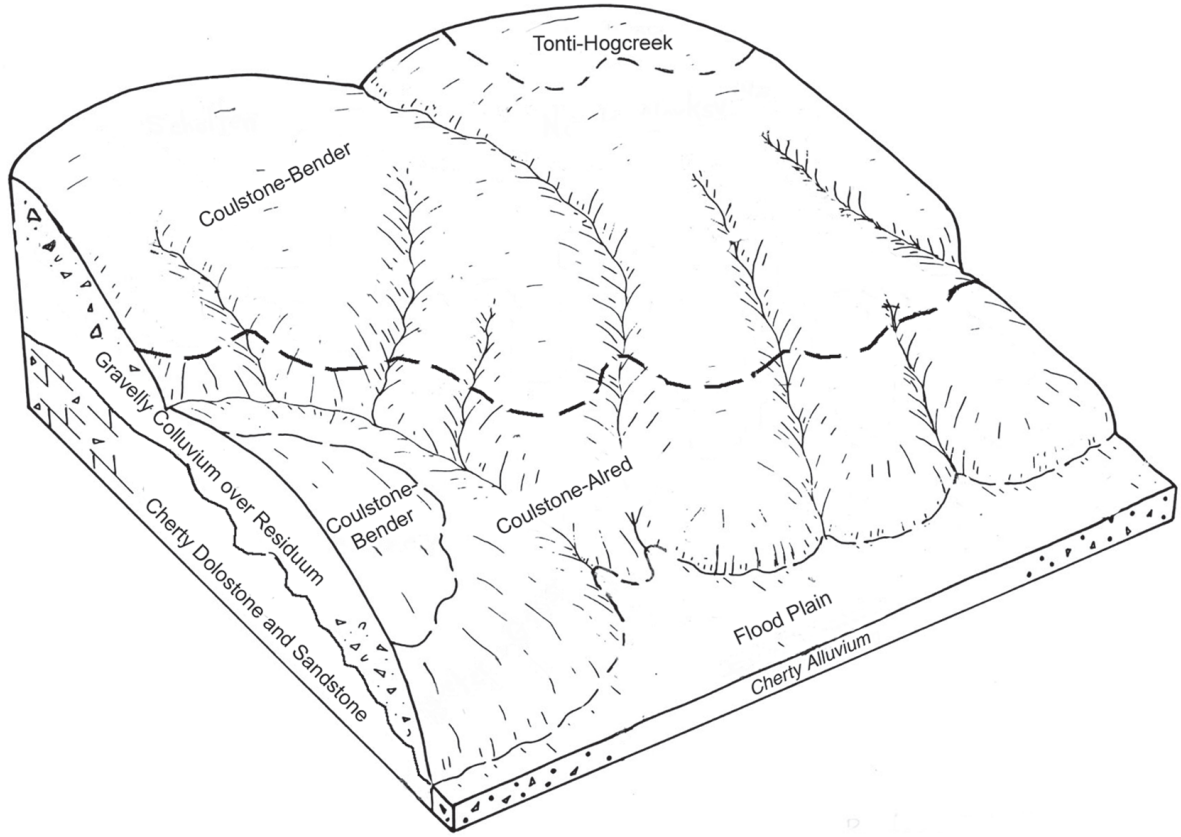

Figure 2.—Typical pattern of soils and parent material in the Coulstone-Bender-Alred association.

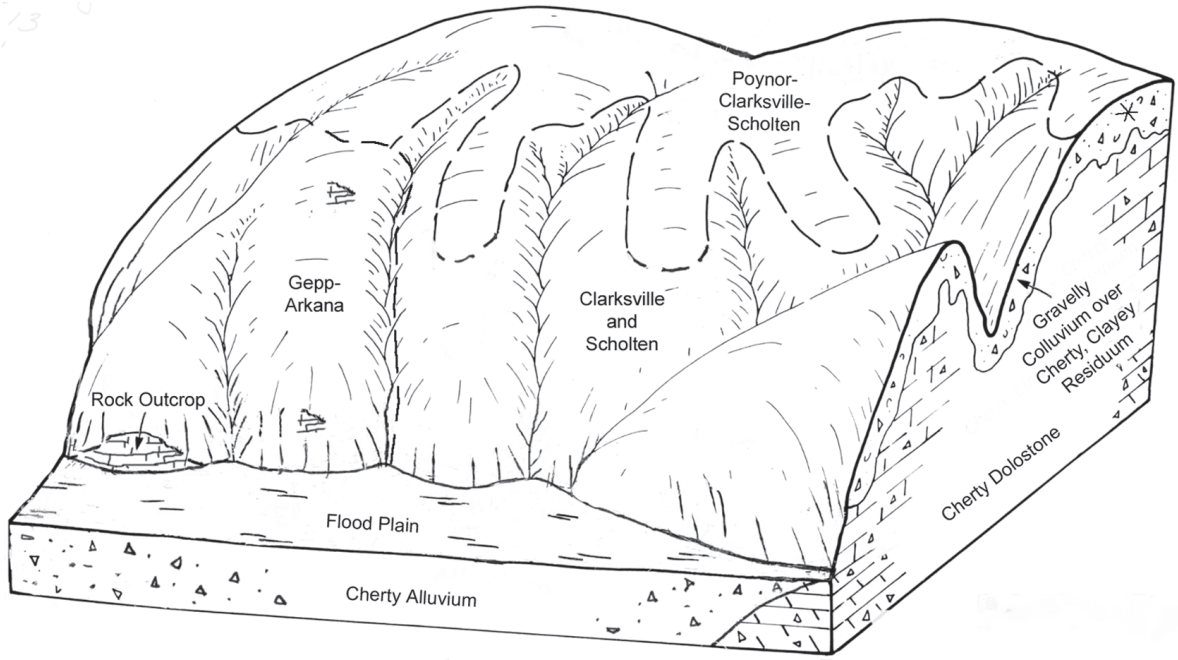

Figure 3.—Typical pattern of soils and parent material in the Clarksville-Scholten-Gepp association.

Slope Range

Clarksville—8 to 45 percent
Scholten—8 to 45 percent
Gepp—8 to 55 percent

Major Land Uses

- Woodland

3. Niangua-Rueter Association

Composition

Extent of the association in the survey area: 11 percent

Extent of the components in the association (fig. 4):
Niangua and similar soils, such as Arkana, Bardley, or Gepp—45 percent
Rueter and similar soils, such as Alred—43 percent
Soils of minor extent—12 percent

Soils of Minor Extent

- Brussels, Courtois, Gasconade, Lecoma, and Taterhill

Landscape

Niangua—hills
Rueter—narrow, convex hills and structural benches

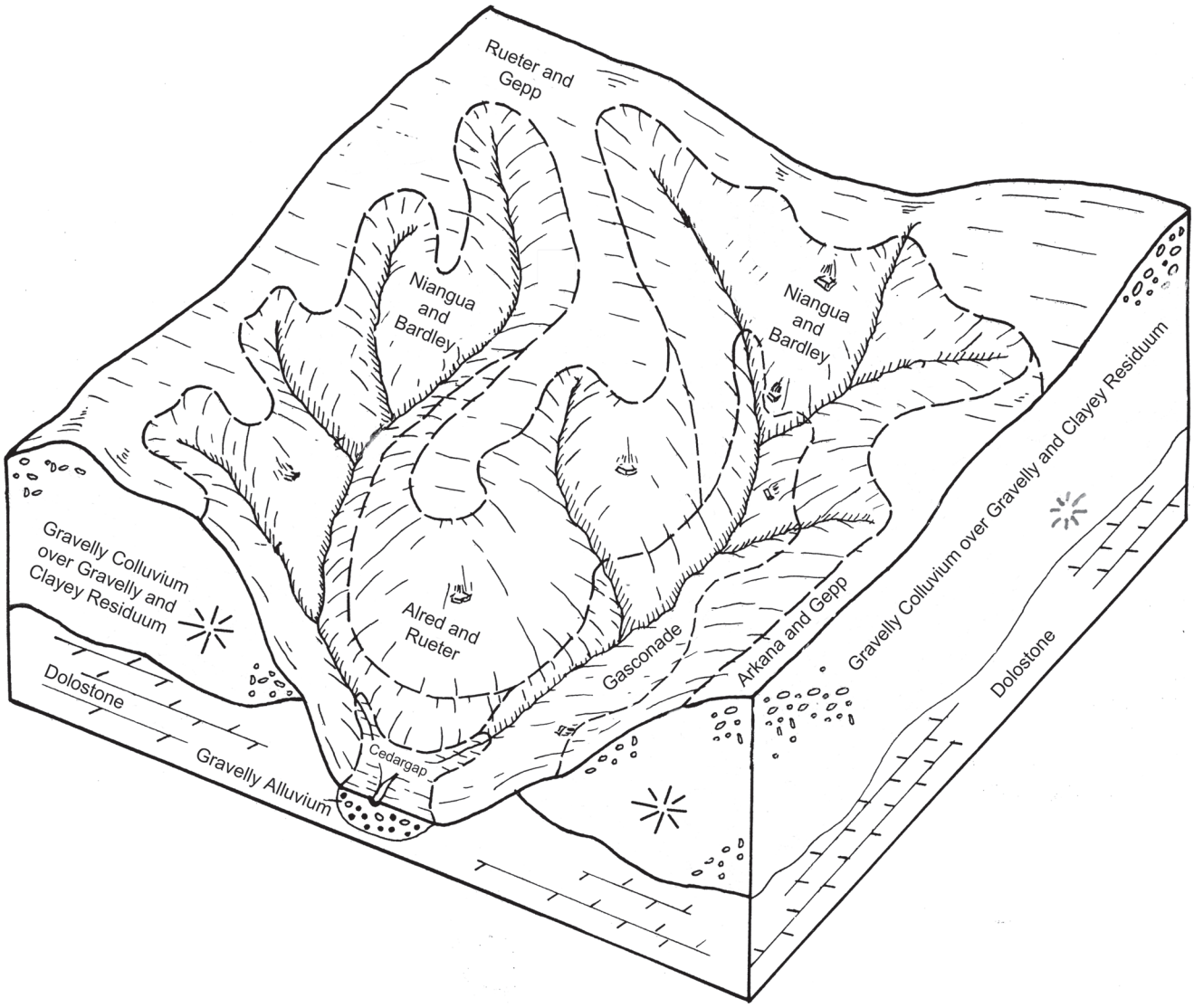

Figure 4.—Typical pattern of soils and parent material in the Niangua-Rueter association.

Parent Material

Niangua—clayey residuum derived from dolostone
Rueter—gravelly colluvium over gravelly residuum derived from dolostone

Slope Range

Niangua—15 to 50 percent
Rueter—8 to 50 percent

Major Land Uses

- Woodland, some pasture and hayland

4. Scholten-Tonti-Poynor Association

Composition

Extent of the association in the survey area: 11 percent

Extent of the components in the association (fig. 5):
Scholten and similar soils—35 percent
Tonti and similar soils, such as Viburnum and Tick—28 percent
Poynor and similar soils—21 percent
Soils of minor extent—16 percent

Soils of Minor Extent

- Bendavis, Cornwall, Horneybuck, Lecoma, Splitlimb, and Taterhill

Landscape

Scholten—summits and shoulders of hills
Tonti—summits of hills
Poynor—summits and shoulders of hills

Parent Material

Scholten—gravelly colluvium derived from cherty dolostone

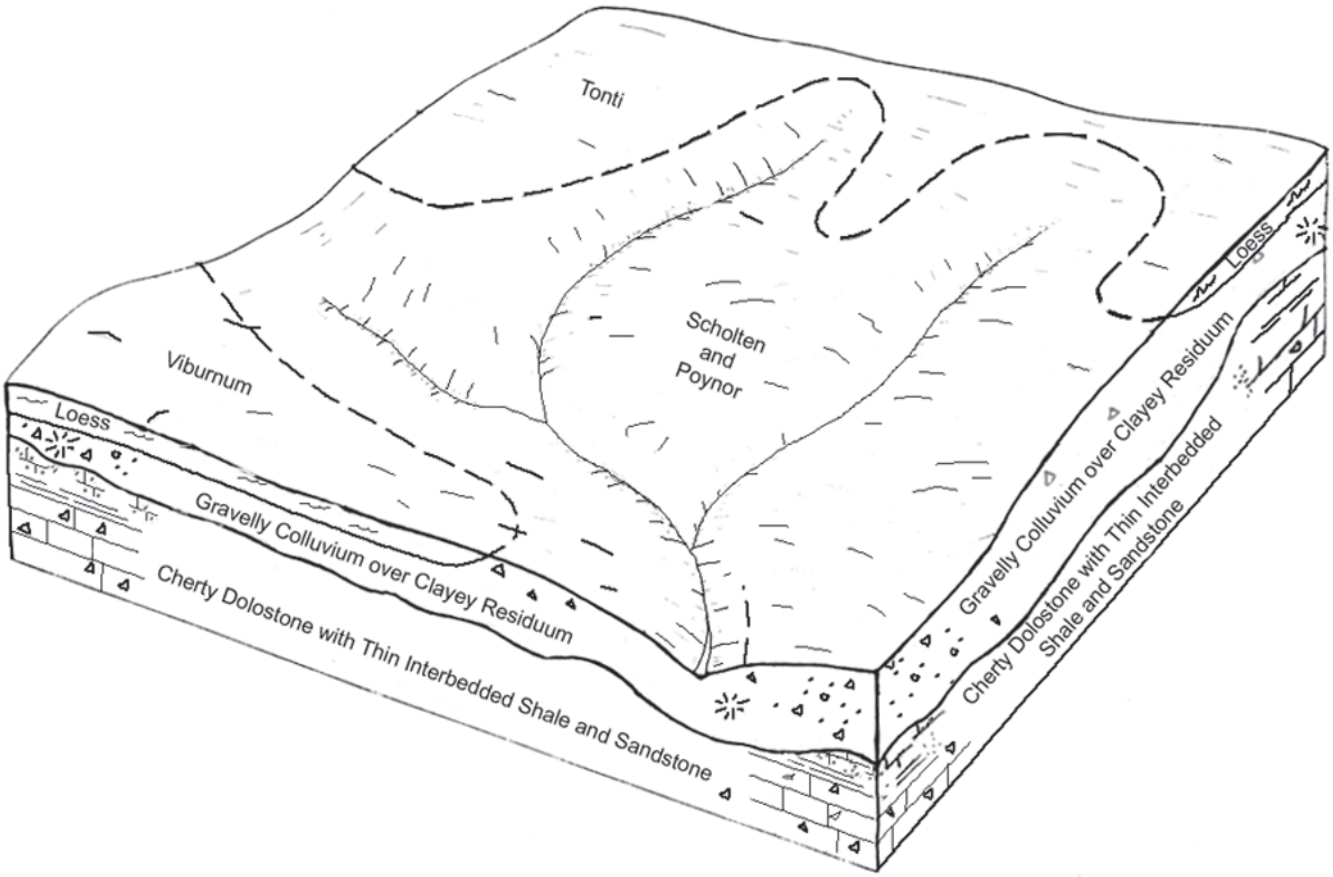

Figure 5.—Typical pattern of soils and parent material in the Scholten-Tonti-Poynor association.

Tonti—loess over gravelly colluvium over clayey residuum derived from dolostone
Poynor—gravelly colluvium derived from cherty dolostone

Slope Range

Scholten—3 to 15 percent
Tonti—1 to 8 percent
Poynor—3 to 15 percent

Major Land Uses

- Pasture and hayland; some woodland

5. Relfe-Tilk-Secesh Association

Composition

Extent of the association in the survey area: 8 percent

Extent of the components in the association (fig. 6):
Relfe and similar soils—30 percent
Tilk and similar soils—25 percent
Secesh and similar soils, such as Taterhill—23 percent
Soils of minor extent—22 percent

Soils of Minor Extent

- Bearthicket, Deible, Gabriel, Lecoma, riverwash, and Waben

Landscape

Relfe—flood plains and low stream terraces
Tilk—low stream terraces
Secesh—low stream terraces

Parent Material

Relfe—sandy and gravelly alluvium

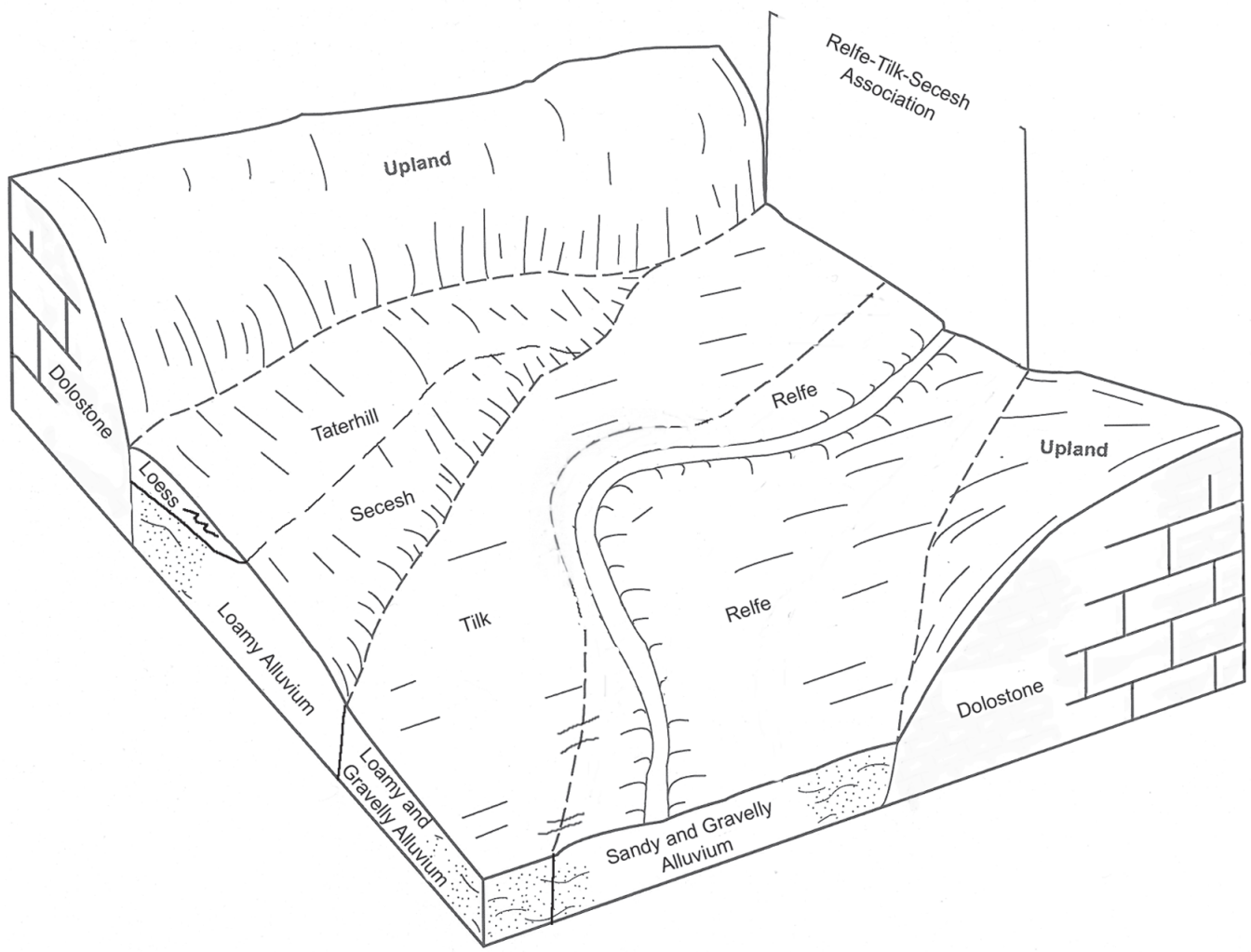

Figure 6.—Typical pattern of soils and parent material in the Relfe-Tilk-Secesh association.

Tilk—loamy and sandy alluvial sediments with a high content of rock fragments
Secesh—about 2 feet of loamy material and the underlying cherty residuum or alluvium from dolostone

Slope Range

Relfe—0 to 3 percent
Tilk—0 to 3 percent
Secesh—0 to 3 percent

Major Land Uses

- Pasture, hayland, and woodland

6. Tonti-Scholten-Viburnum Association

Composition

Extent of the association in the survey area: 6 percent

Extent of the components in the association (fig. 7):
Tonti and similar soils, such as Hogcreek—38 percent
Scholten and similar soils, such as Bendavis and Poynor—34 percent
Viburnum and similar soils—16 percent
Soils of minor extent—12 percent

Soils of Minor Extent

- Bender, Cornwall, Coulstone, Horneybuck, Lily, Lowassie, and Splitlimb

Landscape

Tonti—summits of ridges
Scholten—summits and shoulders of hills
Viburnum—summits of hills

Parent Material

Tonti—loess over gravelly colluvium over clayey residuum derived from dolostone
Scholten—gravelly colluvium derived from cherty dolostone

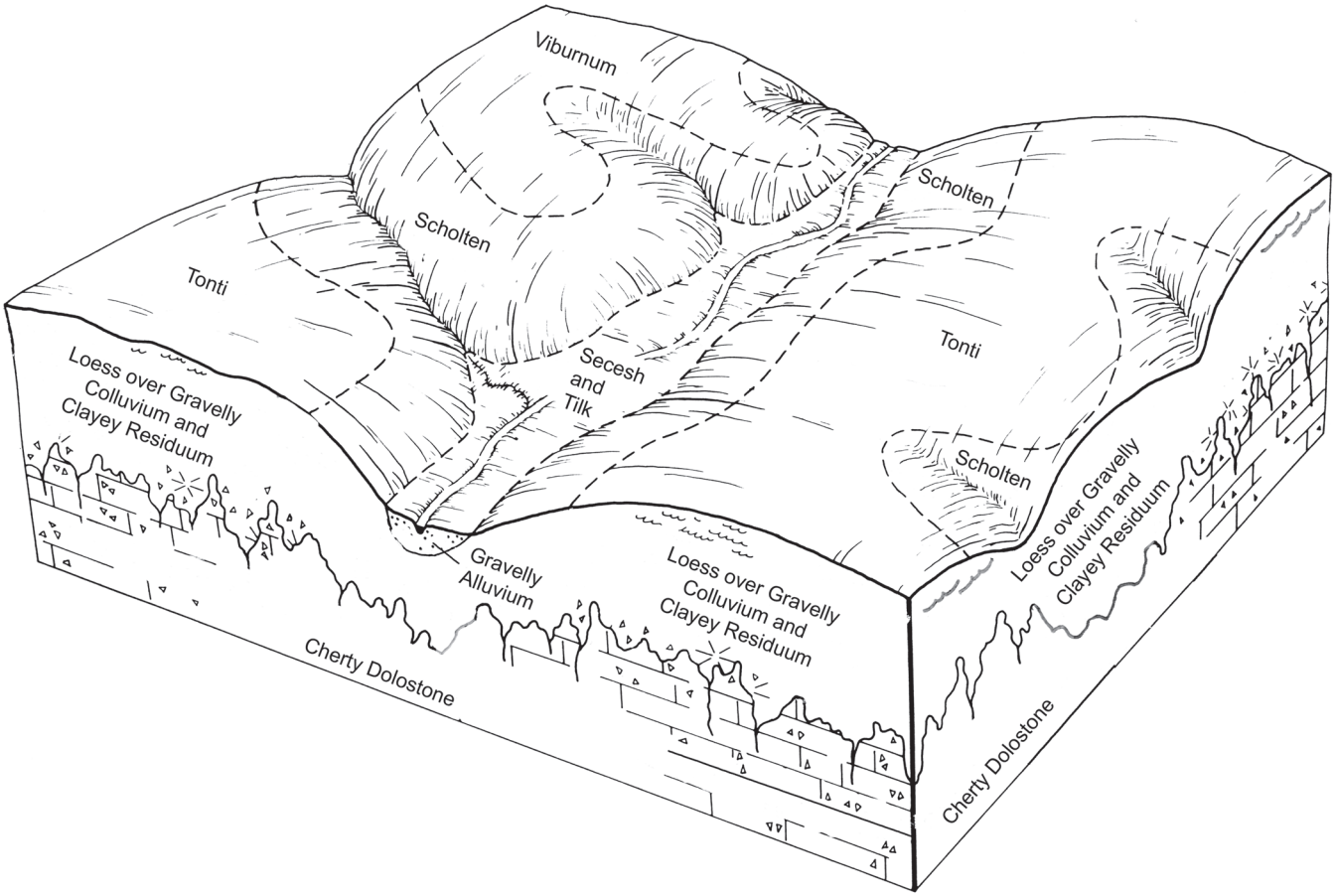

Figure 7.—Typical pattern of soils and parent material in the Tonti-Scholten-Viburnum association.

Viburnum—loess over clayey slope alluvium

Slope Range

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

Major Land Uses

- Pasture, hayland, and woodland

7. Poynor-Bendavis-Scholten Association

Composition

Extent of the association in the survey area: 3 percent

Extent of the components in the association (fig. 8):
Poynor and similar soils, such as Clarksville and Coulstone—30 percent
Bendavis and similar soils, such as Bender—29 percent
Scholten and similar soils—27 percent
Soils of minor extent—14 percent

Soils of Minor Extent

- Cornwall, Grandgulf, Hogcreek, Taterhill, Tilk, and Tonti

Landscape

Poynor—hills
Bendavis—hills
Scholten—summits and shoulders of hills

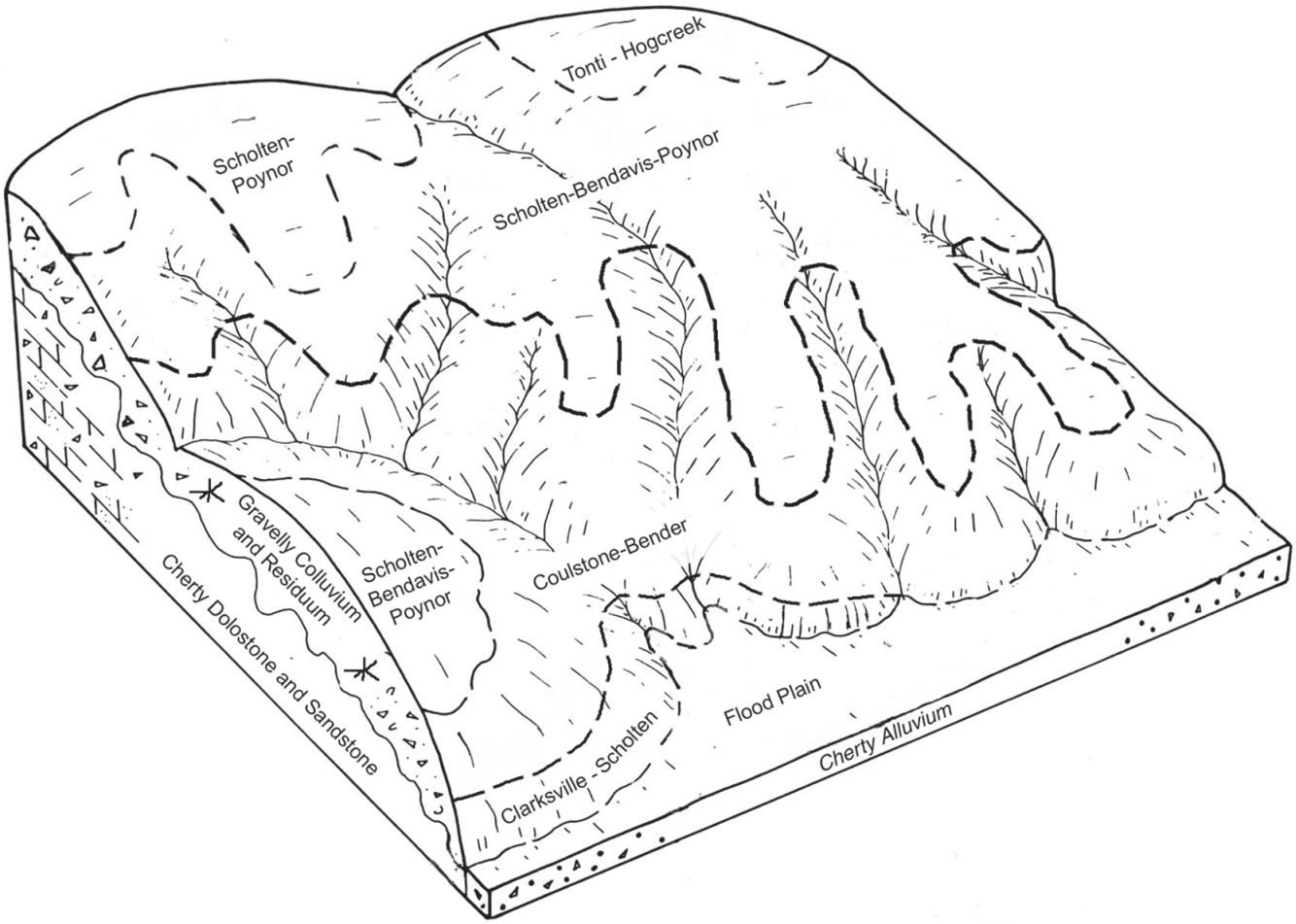

Figure 8.—Typical pattern of soils and parent material in the Poynor-Bendavis-Scholten association.

Parent Material

Poynor—gravelly colluvium derived from cherty dolostone
Bendavis—gravelly colluvium
Scholten—gravelly colluvium derived from cherty dolostone

Slope Range

Poynor—8 to 35 percent
Bendavis—8 to 35 percent
Scholten—8 to 45 percent

Major Land Uses

- Pasture and woodland

8. Irondale-Killarney-Courtois Association

Composition

Extent of the association in the survey area: 2 percent
Extent of the components in the association (fig. 9):
Irondale and similar soils—40 percent
Killarney and similar soils, such as Frenchmill—20 percent
Courtois and similar soils—16 percent
Soils of minor extent—24 percent

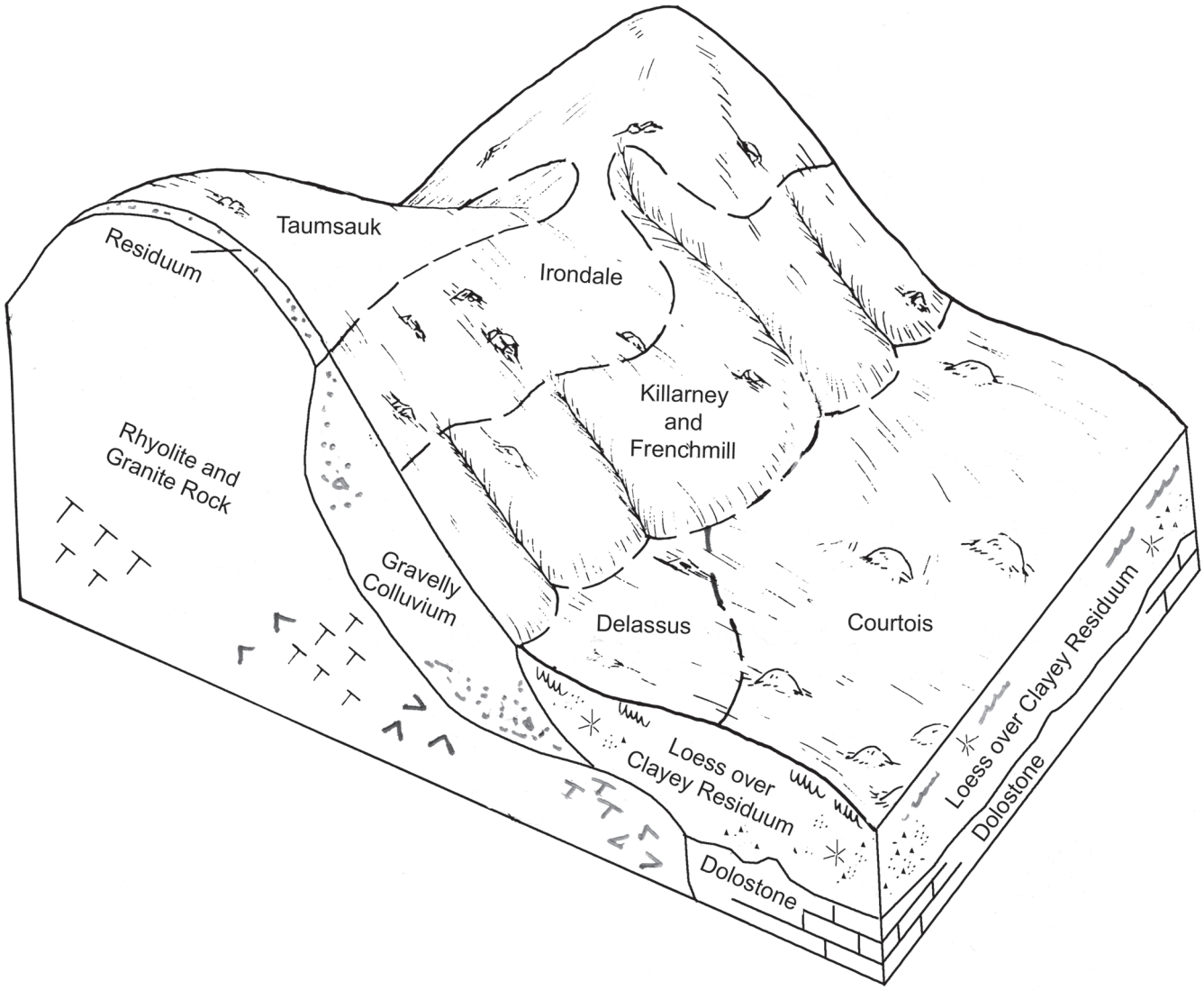

Figure 9.—Typical pattern of soils and parent material in the Irondale-Killarney-Courtois association.

Soils of Minor Extent

- Delassus, Fourche, Niangua, Rock outcrop, Rueter, Taterhill, and Taumsauk

Landscape

Irondale—upper and middle slopes of mountains
Killarney—middle and lower slopes of mountains
Courtois—basins

Parent Material

Irondale—residuum from rhyolite or other fine-grained igneous rock
Killarney—gravelly colluvium derived from loess and rhyolite or granite
Courtois—loess over clayey residuum derived from dolostone

Slope Range

Irondale—3 to 45 percent
Killarney—15 to 45 percent
Courtois—3 to 15 percent

Major Land Uses

- Woodland on the mountains; pasture and hayland in the basins

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, Taterhill silt loam, 3 to 8 percent slopes, is a phase of the Taterhill 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. Clarksville-Scholten complex, 15 to 45 percent slopes, very stony, 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

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Loess over gravelly colluvium over clayey residuum from dolostone

Composition

Tonti and similar soils—85 percent
Minor components—15 percent
- Viburnum
- Fanchon
- Scholten

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Slow (0.06 to 0.2 inch per hour)
Available water capacity: Very low (0 to 3 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: 18 to 30 inches

70026—Tonti silt loam, 1 to 3 percent slopes

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Loess over gravelly colluvium over clayey residuum from dolostone

Composition

Tonti and similar soils—80 percent
Minor components—20 percent
- Scholten
- Viburnum
- Fanchon

Typical Profile

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Slow (0.06 to 0.2 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: 18 to 30 inches

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

Setting

Landform: Sinkholes
Position on the landform: Toeslopes
Parent material: Loess over silty and clayey slope alluvium

Composition

Lowassie and similar soils—90 percent
Minor components—10 percent
- Grandgulf
- Viburnum
- Splitlimb

Typical Profile

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Poorly drained
Permeability: Slow (0.06 to 0.2 inch per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: At the surface, frequently ponded

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

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Gravelly slope alluvium derived from chert over clayey residuum from dolostone

Composition

Poynor and similar soils—90 percent
Minor components—10 percent
- Scholten
- Tonti
- Clarksville

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; clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

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

Setting

Landform: Hillslopes
Position on the landform: Backslopes
Parent material: Gravelly slope alluvium derived from chert over clayey residuum from dolostone

Composition

Poynor and similar soils—90 percent
Minor components—10 percent
- Gatewood
- Bendavis
- Clarksville
- Surface stones and boulders

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; clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

73042—Niangua-Bardley complex, 15 to 50 percent slopes, extremely stony

Setting

Landform: Hills
Position on the landform: Backslopes
Parent material: Gravelly colluvium over clayey residuum from dolostone

Composition

Niangua and similar soils—60 percent
Bardley and similar soils—30 percent
Minor components—10 percent
- Rock outcrop
- Gasconade
- Gepp
- Rueter

Typical Profile

Niangua
A—0 to 3 inches; very gravelly silt loam
E—3 to 14 inches; very gravelly silt loam
2Bt—14 to 52 inches; gravelly clay
2R—52 inches; dolostone bedrock

Bardley
A—0 to 4 inches; very gravelly silt loam
E—4 to 8 inches; extremely gravelly sandy loam
2Bt—8 to 27 inches; clay
2R—27 inches; dolostone bedrock

Soil Properties and Qualities

Depth to bedrock: Niangua—deep (40 to 60 inches); Bardley—moderately deep (20 to 40 inches)
Drainage class: Well drained
Permeability: Niangua—moderately slow (0.2 to 0.6 inch per hour); Bardley—moderate (0.6 inch to 2 inches per hour)
Available water capacity: Niangua—low (3 to 6 inches); Bardley—very low (0 to 3 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

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

Setting

Landform: Hills
Position on the landform: Shoulders
Parent material: Lily—fine-loamy residuum from sandstone; Bender—gravelly residuum from sandstone

Composition

Lily and similar soils—45 percent
Bender and similar soils—40 percent
Minor components—15 percent
- Coulstone
- Yelton
- Scholten
- Rock outcrop

Typical Profile

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

Bender
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 cobbly loam
2R—23 inches; sandstone bedrock

Soil Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Drainage class: Lily—well drained; Bender—somewhat excessively drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Very low (0 to 3 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

73054—Viburnum silt loam, 1 to 3 percent slopes

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Loess over clayey residuum

Composition

Viburnum and similar soils—90 percent
Minor components—10 percent
- Tonti
- Splitlimb
- Lowassie
- Fanchon

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: 18 to 22 inches

73055—Alred-Rueter complex, 15 to 35 percent slopes, very stony

Setting

Landform: Alred—hills, ridges; Rueter—hills
Position on the landform: Alred—backslopes and shoulders; Rueter—backslopes
Parent material: Alred—colluvium over residuum from cherty dolostone; Rueter—gravelly colluvium over gravelly residuum from cherty dolostone

Composition

Alred and similar soils—45 percent
Rueter and similar soils—35 percent
Minor components—20 percent
- Gepp
- Very deep, clayey-skeletal soils
- Coulstone
- Taterhill

Typical Profile

Alred
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 7 inches; very gravelly silt loam
E—7 to 11 inches; very gravelly silt loam
Bt1—11 to 30 inches; very gravelly silt loam
2Bt2—30 to 80 inches; cobbly clay

Rueter
Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; very gravelly silt loam
E—4 to 17 inches; gravelly silt loam
Bt1—17 to 32 inches; very gravelly silt loam
2Bt2—32 to 43 inches; very gravelly silty clay
3Bt3—43 to 71 inches; very cobbly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Alred—well drained; Rueter—somewhat excessively drained
Permeability: Alred—moderate over slow (0.6 inch to 2 inches per hour over 0.2 to 0.6 inch per hour); Rueter—moderate (0.6 inch to 2 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

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

Setting

Landform: Hills
Position on the landform: Shoulders, summits
Parent material: Silty colluvium over clayey residuum from mudstone

Composition

Tick and similar soils—80 percent
Minor components—20 percent
- Poynor
- Scholten
- Viburnum

Typical Profile

Oe—0 to 1 inch; moderately decomposed plant material
A—1 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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Very slow (less than 0.06 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

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

Setting

Landform: Hills
Position on the landform: Shoulders, backslopes
Parent material: Scholten—gravelly slope alluvium over clayey residuum from dolostone; Poynor—gravelly slope alluvium derived from chert over clayey residuum from dolostone

Composition

Scholten and similar soils—50 percent
Poynor and similar soils—35 percent
Minor components—15 percent
- Clarksville
- Tonti
- Fanchon
- Bendavis

Typical Profile

Scholten
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

Poynor
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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Scholten—moderately well drained; Poynor—well drained
Permeability: Scholten—moderate above the fragipan, very slow in the fragipan, and moderately rapid below the fragipan (0.6 inch to 2 inches per hour, less than 0.06 inch per hour, and 2 to 6 inches per hour); Poynor—moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Scholten—very low (0 to 3 inches); Poynor—low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: Scholten—16 to 26 inches; Poynor—more than 6 feet

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

Setting

Landform: Hills
Position on the landform: Backslopes
Parent material: Alred—gravelly slope alluvium over clayey residuum from dolostone; Bardley—gravelly slope alluvium over clayey residuum from dolostone

Composition

Alred and similar soils—35 percent
Bardley and similar soils—35 percent
Rock outcrop—15 percent
Minor components—15 percent
- Clarksville
- Gasconade

Typical Profile

Alred
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

Bardley
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; dolostone bedrock

Soil Properties and Qualities

Depth to bedrock: Bardley—moderately deep (20 to 40 inches); Alred—very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Bardley—very slow (less than 0.06 inch per hour); Alred—moderate over slow (0.6 inch to 2 inches per hour over 0.2 to 0.6 inch per hour)
Available water capacity: Bardley—very low (0 to 3 inches); Alred—low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

Description of Rock Outcrop

Kind of bedrock: Dolostone

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

Setting

Landform: Hills
Position on the landform: Backslopes
Parent material: Bender—gravelly slope alluvium derived from sandstone; Alred—gravelly colluvium over clayey residuum from dolostone

Composition

Bender and similar soils—35 percent
Alred and similar soils—30 percent
Rock outcrop—20 percent
Minor components—15 percent
- Coulstone
- Gatewood
- Bendavis

Typical Profile

Bender
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; sandstone bedrock

Alred
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

Soil Properties and Qualities

Depth to bedrock: Bender—moderately deep (20 to 40 inches); Alred—very deep (more than 60 inches)
Drainage class: Bender—somewhat excessively drained; Alred—well drained
Permeability: Bender—moderately rapid (2 to 6 inches per hour); Alred—moderate over slow (0.6 inch to 2 inches per hour over 0.2 to 0.6 inch per hour)
Available water capacity: Bender—very low (0 to 3 inches); Alred—low (3 to 6 inches)
Shrink-swell potential: Bender—low (0 to 3 percent); Alred—moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

Description of Rock Outcrop

Kind of bedrock: Dolostone

73139—Poynor-Clarksville-Scholten complex, 8 to 15 percent slopes, stony

Setting

Landform: Hills
Position on the landform: Summits, shoulders, and backslopes
Parent material: Poynor—gravelly colluvium over clayey residuum from dolostone; Clarksville—gravelly colluvium and clayey residuum from cherty dolostone; Scholten—gravelly colluvium over clayey residuum from cherty dolostone

Composition

Poynor and similar soils—35 percent
Clarksville and similar soils—32 percent
Scholten and similar soils—15 percent
Minor components—18 percent
- Very deep, fine-loamy soils
- Tonti
- Viburnum
- Very deep, clayey-skeletal soils

Typical Profile

Poynor
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 4 inches; gravelly silt loam
E—4 to 13 inches; very gravelly silt loam
Bt1—13 to 24 inches; extremely gravelly silt loam
2Bt2—24 to 80 inches; gravelly clay

Clarksville
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 5 inches; gravelly silt loam
E—5 to 8 inches; gravelly silt loam
Bt1—8 to 18 inches; very gravelly loam
2Bt2—18 to 42 inches; very gravelly clay loam
3Bt3—42 to 65 inches; clay

Scholten
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 3 inches; gravelly silt loam
E—3 to 8 inches; gravelly silt loam
Bt—8 to 17 inches; very gravelly silty clay loam
2Btx—17 to 41 inches; very gravelly silt loam
3Bt—41 to 80 inches; gravelly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Poynor—well drained; Clarksville—somewhat excessively drained; Scholten—moderately well drained
Permeability: Poynor—moderately slow (0.2 to 0.6 inch per hour); Clarksville—moderate (0.6 inch to 2 inches per hour); Scholten—moderate above the fragipan, very slow in the fragipan, and moderately rapid below the fragipan (0.6 inch to 2 inches per hour, less than 0.06 inch per hour, and 2 to 6 inches per hour)
Available water capacity: Poynor—low (3 to 6 inches); Clarksville—low (3 to 6 inches); Scholten—very low (0 to 3 inches)
Shrink-swell potential: Poynor—moderate (3 to 6 percent); Clarksville—low (0 to 3 percent); Scholten—low (0 to 3 percent)
Flooding: None
Depth to water table: Poynor—more than 6 feet; Clarksville—more than 6 feet; Scholten—12 to 29 inches

73140—Clarksville-Scholten complex, 15 to 45 percent slopes, very stony

Setting (fig. 10)

Landform: Hills
Position on the landform: Clarksville—shoulders, backslopes; Scholten—summits, shoulders, backslopes
Parent material: Clarksville—gravelly colluvium from cherty dolostone; Scholten—gravelly colluvium over clayey residuum from cherty dolostone

Composition

Clarksville and similar soils—50 percent
Scholten and similar soils—30 percent
Minor components—20 percent
- Gepp
- Poynor
- Very deep, fine-loamy soils
- Tilk

Typical Profile

Clarksville
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 6 inches; gravelly silt loam
E—6 to 13 inches; gravelly silt loam
Bt1—13 to 21 inches; very gravelly silt loam
2Bt2—21 to 43 inches; extremely gravelly clay loam
3Bt3—43 to 66 inches; very gravelly clay

Figure 10.—Mixed hardwoods in an area of Clarksville-Scholten complex, 15 to 45 percent slopes, very stony.

Scholten
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 6 inches; very gravelly silt loam
E—6 to 13 inches; very gravelly silt loam
Bt—13 to 34 inches; extremely gravelly clay loam
2Btx—34 to 58 inches; very gravelly loam
3Bt—58 to 80 inches; very gravelly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Clarksville—somewhat excessively drained; Scholten—moderately well drained
Permeability: Clarksville—moderate (0.6 inch to 2 inches per hour); Scholten—moderate above the fragipan, very slow in the fragipan, and moderately rapid below the fragipan (0.6 inch to 2 inches per hour, less than 0.06 inch per hour, and 2 to 6 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: Clarksville—more than 6 feet; Scholten—14 to 35 inches

73143—Courtois silt loam, 3 to 8 percent slopes

Setting (fig. 11)

Landform: Basins
Position on the landform: Summits
Parent material: Loess over clayey residuum from dolostone

Composition

Courtois and similar soils—85 percent
Minor components—15 percent
- Fourche
- Very deep, clayey-skeletal soils
- Gabriel
- Rock outcrop

Typical Profile

Ap—0 to 7 inches; silt loam
Bt1—7 to 15 inches; silty clay loam
2Bt2—15 to 32 inches; silty clay
3Bt3—32 to 80 inches; gravelly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

73144—Courtois silt loam, 8 to 15 percent slopes

Setting

Landform: Basins
Position on the landform: Shoulders
Parent material: Loess over clayey residuum derived from dolostone

Composition

Courtois and similar soils—85 percent
Minor components—15 percent
- Bardley
- Very deep, clayey-skeletal soils
- Gabriel
- Gepp
- Rock outcrop

Typical Profile

Ap—0 to 7 inches; silt loam
Bt1—7 to 15 inches; silty clay loam
2Bt2—15 to 32 inches; silty clay
3Bt3—32 to 80 inches; gravelly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained

Figure 11.—Pasture in an area of Courtois silt loam, 3 to 8 percent slopes.

Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

73147—Fourche silt loam, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Footslopes
Parent material: Loess and underlying residuum derived from dolostone

Composition

Fourche and similar soils—90 percent
Minor components—10 percent
- Very deep, well drained soil
- Higdon
- Very deep, moderately well drained soil with a fragipan

Typical Profile

Ap—0 to 6 inches; silt loam
Bt—6 to 30 inches; silty clay loam
2Bt/E—30 to 54 inches; silty clay loam
3Bt—54 to 66 inches; clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: 24 to 36 inches

73155—Gasconade-Rock outcrop complex, 3 to 35 percent slopes

Setting

Landform: Hills
Position on the landform: Backslopes, shoulders
Parent material: Residuum from dolostone

Composition

Gasconade and similar soils—60 percent
Rock outcrop—30 percent
Minor components—10 percent
- Arkana
- Gepp

Typical Profile

A—0 to 4 inches; silty clay
Bw—4 to 13 inches; very gravelly clay
R—13 inches; dolostone bedrock

Soil Properties and Qualities

Depth to bedrock: Gasconade—very shallow and shallow (4 to 20 inches)
Drainage class: Gasconade—somewhat excessively drained
Permeability: Gasconade—moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Gasconade—very low (0 to 3 inches)
Shrink-swell potential: Gasconade—moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

Description of Rock Outcrop

Kind of bedrock: Dolostone

73159—Yelton silt loam, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Footslopes
Parent material: Loess over colluvium from sandstone

Composition

Yelton and similar soils—90 percent
Minor components—10 percent
- Taterhill
- Waben

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; sandy clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)

above the fragipan and slow (0.06 to 0.2 inch per hour) in the fragipan
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: 18 to 24 inches

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

Setting

Landform: Hills
Position on the landform: Backslopes
Parent material: Bendavis—gravelly colluvium; Poynor—residuum derived from dolostone

Composition

Bendavis and similar soils—50 percent
Poynor and similar soils—30 percent
Minor components—20 percent
- Fanchon
- Viburnum
- Lily
- Hogcreek
- Scholten
- Tonti

Typical Profile

Bendavis
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; chert bedrock

Poynor
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

Soil Properties and Qualities

Depth to bedrock: Bendavis—moderately deep (20 to 40 inches); Poynor—very deep (more than 60 inches)
Drainage class: Bendavis—moderately well drained; Poynor—well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Bendavis—low (0 to 3 percent); Poynor—moderate (3 to 6 percent)
Flooding: None
Depth to water table: Bendavis—24 to 36 inches; Poynor—more than 6 feet

73197—Viburnum silt loam, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Silty loess over clayey residuum

Composition

Viburnum and similar soils—85 percent
Minor components—15 percent
- Scholten
- Tonti
- Fanchon
- Splitlimb
- Hogcreek
- Bendavis

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: 14 to 20 inches

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

Setting

Landform: Hills
Position on the landform: Shoulders, backslopes
Parent material: Gravelly colluvium derived from chert over clayey residuum derived from dolostone

Composition

Poynor and similar soils—80 percent
Minor components—20 percent

- Bendavis
- Tick
- Scholten

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

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

Setting

Landform: Sinkholes
Position on the landform: Backslopes, summits
Parent material: Gravelly slope alluvium over clayey residuum from dolostone

Composition

Poynor and similar soils—85 percent
Minor components—15 percent
- Bendavis
- Clarksville
- Lowassie
- Grandgulf
- Splitlimb
- Scholten
- Rock outcrop

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

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

Setting

Landform: Sinkholes
Position on the landform: Toeslopes
Parent material: Silty loess over silty colluvium

Composition

Splitlimb and similar soils—80 percent
Minor components—20 percent
- Lowassie
- Very deep, well drained soils

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: 12 to 20 inches, frequently ponded

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

Setting

Landform: Hills
Position on the landform: Backslopes
Parent material: Coulstone—colluvium and residuum from interbedded sandstone and cherty dolostone; Bender—residuum from sandstone

Composition

Coulstone and similar soils—40 percent

Bender and similar soils—25 percent
Minor components—35 percent
- Bendavis
- Clarksville
- Vertical bluffs
- Rock outcrop

Typical Profile

Coulstone
Oe—0 to 1 inch; moderately decomposed plant material
A—1 to 6 inches; extremely cobbly sandy loam
Bt1—6 to 29 inches; very cobbly sandy loam
2Bt2—29 to 42 inches; very stony sandy clay loam
3Bt3—42 to 80 inches; very stony clay loam

Bender
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; sandstone bedrock

Soil Properties and Qualities

Depth to bedrock: Coulstone—very deep (more than 60 inches); Bender—moderately deep (20 to 40 inches)
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Very low (0 to 3 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

73236—Scholten-Poynor complex, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Gravelly slope alluvium over clayey residuum from dolostone

Composition

Scholten and similar soils—50 percent
Poynor and similar soils—30 percent
Minor components—20 percent
- Viburnum
- Tonti
- Clarksville
- Bendavis

Typical Profile

Scholten
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

Poynor
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; gravelly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Scholten—moderately well drained; Poynor—well drained
Permeability: Scholten—moderate above the fragipan, very slow in the fragipan, and moderately rapid below the fragipan (0.6 to 2 inches per hour, less than 0.06 inch per hour, and 2 to 6 inches per hour); Poynor—moderate (0.6 inch to 2 inches per hour)
Available water capacity: Scholten—very low (0 to 3 inches); Poynor—moderate (6 to 9 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: Scholten—16 to 26 inches; Poynor—more than 6 feet

73242—Fanchon-Tonti complex, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Loess over gravelly colluvium over clayey residuum from dolostone

Composition

Fanchon and similar soils—40 percent
Tonti and similar soils—30 percent
Minor components—30 percent
- Viburnum
- Aslinger
- Scholten
- Poynor

Typical Profile

Fanchon
Ap—0 to 5 inches; silt loam
AB—5 to 10 inches; silt loam

Bt1—10 to 28 inches; silt loam
2Bt2—28 to 47 inches; gravelly clay loam
3Bt3—47 to 80 inches; clay

Tonti
Ap—0 to 6 inches; silt loam
Bt—6 to 22 inches; silty clay loam
2Btx—22 to 35 inches; very gravelly silt loam
3Bt—35 to 80 inches; cobbly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Fanchon—well drained; Tonti—moderately well drained
Permeability: Fanchon—moderate (0.6 inch to 2 inches per hour); Tonti—very slow (less than 0.06 inch per hour)
Available water capacity: Fanchon—moderate (6 to 9 inches); Tonti—low (3 to 6 inches)
Shrink-swell potential: Fanchon—low (0 to 3 percent); Tonti—moderate (3 to 6 percent)
Flooding: None
Depth to water table: Fanchon—more than 6 feet; Tonti—13 to 28 inches

73269—Brussels-Gasconade-Rock outcrop complex, 30 to 90 percent slopes, very bouldery

Setting (fig. 12)

Landform: Hills
Position on the landform: Brussels—backslopes; Gasconade—backslopes, shoulders
Parent material: Brussels—gravelly colluvium over gravelly residuum from dolostone; Gasconade—gravelly residuum from dolostone

Composition

Brussels—40 percent
Gasconade and similar soils—30 percent
Rock outcrop—15 percent
Minor components—15 percent
- Bardley
- Poynor
- Goss
- Vertical bluffs

Typical Profile

Brussels
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 10 inches; gravelly silty clay loam
Bt1—10 to 49 inches; very gravelly silty clay loam
Bt2—49 to 70 inches; gravelly silty clay loam

Gasconade
A—0 to 9 inches; cobbly silty clay
Bw—9 to 14 inches; very cobbly clay
R—14 inches; dolostone bedrock

Soil Properties and Qualities

Depth to bedrock: Brussels—very deep (more than 60 inches); Gasconade—very shallow and shallow (4 to 20 inches)
Drainage class: Brussels—well drained; Gasconade—somewhat excessively drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Brussels—low (3 to 6 inches); Gasconade—very low (0 to 3 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

Description of Rock Outcrop

Kind of bedrock: Dolostone

73295—Taterhill silt loam, 3 to 8 percent slopes

Setting (fig. 13)

Landform: Hills
Position on the landform: Footslopes
Parent material: Silty colluvium derived mainly from loess and the underlying valley fill materials

Composition

Taterhill and similar soils—85 percent
Minor components—15 percent
- Aslinger
- Tonti
- Poynor

Typical Profile

Ap—0 to 9 inches; silt loam
Bt1—9 to 30 inches; silt loam
2Bt2—30 to 80 inches; gravelly clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

Figure 12.—The Current River flows adjacent to an area of Brussels-Gasconade-Rock outcrop complex, 30 to 90 percent slopes, very bouldery.

73298—Tonti-Hogcreek complex, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Tonti—loess over gravelly colluvium over clayey residuum from dolostone; Hogcreek—loess over gravelly colluvium

Composition

Tonti and similar soils—60 percent
Hogcreek and similar soils—30 percent
Minor components—10 percent
- Very deep, fine-loamy soils
- Scholten
- Bendavis

Typical Profile

Tonti
A—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

Hogcreek
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 28 inches; extremely gravelly silt loam
3R—28 inches; sandstone bedrock

Soil Properties and Qualities

Depth to bedrock: Tonti—very deep (more than 60 inches); Hogcreek—moderately deep (20 to 40 inches)
Drainage class: Moderately well drained
Permeability: Tonti—slow (0.06 to 0.2 inch per hour); Hogcreek—moderate (0.6 inch to 2 inches per hour) above the fragipan and very slow (less than 0.06 inch per hour) in the fragipan

Available water capacity: Tonti—very low (0 to 3 inches); Hogcreek—low (3 to 6 inches)
Shrink-swell potential: Tonti—moderate (3 to 6 percent); Hogcreek—low (0 to 3 percent)
Flooding: None
Depth to water table: Tonti—18 to 30 inches; Hogcreek—16 to 32 inches

73301—Tick very gravelly silt loam, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Silty colluvium over clayey residuum from mudstone

Composition

Tick and similar soils—80 percent

Minor components—20 percent
- Silt loam surface

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Very slow (less than 0.06 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

Figure 13.—Fescue hayland in an area of Taterhill silt loam, 3 to 8 percent slopes.

73308—Grandgulf silt loam, 1 to 3 percent slopes, rarely ponded

Setting

Landform: Sinkholes
Position on the landform: Toeslopes
Parent material: Fine-silty alluvium

Composition

Grandgulf and similar soils—90 percent
Minor components—10 percent
- Splitlimb
- Areas with gravel in the profile
- Taterhill

Typical Profile

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

73309—Clarksville-Bendavis complex, 15 to 35 percent slopes, stony

Setting

Landform: Hills
Position on the landform: Backslopes
Parent material: Clarksville—gravelly slope alluvium over clayey residuum; Bendavis—gravelly slope alluvium

Composition

Clarksville and similar soils—40 percent
Bendavis and similar soils—30 percent
Minor components—30 percent
- Rock outcrop
- Poynor
- Tonti
- Scholten
- Fanchon

Typical Profile

Clarksville
Oi—0 to 1 inch; moderately decomposed plant material
A—1 to 5 inches; extremely gravelly silt loam
BE—5 to 11 inches; very gravelly silt loam
Bt1—11 to 42 inches; extremely gravelly silt loam
2Bt2—42 to 80 inches; very gravelly clay

Bendavis
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; chert bedrock

Soil Properties and Qualities

Depth to bedrock: Clarksville—very deep (more than 60 inches); Bendavis—moderately deep (20 to 40 inches)
Drainage class: Clarksville—somewhat excessively drained; Bendavis—moderately well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: Clarksville—more than 6 feet; Bendavis—24 to 36 inches

73310—Scholten-Bendavis-Poynor complex, 1 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Scholten—summits, shoulders, backslopes; Bendavis—summits, backslopes; Poynor—summits, shoulders, backslopes, footslopes
Parent material: Scholten—gravelly colluvium over clayey residuum from cherty dolostone; Bendavis—gravelly colluvium; Poynor—gravelly colluvium over clayey residuum from dolostone

Composition

Scholten and similar soils—30 percent
Bendavis and similar soils—25 percent
Poynor and similar soils—20 percent
Minor components—25 percent
- Bender
- Hogcreek
- Tonti
- Viburnum

Typical Profile

Scholten
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

Bendavis
Ap—0 to 8 inches; gravelly silt loam
E—8 to 10 inches; very gravelly silt loam
Bt—10 to 31 inches; very gravelly silt loam
2R—31 inches; chert bedrock

Poynor
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; gravelly clay

Soil Properties and Qualities

Depth to bedrock: Scholten—very deep (more than 60 inches); Bendavis—moderately deep (20 to 40 inches); Poynor—very deep (more than 60 inches)
Drainage class: Scholten—moderately well drained; Bendavis—moderately well drained; Poynor—well drained
Permeability: Scholten—moderate above the fragipan, very slow in the fragipan, and moderately rapid below the fragipan (0.6 inch to 2 inches per hour, less than 0.06 inch per hour, and 2 to 6 inches per hour); Bendavis—moderate (0.6 inch to 2 inches per hour); Poynor—moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Scholten—very low (0 to 3 inches); Bendavis—low (3 to 6 inches); Poynor—moderate (6 to 9 inches)
Shrink-swell potential: Scholten—moderate (3 to 6 percent); Bendavis—low (0 to 3 percent); Poynor—moderate (3 to 6 percent)
Flooding: None
Depth to water table: Scholten—16 to 26 inches; Bendavis—24 to 36 inches; Poynor—more than 6 feet

73311—Scholten-Bendavis-Poynor complex, 8 to 15 percent slopes

Setting

Landform: Hills
Position on the landform: Shoulders, backslopes
Parent material: Scholten—gravelly colluvium over clayey residuum from dolomite; Bendavis—gravelly colluvium; Poynor—gravelly colluvium over clayey residuum from dolostone

Composition

Scholten and similar soils—35 percent
Bendavis and similar soils—30 percent
Poynor and similar soils—25 percent
Minor components—10 percent
- Tonti
- Hogcreek
- Clarksville
- Viburnum

Typical Profile

Scholten
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

Bendavis
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; chert bedrock

Poynor
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

Soil Properties and Qualities

Depth to bedrock: Scholten—very deep (more than 60 inches); Bendavis—moderately deep (20 to 40 inches); Poynor—very deep (more than 60 inches)
Drainage class: Scholten—moderately well drained; Bendavis—moderately well drained; Poynor—well drained
Permeability: Scholten—moderate above the fragipan, very slow in the fragipan, and moderately rapid below the fragipan (0.6 inch to 2 inches per hour, less than 0.06 inch per hour, and 2 to 6 inches per hour); Bendavis—moderate (0.6 inch to 2 inches per hour); Poynor—moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Scholten—very low (0 to 3 inches); Bendavis—low (3 to 6 inches); Poynor—low (3 to 6 inches)
Shrink-swell potential: Scholten—moderate (3 to 6 percent); Bendavis—low (0 to 3 percent); Poynor—moderate (3 to 6 percent)

Flooding: None
Depth to water table: Scholten—16 to 26 inches; Bendavis—24 to 36 inches; Poynor—more than 6 feet

73313—Fanchon-Tonti complex, 1 to 3 percent slopes

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Loess over gravelly colluvium over clayey residuum from dolostone

Composition

Fanchon and similar soils—65 percent
Tonti and similar soils—20 percent
Minor components—15 percent
- Viburnum
- Splitlimb

Typical Profile

Fanchon
Ap—0 to 5 inches; silt loam
AB—5 to 10 inches; silt loam
Bt1—10 to 28 inches; silt loam
2Bt2—28 to 47 inches; gravelly clay loam
3Bt3—47 to 80 inches; clay

Tonti
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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Fanchon—well drained; Tonti—moderately well drained
Permeability: Fanchon—moderate (0.6 inch to 2 inches per hour); Tonti—very slow (less than 0.06 inch per hour)
Available water capacity: Fanchon—moderate (6 to 9 inches); Tonti—low (3 to 6 inches)
Shrink-swell potential: Fanchon—low (0 to 3 percent); Tonti—moderate (3 to 6 percent)
Flooding: None
Depth to water table: Fanchon—more than 6 feet; Tonti—18 to 30 inches

73333—Taterhill silt loam, 1 to 3 percent slopes

Setting

Landform: River valleys
Position on the landform: Footslopes, high stream terraces
Parent material: Silty colluvium derived mainly from loess and the underlying valley fill materials

Composition

Taterhill and similar soils—80 percent
Minor components—20 percent
- Aslinger
- Yelton

Typical Profile

Ap—0 to 11 inches; silt loam
BA—11 to 15 inches; silt loam
Bt1—15 to 28 inches; silt loam
2Bt2—28 to 48 inches; very gravelly silty clay loam
2Bt3—48 to 80 inches; silty clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

73334—Horneybuck silt loam, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Footslopes
Parent material: Loamy colluvium

Composition

Horneybuck and similar soils—90 percent
Minor components—10 percent
- Aslinger

Typical Profile

A—0 to 6 inches; silt loam
Bt1—6 to 26 inches; gravelly silt loam
2Bt2—26 to 37 inches; gravelly silty clay loam
2Bt3—37 to 60 inches; very gravelly silty clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: 18 to 30 inches

73335—Hobson-Rueter complex, 3 to 8 percent slopes

Setting

Landform: Hills, structural benches
Position on the landform: Hobson—summits, shoulders; Rueter—summits, backslopes
Parent material: Hobson—residuum from sandstone and cherty dolostone; Rueter—gravelly colluvium over gravelly residuum from dolostone

Composition

Hobson and similar soils—50 percent
Rueter and similar soils—35 percent
Minor components—15 percent
- Alred
- Rueter
- Loamy over clayey, moderately well drained soils

Typical Profile

Hobson
A—0 to 10 inches; silt loam
BE—10 to 16 inches; silt loam
Bt—16 to 32 inches; silt loam
2Btx—32 to 42 inches; very gravelly silt loam
3Bt—42 to 80 inches; very gravelly clay

Rueter
A—0 to 4 inches; very gravelly silt loam
E—4 to 17 inches; gravelly silt loam
Bt1—17 to 32 inches; very gravelly silt loam
2Bt2—32 to 43 inches; very gravelly silty clay
3Bt3—43 to 71 inches; very cobbly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Hobson—moderately well drained; Rueter—somewhat excessively drained
Permeability: Hobson—moderate (0.6 to 2 inches per hour) above the fragipan and slow (0.06 to 0.2 inch per hour) in the fragipan; Rueter—moderate (0.6 inch to 2 inches per hour)
Available water capacity: Hobson—moderate (6 to 9 inches); Rueter—low (3 to 6 inches)
Shrink-swell potential: Hobson—high (6 to 9 percent); Rueter—moderate (3 to 6 percent)
Flooding: None
Depth to water table: Hobson—18 to 30 inches; Rueter—more than 6 feet

73336—Rueter-Gepp complex, bench, 8 to 15 percent slopes

Setting

Landform: Structural benches
Position on the landform: Backslopes
Parent material: Rueter—gravelly colluvium over gravelly residuum from dolostone; Gepp—clayey residuum from dolostone

Composition

Rueter and similar soils—50 percent
Gepp and similar soils—35 percent
Minor components—15 percent
- Hobson
- Portia

Typical Profile

Rueter
A—0 to 5 inches; gravelly silt loam
E—5 to 12 inches; gravelly silt loam
Bt1—12 to 24 inches; very gravelly silt loam
2Bt2—24 to 43 inches; very gravelly silty clay loam
3Bt3—43 to 80 inches; very cobbly clay

Gepp
A—0 to 5 inches; gravelly silt loam
BA—5 to 10 inches; gravelly silt loam
Bt1—10 to 16 inches; gravelly clay
2Bt2—16 to 76 inches; clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Rueter—somewhat excessively drained; Gepp—well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Rueter—low (0 to 3 percent); Gepp—moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

73337—Tonti-Portia complex, 3 to 8 percent slopes

Setting

Landform: Hills, structural benches
Position on the landform: Summits
Parent material: Tonti—loess over gravelly colluvium over clayey residuum from dolostone; Portia—colluvium over residuum

Composition

Tonti and similar soils—50 percent
Portia and similar soils—35 percent
Minor components—15 percent
- Alred
- Gepp
- Moderately deep, loamy or clayey soils
- Scholten

Typical Profile

Tonti
Ap—0 to 10 inches; silt loam
Bt—10 to 25 inches; gravelly silty clay loam
2Btx—25 to 36 inches; extremely gravelly silt loam
3Bt—36 to 80 inches; very gravelly clay

Portia
A—0 to 6 inches; silt loam
Bt1—6 to 16 inches; loam
Bt2—16 to 21 inches; sandy clay loam
2Bt3—21 to 31 inches; clay
3Bt4—31 to 80 inches; clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Tonti—moderately well drained; Portia—well drained
Permeability: Tonti—slow (0.06 to 0.2 inch per hour); Portia—moderate (0.6 inch to 2 inches per hour)
Available water capacity: Tonti—low (3 to 6 inches); Portia—moderate (6 to 9 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: Tonti—18 to 30 inches; Portia—more than 6 feet

73338—Portia-Hobson complex, 8 to 15 percent slopes

Setting

Landform: Structural benches, hills
Position on the landform: Shoulders
Parent material: Portia—colluvium over residuum; Hobson—colluvium from sandstone over clayey residuum from dolostone

Composition

Portia and similar soils—50 percent
Hobson and similar soils—35 percent
Minor components—15 percent
- Alred
- Gepp
- Moderately deep, loamy and clayey soils
- Scholten

Typical Profile

Portia
A—0 to 6 inches; silt loam
Bt1—6 to 16 inches; silt loam
Bt2—16 to 21 inches; loam
2Bt3—21 to 31 inches; clay
3Bt4—31 to 80 inches; clay

Hobson
A—0 to 8 inches; silt loam
BE—8 to 13 inches; silt loam
Bt—13 to 27 inches; gravelly silty clay loam
2Btx—27 to 36 inches; very gravelly clay loam
3Bt—36 to 70 inches; gravelly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Portia—well drained; Hobson—moderately well drained
Permeability: Portia—moderate (0.6 inch to 2 inches per hour); Hobson—moderate (0.6 inch to 2 inches) above the fragipan and slow (0.06 to 0.2 inch per hour) in the fragipan
Available water capacity: Portia—moderate (6 to 9 inches); Hobson—low (3 to 6 inches)
Shrink-swell potential: Portia—moderate (3 to 6 percent); Hobson—high (6 to 9 percent)
Flooding: None
Depth to water table: Portia—more than 6 feet; Hobson—18 to 30 inches

73339—Arkana-Gepp complex, 8 to 15 percent slopes, rocky, stony

Setting

Landform: Hills
Position on the landform: Summits, backslopes

Parent material: Arkana—gravelly colluvium over clayey residuum from dolostone; Gepp—clayey residuum from dolostone

Composition

Arkana and similar soils—50 percent
Gepp and similar soils—35 percent
Minor components—15 percent
- Alred
- Bardley
- Gasconade

Typical Profile

Arkana
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 7 inches; very gravelly silt loam
Bt1—7 to 12 inches; gravelly silty clay loam
2Bt2—12 to 30 inches; clay
2R—30 inches; dolostone bedrock

Gepp
A—0 to 10 inches; very gravelly silt loam
Bt1—10 to 19 inches; gravelly silty clay loam
2Bt2—19 to 60 inches; clay

Soil Properties and Qualities

Depth to bedrock: Arkana—moderately deep (20 to 40 inches); Gepp—very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Arkana—very slow (less than 0.06 inch per hour); Gepp—moderate (0.6 inch to 2 inches per hour)
Available water capacity: Arkana—low (3 to 6 inches); Gepp—moderate (6 to 9 inches)
Shrink-swell potential: Arkana—high (6 to 9 percent); Gepp—moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

73340—Rueter-Gepp complex, 8 to 15 percent slopes, stony

Setting

Landform: Hills
Position on the landform: Summits, backslopes
Parent material: Rueter—gravelly colluvium over gravelly residuum from dolostone; Gepp—clayey residuum from dolostone

Composition

Rueter and similar soils—50 percent
Gepp and similar soils—35 percent
Minor components—15 percent
- Alred
- Bardley
- Scholten

Typical Profile

Rueter
A—0 to 6 inches; very gravelly silt loam
E—6 to 10 inches; gravelly silt loam
Bt1—10 to 28 inches; very gravelly silt loam
2Bt2—28 to 42 inches; very gravelly clay
3Bt3—42 to 80 inches; very cobbly clay

Gepp
A—0 to 4 inches; gravelly silt loam
BA—4 to 9 inches; very gravelly silt loam
Bt1—9 to 17 inches; gravelly clay
2Bt2—17 to 72 inches; clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Rueter—somewhat excessively drained; Gepp—well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Rueter—moderate (6 to 9 inches); Gepp—low (3 to 6 inches)
Shrink-swell potential: Rueter—low (0 to 3 percent); Gepp—moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

73341—Gepp-Arkana complex, 15 to 55 percent slopes, rocky

Setting

Landform: Gepp—hills; Arkana—hills, ridges
Position on the landform: Summits, backslopes
Parent material: Gepp—clayey residuum from dolostone; Arkana—gravelly colluvium over clayey residuum from dolostone

Composition

Gepp and similar soils—50 percent
Arkana and similar soils—35 percent
Minor components—15 percent
- Alred
- Rueter
- Shallow, clayey soils

Typical Profile

Gepp
A—0 to 4 inches; very gravelly silt loam
Bt1—4 to 15 inches; silty clay

2Bt2—15 to 68 inches; clay

Arkana
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 9 inches; very gravelly silt loam
Bt1—9 to 14 inches; very gravelly clay
2Bt2—14 to 29 inches; clay
2R—29 inches; dolostone bedrock

Soil Properties and Qualities

Depth to bedrock: Gepp—very deep (more than 60 inches); Arkana—moderately deep (20 to 40 inches)
Drainage class: Well drained
Permeability: Gepp—moderate (0.6 inch to 2 inches per hour); Arkana—very slow (less than 0.06 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Gepp—moderate (3 to 6 percent); Arkana—high (6 to 9 percent)
Flooding: None
Depth to water table: More than 6 feet

73342—Alred-Arkana complex, 8 to 15 percent slopes, rocky

Setting

Landform: Hills
Position on the landform: Summits
Parent material: Alred—colluvium over residuum from cherty dolostone; Arkana—gravelly colluvium over clayey residuum from dolostone

Composition

Alred and similar soils—60 percent
Arkana and similar soils—35 percent
Minor components—5 percent
- Bardley
- Gepp
- Shallow, clayey soils

Typical Profile

Alred
A—0 to 8 inches; very gravelly silt loam
E—8 to 11 inches; gravelly silt loam
Bt1—11 to 24 inches; very gravelly silt loam
2Bt2—24 to 67 inches; cobbly clay

Arkana
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 5 inches; very gravelly silt loam
Bt1—5 to 17 inches; clay
2Bt2—17 to 25 inches; clay
2R—25 inches; dolostone bedrock

Soil Properties and Qualities

Depth to bedrock: Alred—very deep (more than 60 inches); Arkana—moderately deep (20 to 40 inches)
Drainage class: Alred—Well drained
Permeability: Alred—moderate (0.6 inch to 2 inches per hour) over slow (0.2 to 0.6 inch per hour); Arkana—very slow (less than 0.06 inch per hour)
Available water capacity: Alred—low (3 to 6 inches); Arkana—very low (0 to 3 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

73361—Coulstone-Alred complex, 15 to 50 percent slopes, very stony

Setting

Landform: Hills
Position on the landform: Backslopes
Parent material: Coulstone—gravelly colluvium from sandstone; Alred—colluvium over residuum from cherty limestone

Composition

Coulstone and similar soils—50 percent
Alred and similar soils—30 percent
Minor components—20 percent
- Niangua
- Scholten
- Bendavis

Typical Profile

Coulstone
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 5 inches; very gravelly sandy loam
E—5 to 8 inches; gravelly sandy loam
Bt1—8 to 23 inches; very gravelly loam
Bt2—23 to 52 inches; very gravelly sandy loam
2Bt3—52 to 80 inches; clay loam

Alred
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 7 inches; very gravelly silt loam
E—7 to 11 inches; very gravelly silt loam
Bt1—11 to 30 inches; very gravelly silt loam
2Bt2—30 to 80 inches; cobbly clay

Soil Properties and Qualities

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

Drainage class: Coulstone—somewhat excessively drained; Alred—well drained
Permeability: Coulstone—moderately rapid (2 to 6 inches per hour); Alred—moderate (0.6 to 2 inches per hour) over slow (0.2 to 0.6 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Coulstone—low (0 to 3 percent); Alred—moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

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

Setting

Landform: River valleys
Position on the landform: Low stream terraces
Parent material: Silty alluvium over clayey alluvium

Composition

Hartville and similar soils—90 percent
Minor components—10 percent
- Deible
- Bearthicket
- Secesh
- Lecoma

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Permeability: Slow (0.06 to 0.2 inch per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: High (6 to 9 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: 12 to 30 inches

74636—Lecoma loam, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Structural benches
Parent material: Loamy colluvium from sandstone, fine-loamy alluvium

Composition

Lecoma and similar soils—90 percent
Minor components—10 percent
- Alred
- Gepp
- Waben
- Yelton

Typical Profile

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

74637—Lecoma loam, 8 to 15 percent slopes

Setting

Landform: Hills
Position on the landform: Structural benches
Parent material: Loamy colluvium from sandstone, fine-loamy alluvium

Composition

Lecoma and similar soils—90 percent
Minor components—10 percent
- Alred
- Gepp
- Waben
- Yelton

Typical Profile

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None

Depth to water table: More than 6 feet

74642—Cornwall silt loam, 0 to 3 percent slopes, rarely ponded

Setting

Landform: Sinkholes
Position on the landform: Toeslopes
Parent material: Loess over slope alluvium

Composition

Cornwall and similar soils—90 percent
Minor components—10 percent
- Splitlimb
- Waben

Typical Profile

A—0 to 8 inches; silt loam
Bt—8 to 31 inches; silt loam
2Btx—31 to 43 inches; silty clay loam
3Bt—43 to 80 inches; silt loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Slow (0.06 to 0.2 inch per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: 17 to 32 inches

74643—Lecoma silt loam, 1 to 3 percent slopes

Setting

Landform: River valleys
Position on the landform: High stream terraces, strath terraces
Parent material: Loamy alluvium and loamy colluvium from sandstone

Composition

Lecoma and similar soils—85 percent
Minor components—15 percent
- Taterhill
- Yelton
- Waben

Typical Profile

Ap—0 to 9 inches; silt loam
Bt1—9 to 24 inches; silt loam
2Bt2—24 to 80 inches; clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: None
Depth to water table: More than 6 feet

74644—Deible silt loam, 1 to 3 percent slopes

Setting

Landform: River valleys
Position on the landform: High stream terraces
Parent material: Loess over alluvium

Composition

Deible and similar soils—90 percent
Minor components—10 percent
- Racoon
- Higdon

Typical Profile

Ap—0 to 7 inches; silt loam
E—7 to 16 inches; silt loam
Btg1—16 to 40 inches; silty clay loam
2Btg2—40 to 65 inches; clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Poorly drained
Permeability: Very slow (less than 0.06 inch per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: High (6 to 9 percent)
Flooding: None
Depth to water table: 0 to 12 inches

74648—Aslinger silt loam, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Footslopes
Parent material: Loamy colluvium over loamy and clayey alluvium

Composition

Aslinger and similar soils—85 percent
Minor components—15 percent
- Cornwall
- Clarksville
- Waben

Typical Profile

Ap—0 to 4 inches; silt loam
AB—4 to 8 inches; silt loam
Bt—8 to 21 inches; silt loam
2Btx—21 to 29 inches; very gravelly silt loam
3Bt1—29 to 55 inches; very gravelly clay loam
4Bt2—55 to 70 inches; extremely cobbly clay

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: 18 to 30 inches

74651—Waben gravelly silt loam, 3 to 8 percent slopes

Setting

Landform: Hills
Position on the landform: Footslopes
Parent material: Gravelly alluvium and gravelly colluvium

Composition

Waben—90 percent
Minor components—10 percent
- Aslinger
- Brussels
- Lecoma
- Taterhill

Typical Profile

Waben
Ap—0 to 4 inches; gravelly silt loam
Bt1—4 to 22 inches; very gravelly silt loam
Bt2—22 to 47 inches; very gravelly silt loam
2Bt3—47 to 80 inches; extremely gravelly clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

74658—Zanoni fine sandy loam, 1 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys
Position on the landform: Stream terraces
Parent material: Loamy alluvium

Composition

Zanoni and similar soils—70 percent
Minor components—30 percent
- Bearthicket
- Secesh
- Waben
- Wideman

Typical Profile

Ap—0 to 7 inches; fine sandy loam
Bt1—7 to 36 inches; fine sandy loam
Bt2—36 to 50 inches; sandy loam
2C—50 to 80 inches; stratified extremely gravelly loamy sand to gravelly loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: More than 6 feet

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

Setting

Landform: River valleys
Position on the landform: Low stream terraces
Parent material: Silty alluvium

Composition

Bearthicket and similar soils—85 percent
Minor components—15 percent

- Secesh
- Deible
- Marquand

Typical Profile

Ap—0 to 6 inches; silt loam
AB—6 to 19 inches; silt loam
Bt—19 to 45 inches; silt loam
2BC—45 to 64 inches; loam
2C—64 to 80 inches; coarse sandy loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Very high (more than 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: More than 6 feet

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

Setting

Landform: River valleys
Position on the landform: Low stream terraces
Parent material: Loamy alluvium

Composition

Razort and similar soils—85 percent
Minor components—15 percent
- Bearthicket
- Zanoni
- Tilk
- Racket
- Huzzah

Typical Profile

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: More than 6 feet

75394—Relfe gravelly sandy loam, 0 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys
Position on the landform: Low stream terraces
Parent material: Sandy and gravelly alluvium

Composition

Relfe and similar soils—90 percent
Minor components—10 percent
- Farewell
- Sandbur
- Taterhill
- Waben

Typical Profile

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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Excessively drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Very low (0 to 3 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: More than 6 feet

75395—Jamesfin silt loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform: River valleys
Position on the landform: Flood plains
Parent material: Fine-silty alluvium

Composition

Jamesfin and similar soils—90 percent
Minor components—10 percent
- Higdon
- Gladden
- Wideman

Typical Profile

Ap—0 to 6 inches; silt loam
A—6 to 15 inches; silt loam
Bw—15 to 53 inches; silt loam

BC—53 to 62 inches; loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Very high (more than 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: 48 to 72 inches

75408—Secesh silt loam, 0 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys
Position on the landform: Low stream terraces
Parent material: About 2 feet of loamy alluvium over gravelly residuum or alluvium

Composition

Secesh and similar soils—90 percent
Minor components—10 percent
- Relfe
- Bearthicket
- Tilk
- Gladden

Typical Profile

Ap—0 to 4 inches; silt loam
AB—4 to 10 inches; silt loam
Bt1—10 to 26 inches; gravelly silt loam
2Bt2—26 to 36 inches; gravelly loam
2C—36 to 80 inches; very gravelly coarse sandy loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: More than 6 feet

75409—Relfe sandy loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform: River valleys
Position on the landform: Flood plains
Parent material: Sandy and gravelly alluvium

Composition

Relfe and similar soils—90 percent
Minor components—10 percent
- Gladden
- Wideman
- Gravel bars

Typical Profile

Ap—0 to 7 inches; sandy loam
C—7 to 64 inches; extremely gravelly sand

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Excessively drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: More than 6 feet

75411—Tilk very gravelly sandy loam, 0 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys
Position on the landform: Stream terraces
Parent material: Loamy and sandy alluvium with a high content of rock fragments

Composition

Tilk and similar soils—85 percent
Minor components—15 percent
- Gladden
- Wideman
- Secesh

Typical Profile

A—0 to 8 inches; very gravelly sandy loam
E—8 to 16 inches; extremely gravelly loam
Bt—16 to 47 inches; very cobbly loam
2C—47 to 70 inches; extremely gravelly coarse sandy loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: More than 6 feet

75416—Gladden loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform: River valleys
Position on the landform: Flood plains
Parent material: Loamy and gravelly alluvium

Composition

Gladden and similar soils—85 percent
Minor components—15 percent
- Jamesfin
- Relfe
- Secesh
- Wideman

Typical Profile

Ap—0 to 5 inches; loam
A—5 to 26 inches; loam
Bw—26 to 58 inches; loam
2C—58 to 77 inches; coarse sand

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate in upper part and (0.6 inch to 2 inches per hour) moderately rapid (2 to 6 inches per hour) in the lower part
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: More than 6 feet

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

Setting

Landform: River valleys
Position on the landform: Flood plains
Parent material: Relfe—sandy and gravelly alluvium; Sandbur—loamy alluvium

Composition

Relfe and similar soils—40 percent
Sandbur and similar soils—30 percent
Minor components—30 percent
- Sand and gravel bars
- Tilk
- Racket
- Farewell
- Cedargap
- Kaintuck

Typical Profile

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

Sandbur
Ap—0 to 8 inches; fine sandy loam
C1—8 to 50 inches; stratified fine sand to silt loam
2C2—50 to 80 inches; very gravelly sandy loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Relfe—excessively drained; Sandbur—somewhat excessively drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Relfe—very low (0 to 3 inches); Sandbur—moderate (6 to 9 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Frequent (more than a 50 percent chance in any year)
Depth to water table: More than 6 feet

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

Setting (fig. 14)

Landform: River valleys
Position on the landform: High flood plains

Figure 14.—Fescue hay bales in an area of Secesh-Tilk complex, 0 to 3 percent slopes, occasionally flooded.

Parent material: Secesh—loamy alluvium; Tilk—gravelly alluvium

Composition

Secesh and similar soils—50 percent
Tilk and similar soils—35 percent
Minor components—15 percent
- Bearthicket
- Relfe
- Taterhill
- Yelton

Typical Profile

Secesh
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

Tilk
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

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Secesh—moderate (0.6 inch to 2 inches per hour); Tilk—moderately rapid (2 to 6 inches per hour)
Available water capacity: Secesh—moderate (6 to 9 inches); Tilk—low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: More than 6 feet

75426—Gabriel silt loam, 0 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys
Position on the landform: Low stream terraces
Parent material: Fine-silty alluvium

Composition

Gabriel and similar soils—90 percent
Minor components—10 percent
- Moniteau
- Farewell
- Higdon

Typical Profile

A—0 to 14 inches; silt loam
Btg1—14 to 46 inches; silty clay loam
Btg2—46 to 81 inches; silty clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Poorly drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: 12 to 30 inches

75430—Wideman fine sandy loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform: River valleys
Position on the landform: Flood plains
Parent material: Sandy alluvium

Composition

Wideman and similar soils—90 percent
Minor components—10 percent
- Jamesfin
- Haymond
- Kaintuck
- Relfe

Typical Profile

Ap—0 to 9 inches; fine sandy loam
C1—9 to 13 inches; fine sandy loam
C2—13 to 16 inches; sand
C3—16 to 49 inches; loam
C4—49 to 71 inches; gravelly sandy loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Excessively drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: More than 6 feet

75433—Racket loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform: River valleys
Position on the landform: High flood plains
Parent material: Loamy alluvium

Composition

Racket and similar soils—80 percent
Minor components—20 percent
- Farewell
- Cedargap
- Relfe
- Tilk
- Sandbur

Typical Profile

Ap—0 to 7 inches; loam
A—7 to 42 inches; loam
2C—42 to 80 inches; stratified extremely gravelly sand to gravelly sandy loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: 42 to 72 inches

75451—Gladden silt loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform: River valleys
Position on the landform: Flood plains

Parent material: Loamy and gravelly alluvium

Composition

Gladden and similar soils—85 percent
Minor components—15 percent
- Jamesfin
- Relfe
- Wideman

Typical Profile

A—0 to 5 inches; silt loam
Bw—5 to 53 inches; loam
2C—53 to 80 inches; gravelly sandy loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2 inches per hour) in the upper part and moderately rapid (2 to 6 inches per hour) in the lower part
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: More than 6 feet

75462—Huzzah sandy loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform: River valleys
Position on the landform: High flood plains
Parent material: Loamy alluvium

Composition

Huzzah and similar soils—90 percent
Minor components—10 percent
- Cedargap
- Relfe
- Sandbur

Typical Profile

A1—0 to 6 inches; sandy loam
A2—6 to 23 inches; fine sandy loam
Bw—23 to 47 inches; fine sandy loam
2C—47 to 60 inches; loamy fine sand

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: High (9 to 12 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: More than 6 feet

75463—Huzzah sandy loam, 0 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys
Position on the landform: Low stream terraces
Parent material: Loamy alluvium

Composition

Huzzah and similar soils—90 percent
Minor components—10 percent
- Kaintuck
- Relfe
- Gladden

Typical Profile

Ap—0 to 10 inches; sandy loam
A—10 to 24 inches; fine sandy loam
Bw—24 to 38 inches; fine sandy loam
2C—38 to 60 inches; loamy fine sand

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: More than 6 feet

75464—Cedargap gravelly loam, 0 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys
Position on the landform: Low stream terraces
Parent material: Gravelly alluvium

Composition

Cedargap and similar soils—80 percent
Minor components—20 percent
- Huzzah
- Hartville
- Tilk

Typical Profile

Ap—0 to 6 inches; gravelly loam
A—6 to 20 inches; gravelly loam
Bw—20 to 36 inches; extremely gravelly sandy loam
C—36 to 60 inches; extremely gravelly sandy clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability: Moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: More than 6 feet

75465—Raftville-Gabriel complex, 0 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys
Position on the landform: Stream terraces
Parent material: Raftville—loamy alluvium from sandstone; Gabriel—fine-silty alluvium

Composition

Raftville and similar soils—50 percent
Gabriel and similar soils—25 percent
Minor components—25 percent
- Cedargap
- Lecoma
- Moniteau
- Relfe

Typical Profile

Raftville
A—0 to 9 inches; sandy loam
Bt1—9 to 24 inches; loam
2Bt2—24 to 39 inches; very gravelly clay loam
2R—39 inches; dolostone bedrock

Gabriel
Ap—0 to 9 inches; loam
E—9 to 19 inches; silt loam
Bt1—19 to 25 inches; silt loam
Bt2—25 to 63 inches; silty clay loam

Soil Properties and Qualities

Depth to bedrock: Raftville—moderately deep (20 to 40 inches); Gabriel—very deep (more than 60 inches)
Drainage class: Raftville—well drained; Gabriel—poorly drained
Permeability: Raftville—moderately rapid (2 to 6 inches per hour); Gabriel—moderately slow (0.2 to 0.6 inch per hour)
Available water capacity: Raftville—low (3 to 6 inches); Gabriel—high (9 to 12 inches)
Shrink-swell potential: Raftville—low (0 to 3 percent); Gabriel—moderate (3 to 6 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: Raftville—more than 6 feet; Gabriel—12 to 30 inches

75466—Midco very gravelly loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform: River valleys
Position on the landform: High flood plains
Parent material: Gravelly alluvium

Composition

Midco and similar soils—90 percent
Minor components—10 percent
- Alluvial land
- Loamy soils
- Secesh

Typical Profile

A—0 to 8 inches; very gravelly loam
C1—8 to 26 inches; very gravelly sandy loam
C2—26 to 60 inches; extremely gravelly sandy loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid (2 to 6 inches per hour)
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: Occasional (5 to 50 percent chance in any year)
Depth to water table: More than 6 feet

75470—Farewell gravelly silt loam, 0 to 3 percent slopes, rarely flooded

Setting

Landform: River valleys

Position on the landform: Low stream terraces
Parent material: Loamy alluvium

Composition

Farewell and similar soils—90 percent
Minor components—10 percent
- Cedargap
- Gabriel
- Gladden

Typical Profile

Ap—0 to 8 inches; gravelly silt loam
A—8 to 18 inches; silt loam
Btg1—18 to 39 inches; gravelly clay loam
2Btg2—39 to 80 inches; very gravelly clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Moderate (6 to 9 inches)
Shrink-swell potential: Moderate (3 to 6 percent)
Flooding: Rare (1 to 5 percent chance in any year)
Depth to water table: 0 to 6 inches

77000—Killarney-Frenchmill complex, 15 to 45 percent slopes, rubbly

Setting

Landform: Mountains
Position on the landform: Backslopes, footslopes
Parent material: Killarney—gravelly colluvium from loess and rhyolite or granite; Frenchmill—gravelly colluvium from rhyolite or granite

Composition

Killarney and similar soils—45 percent
Frenchmill and similar soils—40 percent
Minor components—15 percent
- Delassus
- Irondale
- Taumsauk
- Rock outcrop

Typical Profile

Killarney
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 5 inches; very cobbly silt loam
E—5 to 16 inches; very cobbly silt loam
Bt—16 to 32 inches; very gravelly silt loam
2Btx—32 to 48 inches; very gravelly silt loam
3Bt—48 to 80 inches; very gravelly loam

Frenchmill
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 6 inches; very cobbly silt loam
E—6 to 19 inches; gravelly silt loam
Bt1—19 to 27 inches; very gravelly silt loam
2Bt2—27 to 58 inches; very gravelly loam
3Bt3—58 to 80 inches; cobbly clay loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Killarney—moderately well drained; Frenchmill—well drained
Permeability: Killarney—moderate (0.6 inch to 2 inches per hour) above the fragipan and very slow (less than 0.06 inch per hour) in the fragipan; Frenchmill—moderate (0.6 inch to 2 inches per hour)
Available water capacity: Killarney—low (3 to 6 inches); Frenchmill—moderate (6 to 9 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: Killarney—24 to 36 inches; Frenchmill—more than 6 feet

77003—Delassus gravelly silt loam, 8 to 15 percent slopes, very bouldery

Setting

Landform: Mountains
Position on the landform: Summits, footslopes
Parent material: Loess mixed with loamy colluvium or residuum from granite or rhyolite

Composition

Delassus and similar soils—90 percent
Minor components—10 percent
- Frenchmill
- Roselle
- Trackler
- Rock outcrop

Typical Profile

A—0 to 8 inches; gravelly silt loam
E—8 to 13 inches; gravelly silt loam
Bt—13 to 20 inches; gravelly loam
2Btx—20 to 59 inches; gravelly loam
3Bt—59 to 78 inches; cobbly loam

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)

in the upper part and very slow (less than 0.06 inch per hour) in the fragipan
Available water capacity: Low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: 22 to 30 inches

77004—Irondale gravelly silt loam, 15 to 35 percent slopes, rocky, extremely bouldery

Setting

Landform: Mountains
Position on the landform: Backslopes, shoulders
Parent material: Gravelly residuum derived from rhyolite

Composition

Irondale and similar soils—85 percent
Minor components—15 percent
- Killarney
- Trackler
- Taumsauk
- Frenchmill

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 4 inches; gravelly silt loam
E—4 to 9 inches; very gravelly silt loam
Bt1—9 to 15 inches; very cobbly silt loam
Bt2—15 to 22 inches; very gravelly silt loam
R—22 inches; rhyolite bedrock

Soil Properties and Qualities

Depth to bedrock: Moderately deep (20 to 40 inches)
Drainage class: Well drained
Permeability: Moderate (0.6 inch to 2.0 inches per hour)
Available water capacity: Very low (0 to 3 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

77007—Taumsauk-Irondale-Rock outcrop complex, 15 to 45 percent slopes, extremely stony

Setting

Landform: Mountains
Position on the landform: Backslopes, shoulders
Parent material: Taumsauk—loess or colluvium or gravelly residuum derived from rhyolite; Irondale—gravelly residuum derived from rhyolite

Composition

Taumsauk and similar soils—40 percent
Irondale and similar soils—32 percent
Rock outcrop—21 percent
Minor components—7 percent
- Killarney
- Trackler
- Frenchmill

Typical Profile

Taumsauk
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 5 inches; cobbly silt loam
Bt—5 to 17 inches; very cobbly silt loam
R—17 inches; rhyolite bedrock

Irondale
Oi—0 to 1 inch; slightly decomposed plant material
A—1 to 5 inches; very cobbly silt loam
E—5 to 10 inches; very cobbly silt loam
Bt1—10 to 17 inches; very cobbly silt loam
Bt2—17 to 35 inches; very cobbly silty clay loam
R—35 inches; rhyolite bedrock

Soil Properties and Qualities

Depth to bedrock: Taumsauk—very shallow and shallow (4 to 20 inches); Irondale—moderately deep (20 to 40 inches)
Drainage class: Taumsauk—somewhat excessively drained; Irondale—well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Very low (0 to 3 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

Description of Rock Outcrop

Kind of bedrock: Rhyolite

77011—Taumsauk-Irondale-Rock outcrop complex, 3 to 15 percent slopes, very stony

Setting

Landform: Mountains
Position on the landform: Shoulders, backslopes
Parent material: Residuum derived from rhyolite

Composition

Taumsauk and similar soils—40 percent
Irondale and similar soils—30 percent
Rock outcrop—15 percent
Minor components—15 percent
- Trackler
- Hassler
- Delassus

Typical Profile

Taumsauk
A—0 to 4 inches; gravelly silt loam
Bt—4 to 15 inches; extremely cobbly silty clay loam
R—15 inches; rhyolite bedrock

Irondale
A—0 to 3 inches; gravelly silt loam
E—3 to 6 inches; gravelly silt loam
Bt1—6 to 13 inches; very gravelly silt loam
Bt2—13 to 28 inches; very gravelly silty clay loam
R—28 inches; rhyolite bedrock

Soil Properties and Qualities

Depth to bedrock: Taumsauk—very shallow and shallow (4 to 20 inches); Irondale—moderately deep (20 to 40 inches)
Drainage class: Taumsauk—somewhat excessively drained; Irondale—well drained
Permeability: Moderate (0.6 inch to 2 inches per hour)
Available water capacity: Taumsauk—very low (0 to 3 inches); Irondale—low (3 to 6 inches)
Shrink-swell potential: Low (0 to 3 percent)
Flooding: None
Depth to water table: More than 6 feet

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.

99007—Dam

Component Description

- This map unit consists of earthen structures which hold larger bodies of water.

99010—Pits and Dumps

Component Description

- This map unit consists of open excavations from which iron ore, granite, gravel, limestone, rhyolite, or sandstone have been removed. These areas commonly are associated with an area of dumps, or spoil material. Iron ore was mined from the thick residual deposits weathered from limestone or dolomite. Most of these iron mines are small and are in the southern part of the county. Most of these areas were mined before 1920. Dumps consist of heaps of soil and clayey residuum. Granite and sandstone were quarried for dimension stone. These quarries are small. Dumps consist of heaps of soil and weathered rock.
- Gravel was extracted from the gravelly alluvium found in the stream valleys. It is used for aggregate on roads and in concrete. These areas vary in size. The deeper pits are filled with water. Dumps consist of heaps of larger rocks or loamy alluvium.
- Limestone or dolomite are quarried for stone, aggregate, and agricultural lime. Some of the deeper quarry pits contain water. Dumps consist of heaps of overlying soil and clayey residuum. Individual areas vary widely in size.
- Rhyolite is quarried for aggregate. One large quarry is near Gads Hill. Dumps consist of the overlying soil and weathered rock. These dumps are smoothed and vegetated with grasses.
- 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.

Composition

Pits—55 percent
Dumps—45 percent

99013—Riverwash, frequently flooded

Component Description

- This map unit consists of gravel bars and other areas in river and stream channels. These areas are reshaped by the stream flow. Many of these areas have a sparse vegetation of willows and grapevines.

Setting

Landform: River valleys
Position on the landform: Low flood plains
Parent material: Alluvium

Composition

Riverwash—90 percent
Minor components—10 percent
- Relfe
- Sandbur
- Water

Soil Properties and Qualities

Depth to bedrock: Very deep (more than 60 inches)
Flooding: Frequent (more than a 50 percent chance in any year)
Depth to water table: Variable

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

General management needed for crops and pasture is suggested in this section. The crops or pasture plants best suited to the soils, including some not commonly grown in the survey area, are identified. 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.

About 10 percent of the survey area is used for pasture and hay. Cultivated crops, such as corn or soybeans, are seldom grown.

The potential for increased production is fair. About 50,000 acres in the area qualify as prime farmland. An additional 50,000 acres is suited to crop production, including sloping areas where adequate protection from erosion is needed. About 150,000 acres is best suited to pasture.

Water erosion is a major concern on slopes of more than about 2 percent. Loss of the surface layer reduces the available water capacity and results in poor tilth. Erosion is especially harmful to soils that have a root-restricting layer within a depth of about 40 inches of the surface, such as Tonti soils. It is less harmful, though still a concern, on soils that have no root-restricting characteristics, such as Courtois soils. Applications of fertilizer help to offset the lower fertility caused by erosion, but overcoming much of the damage is difficult or impractical. Controlling erosion minimizes the pollution of streams by sedimentation. Thus water quality is improved for farm and city uses, for wildlife habitat, and for recreational uses.

Erosion-control practices provide a protective cover of crop residues or vegetation. Properly managed permanent pasture or hay can provide 80 percent or more of the protection needed. Crop rotations that alternate cultivated crops and meadows help to control erosion. Applying a system of conservation tillage that leaves a protective cover of crop residue on the surface throughout the year can reduce sheet erosion by one-half or more, as compared to fall plowing with a moldboard plow.

No-till systems that leave nearly the entire crop residue on the surface reduce the hazard of erosion. Contour farming and contour strip cropping can be used on fields that have smooth, uniform slopes. Terraces that divert surface runoff to safe outlets can be used in some fields.

Parallel terraces can be farmed more easily than contour terraces. Deep and very deep soils that have no root-restricting characteristics, such as Courtois soils, are better suited to terraces than soils that have a fragipan near the surface, such as Tonti soils. On the more shallow soils, the possible losses caused by exposing small infertile areas should be considered when the depth of cut and the design of the terrace system are determined.

Soil tilth is an important factor affecting the germination of seeds and the infiltration of water into the soil. Soils that have good tilth are granular and porous. In the uplands, most soils used for cultivated crops have a surface layer of silt loam that is low in content of organic matter. Examples are Courtois soils. Generally, tilling these soils weakens the soil structure and increases the degree of soil compaction and the extent of surface crusting. Tilling when the soils are too wet can further increase the degree of compaction, even below the plow layer. Subsoiling and varying the depth of plowing minimize compaction and the formation of traffic pans. Regular additions of crop residue, manure, and other organic material improve tilth and minimize surface crusting.

Most of the soils on the flood plains in the survey area have a surface layer of silt loam that is moderate in content of organic matter. These soils retain favorable tilth under normal tillage operations. They are susceptible to compaction beneath the tillage zone.

Stones and boulders are a common feature in many of the soils in the surface area. In some places, these soils cannot be tilled because they have too many stones and boulders. In other places, the stones and boulders can be removed.

Soil fertility is medium in most of the soils on the flood plains and low in the soil on uplands. Almost all of the soils on uplands have excessive levels of acidity in the upper part of the root zone. Applications of lime are needed to raise the pH level of these soils for the adequate growth of most crops. Most of the soils on flood plains are naturally acid, but the levels may or may not affect crop growth in a given year. On all soils, the amount of lime and fertilizer to be applied should be based on the results of soil tests, the needs of the crop, and the expected level of yield. The Cooperative Extension Service can help to determine the kind and amount of fertilizer to be applied. Soil samples can be organized using the soil survey to identify contrasting soil types.

Organic matter is an important source of nitrogen for crop growth. Also, it helps to maintain good tilth and the rate of water infiltration. The content of organic matter is low in most of the cultivated soils in the uplands and moderate in the soils on flood plains. Throughout the survey area, the soils have low levels of phosphorus and low or moderate levels of potassium, unless heavy applications of fertilizer have been applied.

Soils along the river bottoms generally flood at some time. Soils subject to overflow, when the stream channel runs full, flood frequently. These generally are gravelly soils. Soils on the next higher level flood occasionally. Flooding generally occurs between December and May and is of brief duration. Flash flooding as a result of intensive rainfall can occur on the upper reaches of stream bottoms at any time of the year. Flooding history should be considered for cropped areas.

In soils that have a high water table, a drainage system is needed to reduce wetness during spring. Additional drainage measures are needed in some areas of Deible soils. Surface ditches or tile drains can be used if suitable outlets are available. On some areas, due to seepage of water into these soils, draining these soils is only partly effective. As a result, these soils are best suited to pasture and wildlife habitat.

Areas of wet soils without a history of cropping may be considered wetland. Before altering any area that may be considered a wetland, the Natural Resources Conservation Service should be contacted in order to ensure compliance with existing laws.

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 50,000 acres in the survey area, or nearly 9 percent of the total acreage, meets the soil requirements for prime farmland. Scattered areas of this land are throughout the county, but most are along the river valleys, mainly in association 5, which is described under the heading "General Soil Map Units." Most of the prime farmland is used for pasture and hay.

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."

Some soils that have a seasonal high water table and all soils that are frequently flooded during the growing season qualify as prime farmland only in areas where these limitations have been overcome by drainage measures or flood control. The need for these measures is indicated after the map unit name below. Onsite evaluation is needed to determine whether or not these limitations have been overcome by corrective measures.

The soils identified as prime farmland in Shannon County are:

70026 Tonti silt loam, 1 to 3 percent slopes
73054 Viburnum silt loam, 1 to 3 percent slopes
73308 Grandgulf silt loam, 1 to 3 percent slopes, rarely ponded
73313 Fanchon-Tonti complex, 1 to 3 percent slopes
73333 Taterhill silt loam, 1 to 3 percent slopes
74627 Hartville silt loam, 1 to 3 percent slopes, rarely flooded
74643 Lecoma silt loam, 1 to 3 percent slopes
74644 Deible silt loam, 1 to 3 percent slopes (where drained)
74658 Zanoni fine sandy loam, 1 to 3 percent slopes, rarely flooded
75381 Bearthicket silt loam, 0 to 3 percent slopes, rarely flooded

75390 Razort silt loam, 0 to 3 percent slopes, rarely flooded
75395 Jamesfin silt loam, 0 to 3 percent slopes, occasionally flooded
75408 Secesh silt loam, 0 to 3 percent slopes, rarely flooded
75416 Gladden loam, 0 to 3 percent slopes, occasionally flooded
75420 Secesh-Tilk complex, 0 to 3 percent slopes, occasionally flooded
75426 Gabriel silt loam, 0 to 3 percent slopes, rarely flooded (where drained)
75430 Wideman fine sandy loam, 0 to 3 percent slopes, occasionally flooded
75433 Racket loam, 0 to 3 percent slopes, occasionally flooded
75451 Gladden silt loam, 0 to 3 percent slopes, occasionally flooded
75462 Huzzah sandy loam, 0 to 3 percent slopes, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
75463 Huzzah sandy loam, 0 to 3 percent slopes, rarely flooded (where protected from flooding or not frequently flooded during the growing season)

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.

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

Pasture and Hayland Suitability Groups

The soils in Shannon County are assigned to a pasture and hayland group according to their suitability for pasture management (fig. 15).

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 WLB—Wet Loamy Bottom. A seasonal high water table and flooding are the main management concerns. Plants should be selected accordingly. 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 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

Figure 15.—Fescue hayland in an area of Tilk very gravelly sandy loam, 0 to 3 percent slopes, rarely flooded, in the foreground and Scholten-Poynor complex, 8 to 15 percent slopes, in the background.

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 ShU—Shallow Upland. Most areas of this group are used for native pasture and are best suited to shallow-rooted species. In some areas tillage is

nearly impossible. Broadcast seeding may be necessary. The slope and rock outcrop can hinder mowing in places.

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

Forests are more than a group of trees. Together with the soil, associated plants, and animals they form a forest ecosystem with many valuable properties. Wood fiber, water quality, wildlife habitat, and recreational activities, such as hunting and hiking, are useful products from a productive forest ecosystem.

An estimated 90 percent of the survey area is forested. Forested uplands in Shannon County are covered by oak-hickory, oak-pine, and eastern redcedar communities. White oak, red oak, mockernut hickory, and black oak occur on the better sites. Post oak, blackjack oak, shortleaf pine, eastern redcedar, and shagbark hickory prevail on the shallower and more droughty soils. Areas that are very shallow or shallow to bedrock are dominated by eastern redcedar, blackjack oak, and prairie grasses. These areas are commonly referred to as “glades” or “cedar breaks.” Common associates on flood plain sites include black walnut, American elm, silver maple, sycamore, bur oak, hackberry, green ash, and black willow. This variation in tree species and growth on both upland and bottom land positions is dependent upon the interaction of site characteristics, soil properties, and management activities (fig. 16).

Site characteristics that have a strong affect on tree growth include aspect (the direction the slope is facing) and slope position. These site characteristics influence the amount of available sunlight, air drainage, soil temperature, soil moisture, and relative humidity. Generally, north and east aspects and lower slope positions, which are cooler and have better moisture conditions, will be more productive than the south and west aspects and upper slope positions of the same or similar soil types.

Soil properties are fundamentally important for forest production and management considerations. A quarter or more of a tree’s mass is located in the soil, which serves as a reservoir for moisture, provides an anchor for roots, and supplies essential plant nutrients. In Shannon County, important soil properties include soil wetness, soil slope, soil clay content, and soil depth.

Soil wetness is the result of a high water table, flooding, poor drainage, or ponding. It causes seedling mortality, limits the use of equipment, and increases the hazard of windthrow by restricting the root depth of some trees. Ruts form easily if wheeled skidders are used when these soils are wet. Deep ruts, which tend of restrict lateral drainage, result in damage to tree roots and alter soil structure. Flooding and/or surface wetness is a problem on Gladden, Huzzah, Razort, Gabriel, Lowassie, Splitlimb, and Jamesfin soils. On all of these soils, equipment should be used only during dry periods or when the ground is frozen.

Soil slope can limit the use of forestry equipment. Slopes more than 15 percent limit the use of equipment in logging areas, on skid roads, in yarding areas, and on logging roads. Soil erosion is a hazard in these disturbed areas. Limited use of equipment, due to slope and sites susceptible to erosion, is necessary. Special erosion control measures, such as water bars or dips and designing logging roads and trails to minimize the steepness and length of slope, may help to reduce erosion. Moderately steep to very steep slopes indicate a safety hazard and limitation for equipment. In these areas, equipment should be operated on the contour when possible. Severely sloping sites require moving logs uphill to skid trails and yarding areas.

Soil clay content in the topsoil or subsoil can affect equipment use and seedling mortality. Clayey soils have reduced traction, moderate to high seedling mortality, and compact easily when wet. Unsurfaced roads and skid trails rut easily and may be impassable during rainy periods. Soils with high subsoil content of clay include Courtois, Gepp, and Niangua soils. Activities on these soils should be restricted to dry periods or to areas that are surfaced. Successful seedling establishment can be improved with mechanical or chemical weed control, mulching, or supplemental water.

Soil depth favorable to rooting is generally one of the most significant soil properties affecting forest productivity. Soil horizons that are favorable for root development allow a tree to anchor its roots and

provide volume for available water and nutrients. Very shallow and shallow soils, such as Gasconade and Taumsauk soils, limit rooting depth and rooting volume and restrict the use of equipment and hinder the construction of logging roads. Careful planning of proposed logging roads to avoid these areas can minimize most of these limitations. Trees occupying these sites are prone to water stress during dry years or dry seasons and are susceptible to windthrow during high winds. Effective rooting depths are also restricted to varying degrees on some of the soils in the survey area because of root-restricting subsoil layers. These soils include Scholten, Tonti, Killarney, Hobson, and Hogcreek soils.

Management activities can influence woodland productivity and should be aimed at eliminating factors causing tree stress. Generally, this involves controlling erosion; thinning over-stocked young stands; planting trees where natural regeneration is deficient; harvesting old, mature trees; and eliminating destructive fire and grazing.

To maximize forestry investment inputs, management activities should concentrate on sites with productive soils and on areas with high-value timber species. The more productive soils in Shannon County include Lecoma and Courtois soils on the uplands and Jamesfin, Bearthicket, and Huzzah soils on the bottom lands.

Fire and grazing have very negative impacts on forest growth and quality. Over 30 percent of the forest land is still subject to moderate to heavy grazing. Grazing destroys the leaf layer on the surface, compacts the soil, and eliminates or damages tree seedlings. Fire damage to a forest is a major concern throughout the Ozarks. Not only are trees damaged by fire, resulting in reduced wood quality, but damage is also caused to soil, water quality, and wildlife habitat. Forest land sites that are protected from grazing and burning have the highest potential for optimum timber, wildlife, and recreational production.

The tables described in this section can help forest owners or managers plan the use of soils for wood

Figure 16.—A mixture of hardwoods and shortleaf pine in an area of Clarksville-Scholten complex, 15 to 45 percent slopes, very stony.

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.

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 (USDA, National forestry manual).

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

Doug Wallace, Natural Resources Conservation Service, helped prepare this section.

Living plants play an important role in supporting our life and improving its condition. Properly used and maintained, plants help provide positive solutions to many problems existing in our contemporary environment. In Shannon County, windbreaks and environmental plantings can be utilized throughout the landscape for a variety of engineering, climatological, and esthetic needs.

Windbreaks can be used successively in open areas of Shannon County. When working with farmstead and field windbreaks, the following activities should be considered: design and layout; species selection; site preparation; seedling handling; weed management; irrigation; and protection from diseases, insects, and livestock.

Farmstead windbreaks make the farmstead area a more comfortable place to live and work, reduce energy costs, increase garden and fruit tree yields, enhance wildlife populations, buffer noises, and raise property values (Scholten, 1988).

Feedlot windbreaks can be used to protect livestock from wind and snow. Windbreaks significantly reduce calf losses, make feeding operations easier, and enable livestock to maintain better weight with less feed.

Farmstead and feedlot windbreaks are generally three or more rows wide and dense with at least two of the rows a conifer type of tree species. In addition, they should be located on the windward side of the area to be protected and as perpendicular as possible to commonly prevailing winds.

Field windbreaks or shelterbelts are designed to protect field crops and bare soil from the effects of strong winds. Field windbreaks reduce soil losses, increase crop yields, retard the spread of weeds between fields, and enhance wildlife populations (Brandle and others, 1988). They should be carefully planned. Field boundaries, irrigation systems, power lines, and roads should be considered in determining the location of field windbreaks. Windbreaks should be oriented at right angles to prevailing winds. The typical field windbreak system consists of a series of single rows of trees or shrubs.

Environmental plantings can be used for beautification, visual screens, and control of acoustical, pollution, and climatological problems around buildings and other living spaces. When using environmental plantings, care should be given to selecting plants that exhibit proper height, shape, form, color, and texture that are compatible with the surrounding area, structures, and desired use (Robinette, 1972). Trees and shrubs are easy to establish on most sites and soil types in Shannon County, as long as there is adequate site preparation prior to planting, and weeds and other competition are controlled after planting and adequate soil moisture is maintained during the growing season.

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

Shannon County offers many opportunities for people to enjoy outdoor activities. The Current and the Jacks Fork Rivers provide excellent boating, canoeing, fishing, and swimming (fig. 17). There are thousands of acres of publicly owned land available for outdoor recreation in the county. The Ozark National Scenic Riverways offers hiking, swimming, fishing, horseback riding, and canoeing in and around the rivers and their tributaries.

Many parks offer boating, canoeing, swimming, and fishing on the Current River. The parks have many campgrounds and furnished cabins. Stores along the river rent fishing boats and canoes and sell fishing tackle. Sandy beaches, picnic sites, playgrounds, and hiking trails are available for visitors along the river's edge.

In Shannon County, the Mark Twain National Forest covers thousands of acres. The forest provides opportunities for camping, hiking, picnics, hunting, fishing, and horseback riding.

Several large natural springs are located in the Scenic Riverways—Round Spring, Blue Spring, Welch Spring, and Alley Spring, to name a few.

The Missouri Department of Conservation owns several thousand acres of land in Shannon County. They have a number of conservation areas and river and stream accesses. These areas provide excellent wildlife habitat and are available for hunting and hiking.

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

Figure 17.—This campground is located along the scenic Jacks Fork River in an area of Relfe-Sandbur complex, 0 to 3 percent slopes, frequently flooded.

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.

The information in the table can be supplemented by other information in this survey, for example, interpretations for dwellings without basements and for local roads and streets in table 12 and interpretations for septic tank absorption fields in table 13.

Wildlife Habitat

Joe Tousignant, Wildlife Services Biologist, Missouri Department of Conservation, helped prepare this section.

Shannon County is in the part of the state known as the Ozark Plateau. The majority of the county is in forest cover, consisting of mixed hardwoods and shortleaf pine growing on the steep, rocky slopes of the Ozark Mountains. Most of the farmland in the Ozark region of the county is located in the valleys and river bottoms. About 90 percent of the survey is forested. The remainder is a mixture of land uses such as cropland, pasture, hayland, and residential.

There is much discussion regarding historical vegetation (pre-European settlement) found in Missouri's Ozarks. It is generally assumed that much of the Ozarks was wooded prior to settlement. However, evidence exists that much of the Ozark Mountains and ridgetops were not predominately forested, but rather were a mixture of grasses and trees, also known as woodland or savannas. The areas with the thinnest soil and prominent rock outcroppings, especially on south- and west-facing slopes, were often in a similar habitat known as glades. Beilmann and Brenner, in their paper "The Recent Intrusion of Forests in the Ozarks," state that much of the Ozarks were barrens, savannas, or park-like, where the prairie grasses and forbs were dominant, with an intermixing of scattered oaks and shortleaf pine. Bison were common in this landscape. According to Beilmann and Brenner (Bielmann and Brenner, 1951), the change in vegetation to a more forested cover type is the result of a reduction in fire since settlement, coupled with a general trend of an increase in precipitation. Vast logging and deforestation of the Ozarks occurred in the late 1800s and early 1900s. The logging during that period, therefore, was the harvest of first-generation timber that was established earlier in the 19th century.

Savannas, woodlands, and forested areas have also experienced a dramatic shift in tree species composition that has significant effects on forest management decisions today. Forests and woodlands that burned on a regular basis in pre-settlement times were often dominated by shortleaf pine. The more fire-tolerant pines were almost completely removed from the landscape during the Ozark timber boom period. The use of fire decreased substantially over the years

since that time. The result now is a forest comprised primarily of hardwoods such as oak and hickory. Trees in the red oak group, such as scarlet and black oaks, have invaded sites more suitable for the growth of shortleaf pine.

As these stands of short-lived red oaks are reaching and passing maturity today, their vigor and health declines. The age of the timber, coupled with specific disease and insect threats, have created conditions where large numbers of red oaks are dying in close proximity to each other, a condition known as Oak Decline. As mentioned later in this article, it is now increasingly important to enlist the services of a trained forester to deal with forest management and health issues.

Up until the latter quarter of the 20th century, small row-crop farms added an element of wildlife habitat that no longer exists today throughout most of the county. In addition, in the late 1960s, the plant composition of hayland and pastureland changed greatly. Native warm-season grasses and wildlife-friendly cool-season grasses, such as Kentucky bluegrass, timothy, and orchard grass, were replaced with more aggressive pasture grasses of limited value to most wildlife.

Regardless of the historical or present major land uses, Shannon County offers excellent habitat development potential for wildlife that thrive in forest, woodland, savanna, or edge habitats.

Shannon County is drained by the Current River, and to a lesser degree the Eleven Point River watersheds. Streams in the county are gravel-bottomed and clear running. These streams support thriving populations of sport fishes such as small mouth bass, rock bass, and suckers, as well as trout in the cold water sections. The river otter is a recently restored species of wildlife that was previously extirpated from the streams and wetlands of Shannon County.

Wetland acreage is limited in Shannon County, and primarily exists as old river channels and cut-offs, fens, and seeps. Waterfowl, such as blue and green-winged teal, migrate through much of the county and make use of wetlands primarily in the spring and fall. Other species, such as wood ducks, nest and raise young on the ponds, streams, and wetlands and are present in all but the winter months. Large numbers of farm ponds and small lakes have been built by landowners for livestock water, erosion control, and recreational uses. They add diversity to the wetland habitats and support birds such as kingfishers, great blue herons, and other wading birds.

Historical accounts from the early 20th century often tell of small springs and running streams that have disappeared completely or dried up in the last 100 years. Beilmann and Brenner explain this occurrence as being the result of an increasing trend in woodland acreage in the Ozarks. They postulate that more deep percolation and runoff occur from grasslands than forested areas, where a larger amount of precipitation is lost to evaporation. (Bielmann and Brenner, 1951). Wildlife use of dry ridges and the upper end of stream valleys may be diminished by lack of water, or conversely, the habitat can be improved with the addition of new water sources to replace those lost over the last century. Small wildlife ponds, constructed very close to the top of wooded ridges where adequate soil can be found, are often heavily used by mammals, birds, and amphibians.

The forest land typically occurs as stands of pole-sized oak and hickory. The stands have a closed canopy and generally do not have a diverse, well-developed understory. Most have been under short and “high-grade” logging rotations. Decreased numbers of tree cavities often occurs under this type of management. Habitat for cavity nesting wildlife, such as squirrels, raccoons, and woodpeckers can be enhanced by the creation of tree snags, protection of den trees, and the placement of wooden nest boxes.

Great expanses of unbroken woodland are important to the wildlife species that inhabit the interior of a forest, but there is a scarcity of suitable edge areas where cover types are interspersed. Large, contiguous blocks of timber now exist through much of the county. This is in contrast to pre-settlement conditions when there was a dispersion of mixed forested and non-forested habitats. The habitat for both game and non-game species can be improved by the construction of woodland openings in large blocks of contiguous forest. These openings can effectively replace those natural openings that are rare today, such as glades and ridgetop savannas. Grasses and forbs growing in forest openings are critical for the growth and survival of turkey poults, as well as many insectivorous birds, even those that require unfragmented forest for nesting.

Land devoted to early successional habitat is managed through disturbance, be it fire or ground disturbance, associated with agricultural activities. With the loss of row-crop agriculture and the abandonment of farms and fields, this habitat is virtually non-existent. It is doubtful that early successional wildlife species, such as quail and rabbits, will ever return to Shannon County in the numbers present when row-crop farming was an active land use in the Ozark region.

Overall, populations of game species such as deer, turkeys, and squirrels are good in Shannon County,

and attract thousands of hunters every year. However, the habitat can be improved over the long term by habitat management such as the prescribed use of fire, fencing of livestock out of woodlands, and the establishment of riparian corridors adjacent to streams. With the majority of Shannon County being forested, the importance of soliciting the assistance of a professional forester in the management of that forest cannot be understated. Increased use of native grasses in pasture and hay plantings, and the restoration of such critical natural communities such as wetlands, savannas, and glades, where appropriate, are also techniques that could enhance the wildlife habitat in the county.

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 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.

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

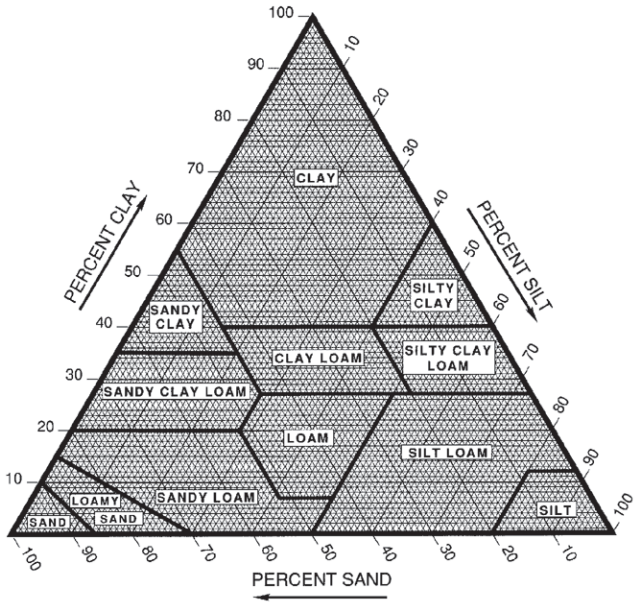

Figure 18.—Percentages of clay, silt, and sand in the basic USDA soil textural classes.

Engineering Index Properties

Table 17 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

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

Texture is given in 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. 18). “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

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

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

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

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

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

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

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

Physical Properties

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

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

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

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

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 the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

Erosion 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 several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

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. Descriptions of these groups are available in the“National Soil Survey Handbook” (USDA, 2003).

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.

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

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

Water Features

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

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

The four hydrologic soil groups are:

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

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

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

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

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

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

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

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

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

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

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

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

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 hardness and thickness 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 Ultisol.

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 Udult (*Ud*, meaning humid, plus *ult*, from Ultisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Paleudults (*Pale*, meaning excessive development, plus *udults*, the suborder of the Ultisols 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 Paleudults.

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, Depth class, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is loamy-skeletal, siliceous, seimactive, mesic Typic Paleudults.

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

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate in the upper part and slow in the lower part
Landform: Hills, hillslopes, and ridges

Position on the landform: Backslopes and summits
Parent material: Colluvium over residuum derived from cherty dolostone
Slope range: 15 to 50 percent
Elevation: 610 feet
Taxonomic classification: Loamy-skeletal over clayey, siliceous, semiactive, mesic Typic Paleudalfs

Typical Pedon

Alred very gravelly silt loam, in an area of Alred-Rueter complex, 15 to 35 percent slopes, very stony, in a forest; 2,180 feet south and 1,900 feet east of the northwest corner of sec. 31, T. 31 N., R. 8 E. in Madison County; USGS Allbright topographic quadrangle; UTM coordinates 4,134,125 meters Northing and 747,148 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed leaves, twigs, and roots; abrupt wavy boundary.

A—1 to 7 inches; brown (10YR 4/3) very gravelly silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; very friable; many very fine and fine roots; 35 percent gravel; moderately acid; abrupt wavy boundary.

E—7 to 11 inches; yellowish brown (10YR 5/4) very gravelly silt loam, pale brown (10YR 6/3) dry; weak very fine subangular blocky structure; very friable; common very fine to medium roots throughout; 38 percent gravel; very strongly acid; abrupt wavy boundary.

Bt1—11 to 18 inches; strong brown (7.5YR 5/6) very gravelly silt loam; moderate very fine subangular blocky structure; friable; common very fine to coarse roots; very few faint clay films on faces of peds; common prominent silt coats on faces of peds; 50 percent gravel; very strongly acid; clear wavy boundary.

Bt2—18 to 30 inches; strong brown (7.5YR 5/6) very gravelly silty clay loam; moderate very fine subangular blocky structure; friable; few very fine to medium roots throughout; common faint light yellowish brown (10YR 6/4) clay films on faces of peds; very few prominent coats on faces of peds; 52 percent gravel; strongly acid; clear wavy boundary.

2Bt3—30 to 40 inches; red (2.5YR 4/8) clay; moderate very fine angular blocky structure; friable; few very fine and fine roots throughout; many distinct clay films on faces of peds; 3 percent gravel; very strongly acid; clear wavy boundary.

2Bt4—40 to 58 inches; red (2.5YR 4/6) gravelly clay; moderate very fine angular blocky structure; firm; few very fine and fine roots throughout; many distinct clay films on faces of peds; very few prominent manganese or iron-manganese stains on faces of peds; common prominent light yellowish brown (10YR 6/4), moist, coats on faces of peds; 27 percent gravel; very strongly acid; gradual wavy boundary.

2Bt5—58 to 79 inches; 75 percent red (2.5YR 4/6) and 25 percent yellowish red (5YR 5/6) very cobbly clay; moderate fine subangular blocky structure; firm; few fine roots throughout; very few prominent manganese or iron-manganese stains on faces of peds; many prominent clay films on faces of peds; 5 percent stones, 12 percent cobbles, and 18 percent gravel; strongly acid.

Range in Characteristics

Depth to the 2Bt horizon: 14 to 40 inches
Thickness of the solum: More than 60 inches

A or Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—35 to 70 percent
Reaction—very strongly acid to neutral

E horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—silt loam
Content of rock fragments—20 to 70 percent
Reaction—very strongly acid to slightly acid

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8
Texture of the fine-earth fraction—loam, silt loam, or silty clay loam
Content of rock fragments—35 to 75 percent
Reaction—very strongly acid to slightly acid

2Bt horizon:
Color—hue of 2.5YR or 5YR, value of 3 to 6, and chroma of 4 to 8
Texture of the fine-earth fraction—clay
Content of rock fragments—0 to 35 percent (ranges up to 60 percent in the lower part of the horizon)
Reaction—very strongly acid to slightly alkaline

Arkana Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability class: Very slow
Landform: Hills, hillslopes, and ridges
Position on the landform: Summits and backslopes

Parent material: Gravelly colluvium over clayey residuum derived from dolostone
Slope range: 8 to 35 percent
Elevation: 890 feet
Taxonomic classification: Very fine, mixed, active, mesic Mollic Hapludalfs

Typical Pedon

Arkana very gravelly silt loam in an area of Arkana-Gepp complex, 8 to 15 percent slopes, rocky, stony, in a hardwood forest; 3,600 feet east and 3,610 feet north of the southwest corner of sec. 32, T. 32 N., R. 3 W.; USGS Round Spring, Missouri, topographic quadrangle; UTM coordinates 4,128,232 meters Northing and 643,306 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 6 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 fine interstitial and tubular pores; 50 percent chert gravel; moderately acid; clear smooth boundary.
Bt1—6 to 11 inches; red (2.5YR 4/8) gravelly silty clay loam; moderate medium subangular blocky structure; firm; common fine and coarse roots; many fine tubular and common medium tubular and common coarse tubular pores; many distinct dark grayish brown (10YR 4/2) organic stains on faces of peds; common distinct pale brown (10YR 6/3) silt coats on faces of peds; common distinct red (2.5YR 4/8) clay films on faces of peds; 2 percent chert cobbles and 15 percent chert gravel; strongly acid; clear wavy boundary.
2Bt2—11 to 23 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; very firm; common fine and coarse roots; many fine tubular and common medium tubular and common coarse tubular pores; common distinct dark yellowish brown (10YR 4/6) and common distinct red (2.5YR 4/6) clay films on faces of peds; very strongly acid; clear smooth boundary.
2Bt3—23 to 29 inches; strong brown (7.5YR 5/6) clay; weak fine angular blocky structure; very firm; few fine and coarse roots; many fine tubular pores; common distinct yellowish red (5YR 5/6) and common distinct yellowish brown (10YR 5/4) clay films on faces of peds; common distinct black (N 2/0) manganese or iron-manganese stains on faces of peds; strongly acid; abrupt smooth boundary.
R—29 inches; dolostone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Color—hue of 10YR, value of 2 or 3, and chroma of 1 to 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—35 to 60 percent
Reaction—very strongly acid to neutral

E horizon (if it occurs):
Color—hue of 10YR, value of 4 to 6, and chroma of 2 to 4
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—15 to 60 percent
Reaction—very strongly acid to neutral

Bt horizon:
Color—hue of 2.5YR, 5YR, or 7.5YR; value of 4 to 6; and chroma of 4 to 8
Texture of the fine-earth fraction—loam, silt loam, or silty clay loam
Content of rock fragments—0 to 40 percent
Reaction—very strongly acid to neutral

2Bt horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture of the fine-earth fraction—clay
Content of rock fragments—0 to 10 percent
Reaction—very strongly acid to neutral

Aslinger Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderately slow
Landform: Hillslopes
Position on the landform: Footslopes
Parent material: Loamy colluvium over loamy and clayey alluvium
Slope range: 3 to 8 percent
Elevation: 1,050 feet
Taxonomic classification: Fine-loamy, mixed, active, mesic Fragiaquic Paleudults

Typical Pedon

Aslinger silt loam, 3 to 8 percent slopes, in a hardwood forest; 3,850 feet east and 350 feet north of the southwest corner of sec. 16, T. 27 N., R. 5 W; USGS Bartlett, Missouri, topographic quadrangle; UTM coordinates 4,096,110 meters Northing and 633,863 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 5 inches; brown (10YR 4/3) silt loam; moderate fine and medium granular structure; friable; common fine and medium and few coarse roots; common fine tubular pores; 2 percent chert gravel; strongly acid; clear smooth boundary.

AB—5 to 9 inches; dark yellowish brown (10YR 4/4) silt loam; moderate very fine subangular blocky structure; friable; common medium roots; common fine and medium tubular pores; many distinct brown (10YR 4/3) organic stains throughout; 2 percent chert gravel; strongly acid; clear wavy boundary.

Bt1—9 to 17 inches; dark yellowish brown (10YR 4/6) silty clay loam; moderate medium subangular blocky structure; firm; common medium roots; common fine tubular pores; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds and few faint manganese or iron-manganese stains on faces of peds; 2 percent chert gravel; very strongly acid; clear wavy boundary.

Bt2—17 to 24 inches; dark yellowish brown (10YR 4/6) gravelly silty clay loam; weak medium subangular blocky structure; firm; few fine roots; few fine tubular pores; common faint dark yellowish brown (10YR 3/4) clay films throughout; common distinct very dark grayish brown (10YR 3/2) manganese or iron-manganese stains on faces of peds and in pores; 15 percent chert gravel; very strongly acid; abrupt wavy boundary.

2Btx—24 to 32 inches; grayish brown (10YR 5/2) extremely gravelly silt loam; weak coarse prismatic structure; very firm; 35 percent brittle; few fine roots; common fine and medium vesicular pores; many faint grayish brown (10YR 5/2) silt coats on faces of peds and in pores; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; many fine faint irregular dark gray (10YR 4/1) iron depletions; 2 percent chert cobbles and 60 percent chert gravel; very strongly acid; clear smooth boundary.

2Bt1—32 to 43 inches; 60 percent yellowish brown (10YR 5/4), 30 percent strong brown (7.5YR 5/6), and 10 percent yellowish red (5YR 5/6) gravelly clay loam; weak coarse platy structure parting to weak fine subangular blocky; firm; few fine roots; few fine tubular and few medium vesicular pores; common distinct yellowish brown (10YR 5/4) silt coats on faces of peds and in pores; common distinct yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) clay films on faces of peds; 15 percent chert gravel; very strongly acid; clear wavy boundary.

3Bt2—43 to 55 inches; 60 percent strong brown (7.5YR 5/6), 20 percent reddish brown (5YR 4/4), and 20 percent yellowish brown (10YR 5/4) gravelly clay; moderate medium subangular blocky structure; firm; common fine and medium tubular pores; many distinct strong brown (7.5YR 4/6) and brown (10YR 4/3) clay films on faces of peds; 1 percent chert cobbles and 25 percent chert gravel; very strongly acid; gradual wavy boundary.

3Bt3—55 to 72 inches; 70 percent strong brown (7.5YR 5/8), 20 percent gray (10YR 5/2), and 10 percent red (2.5YR 4/6) extremely gravelly clay; weak fine and medium subangular blocky structure; firm; few fine tubular pores; very few distinct gray (10YR 5/1) clay films on vertical faces of peds; 1 percent chert stones, 10 percent chert cobbles, and 50 percent chert gravel; very strongly acid.

Range in Characteristics

Depth to the 2Btx horizon: 20 to 36 inches

A or Ap horizon:
- Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 3 or 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 7 percent gravel
- Reaction—very strongly acid to slightly acid

AB horizon:
- Color—hue of 10YR or 7.5YR, value of 4, and chroma of 4 to 6
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 7 percent gravel
- Reaction—very strongly acid to slightly acid

Bt horizon:
- Color—hue of 10YR to 5YR, value of 4 to 6, and chroma of 6 to 8
- Texture of the fine-earth fraction—silt loam or silty clay loam
- Content of rock fragments—0 to 15 percent gravel
- Reaction—very strongly acid to moderately acid

2Btx and 2Bt horizons (if it occurs):
- Color—hue of 10YR to 2.5YR, value of 4 to 6, and chroma of 2 to 8
- Texture of the fine-earth fraction—loam, silt loam, or clay loam
- Content of rock fragments—15 to 60 percent gravel; 0 to 10 percent cobbles
- Reaction—very strongly acid or strongly acid

3Bt horizon:
- Color—hue of 10YR to 2.5YR, value of 4 to 6, and chroma of 2 to 8
- Texture of the fine-earth fraction—silty clay loam, clay loam, or clay

Content of rock fragments—25 to 60 percent gravel; 0 to 40 percent cobbles
Reaction—extremely acid to strongly acid

Bardley Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Hillslopes
Position on the landform: Backslopes
Parent material: Gravelly colluvium over clayey residuum derived from dolostone
Slope range: 15 to 50 percent
Elevation: 620 feet
Taxonomic classification: Very fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Bardley very gravelly silt loam in an area of Niangua-Bardley complex, 15 to 50 percent slopes, extremely stony, in a hardwood forest; 100 feet east and 150 feet south of the northwest corner of sec. 4, T. 28 N., R. 2 W.; USGS Stegall Mountain, Missouri, topographic quadrangle; UTM coordinates 4,109,649 meters Northing and 662,501 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 5 inches; yellowish brown (10YR 5/4) very gravelly silt loam; weak fine granular structure; friable; many fine and medium roots; many coarse interstitial and tubular pores; 45 percent chert gravel; very strongly acid; clear smooth boundary.
E—5 to 12 inches; light brown (7.5YR 6/4) very gravelly loam; weak fine subangular blocky structure; friable; many fine to coarse roots; many coarse interstitial and tubular pores; common distinct yellowish red (5YR 5/8) clay films on faces of peds; 45 percent chert gravel; very strongly acid; clear smooth boundary.
2Bt—12 to 21 inches; red (2.5YR 4/8) clay; weak fine subangular blocky structure; very firm; common fine and medium roots; few fine vesicular pores; many distinct red (2.5YR 4/6) clay films on faces of peds; 1 percent chert gravel; strongly acid; clear smooth boundary.
2BC—21 to 31 inches; yellowish red (5YR 4/6) gravelly loamy coarse sand; common fine distinct yellowish red (5YR 5/6) and common fine distinct pinkish gray (7.5YR 7/2) mottles; single grain and weak fine subangular blocky structure; loose; few fine roots; few fine vesicular pores; many distinct red (2.5YR 4/6) clay films on faces of peds; 25 percent dolostone gravel; mildly alkaline; abrupt smooth boundary.
R—31 inches; dolostone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—35 to 70 percent
Reaction—very strongly acid to neutral

E or BE horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 or 4
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—35 to 70 percent
Reaction—very strongly acid to slightly acid

2Bt horizon:
Color—hue of 2.5YR or 5YR, value of 3 to 5, and chroma of 3 to 8
Texture of the fine-earth fraction—clay
Content of rock fragments—0 to 30 percent
Reaction—very strongly acid to moderately acid in the upper part and moderately acid to slightly alkaline in the lower part

2BC or 2C horizon:
Color—hue of 5YR, 7.5YR, or 10YR; value of 4 to 6; and chroma of 2 to 6
Texture of the fine-earth fraction—coarse sand, loamy coarse sand, coarse sandy loam, sandy clay loam, or clay loam
Content of rock fragments—0 to 30 percent
Reaction—slightly acid to moderately alkaline

Bearthicket Series

Depth class: Very deep (more than 60 inches)
Drainage class: Well drained
Permeability class: Moderate
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Silty alluvium
Slope range: 0 to 3 percent
Elevation: 610 feet
Taxonomic classification: Fine-silty, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Bearthicket silt loam, 0 to 3 percent slopes, rarely flooded, in hay field; 100 feet east and 60 feet north of

the southwest corner of sec. 32, T. 29 N., R. 2 E. in Reynolds County; USGS Clearwater Dam, Missouri, topographic quadrangle; UTM coordinates 4,112,249 meters Northing and 689,339 meters Easting, Zone 15, NAD27.

A—0 to 6 inches; brown (10YR 4/3) silt loam; weak fine granular structure; many fine roots throughout; many medium moderate continuity interstitial pores; moderately acid; clear smooth boundary.

BA—6 to 12 inches; dark yellowish brown (10YR 4/4) silt loam; moderate fine subangular blocky structure; common fine roots throughout; many fine moderate continuity tubular pores; common faint dark yellowish brown (10YR 4/6) clay films on all faces of peds; common distinct pale brown (10YR 6/3) silt coats on all faces of peds; moderately acid; clear smooth boundary.

Bt1—12 to 21 inches; strong brown (7.5YR 5/6) silt loam; strong fine subangular blocky structure; common fine roots throughout; many fine moderate continuity tubular pores; common distinct brown (7.5YR 4/3) clay films on all faces of peds; common distinct brown (10YR 5/3) and brown (7.5YR 4/3) silt coats on all faces of peds; moderately acid; clear smooth boundary.

Bt2—21 to 31 inches; yellowish brown (10YR 5/6) silt loam; weak fine subangular blocky structure; common very fine roots throughout; and many fine moderate continuity irregular pores; common faint brown (7.5YR 4/4) clay films on all faces of peds; few distinct very pale brown (10YR 7/3) and dark yellowish brown (10YR 4/4) silt coats on all faces of peds; common fine distinct irregular very dark gray (10YR 3/1) iron-manganese masses between peds with diffuse boundaries; common fine distinct irregular yellowish brown (10YR 5/6) masses of oxidized iron between peds with sharp boundaries; moderately acid; clear smooth boundary.

Bt3—31 to 44 inches; yellowish brown (10YR 5/4) silt loam; weak very fine subangular blocky structure; common fine roots throughout; common fine low continuity tubular pores; few prominent brown (10YR 4/3) clay films on all faces of peds; many prominent very pale brown (10YR 7/3) silt coats on all faces of peds; common fine prominent irregular very dark gray (10YR 3/1) and black (10YR 2/1) iron-manganese masses; common fine distinct irregular yellowish brown (10YR 5/6) masses of oxidized iron; moderately acid; clear wavy boundary.

Bt4—44 to 60 inches; 70 percent pale brown (10YR 6/3) and 30 percent brown (10YR 5/3) silt loam; weak fine subangular blocky structure; common very fine roots throughout; common fine moderate continuity tubular pores; common prominent yellowish brown (10YR 5/6) clay films on all faces of peds; many fine distinct irregular very dark gray (10YR 3/1) manganese masses between peds with diffuse boundaries; many fine faint irregular brownish yellow (10YR 6/6) masses of oxidized iron between peds with diffuse boundaries; many fine faint irregular gray (10YR 5/1) clay depletions between peds with diffuse boundaries; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 80 inches or more

A or Ap horizon:
- Color—hue of 10YR or 7.5YR, value of 3 or 4, chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 2 percent gravel
- Reaction—strongly acid to neutral

AB or BA horizon (if it occurs):
- Color—hue of 10YR or 7.5YR, value of 3 or 4, chroma of 2 to 6
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 2 percent
- Reaction—strongly acid to neutral

Bt horizon (upper part):
- Color—hue of 10YR or 7.5YR, value of 3 to 5, chroma of 3 to 6
- Texture of the fine-earth fraction—silt loam or silty clay loam
- Content of rock fragments—0 to 2 percent
- Reaction—strongly acid to neutral

2Bt or Bt horizon (lower part):
- Color—hue of 10YR to 2.5YR, value of 3 to 6, chroma of 3 to 6
- Texture of the fine-earth fraction—loam or silt loam
- Content of rock fragments—0 to 30 percent (may range up to 60 percent below a depth of 60 inches)
- Reaction—strongly acid to neutral

2BC or 2C horizon (if it occurs):
- Color—hue of 7.5YR or 10YR, value of 4 or 5, chroma of 4 to 6
- Texture of the fine-earth fraction—coarse sandy loam, sandy loam, fine sandy loam, or loam
- Content of rock fragments—0 to 35 percent
- Reaction—moderately acid to neutral

Bendavis Series

Depth class: Moderately deep
Drainage class: Moderately well drained

Permeability class: Moderate
Landform: Hillslopes
Position on the landform: Summits and backslopes
Parent material: Gravelly colluvium
Slope range: 1 to 15 percent
Elevation: 1,060 feet
Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Typic Hapludults

Typical Pedon

Bendavis very gravelly silt loam, in an area of Scholten-Bendavis-Poynor complex, 8 to 15 percent slopes, in a hardwood forest; 260 feet north and 160 feet west of the southeast corner of sec. 1, T. 29 N., R. 5 W.; USGS Alley Spring, Missouri, topographic quadrangle; UTM coordinates 4,118,510 meters Northing and 636,840 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 5 inches; dark grayish brown (10YR 4/2) very gravelly silt loam; weak fine granular structure; very friable; common medium and coarse roots; common fine interstitial pores; 5 percent chert cobbles and 50 percent chert gravel; very strongly acid; clear smooth boundary.
E—5 to 13 inches; pale brown (10YR 6/3) very gravelly silt loam; weak fine subangular blocky structure; friable; common fine and medium roots; many fine tubular pores; 5 percent chert cobbles and 35 percent chert gravel; very strongly acid; clear smooth boundary.
Bt1—13 to 20 inches; yellowish brown (10YR 5/6) very gravelly clay loam; moderate fine subangular blocky structure; firm; few fine and common medium roots; common fine tubular pores; few faint yellowish brown (10YR 5/6) clay films on faces of peds; 10 percent chert cobbles and 30 percent chert gravel; very strongly acid; abrupt smooth boundary.
Bt2—20 to 23 inches; yellowish brown (10YR 5/8) extremely gravelly clay loam; common medium prominent light brownish gray (10YR 6/2) and common medium distinct pale brown (10YR 6/3) mottles; moderate fine subangular blocky structure; firm; few fine roots; common fine tubular pores; few faint yellowish brown (10YR 5/6) clay films on faces of peds; 15 percent chert cobbles and 50 percent chert gravel; very strongly acid; abrupt smooth boundary.
R—23 inches; sandstone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—15 to 60 percent
Reaction—very strongly acid to slightly acid

E horizon:
Color—hue of 10YR, value of 5 or 6, and chroma of 3 or 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—10 to 60 percent
Reaction—very strongly acid to moderately acid

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8
Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam
Content of rock fragments—35 to 70 percent
Reaction—extremely acid to strongly acid

Bender Series

Depth class: Moderately deep
Drainage class: Somewhat excessively drained
Permeability class: Moderately rapid
Landform: Hillslopes
Position on the landform: Backslopes
Parent material: Residuum from sandstone
Slope range: 3 to 50 percent
Elevation: 1,120 feet
Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Typic Hapludults

Typical Pedon

Bender extremely cobbly sandy loam, in an area of Coulstone-Bender complex, 15 to 50 percent slopes, very stony, in a pine and hardwood forest; 950 feet west and 250 feet south of the northeast corner of sec. 25, T. 29 N., R. 6 E.; USGS Summersville NE, Missouri, topographic quadrangle; UTM coordinates 4,113,713 meters Northing and 628,943 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 6 inches; dark grayish brown (10YR 4/2) extremely cobbly sandy loam; weak fine granular structure; friable; many fine roots throughout; many fine interstitial and tubular pores; 35 percent sandstone cobbles and 30 percent chert gravel; very strongly acid; abrupt smooth boundary.
E—6 to 9 inches; pale brown (10YR 6/3) very gravelly fine sandy loam; weak fine subangular blocky

structure; friable; common medium roots; common fine tubular pores; few faint brown (10YR 5/3) organic stains; 10 percent sandstone cobbles and 35 percent chert gravel; very strongly acid; clear smooth boundary.

Bt1—9 to 15 inches; pale brown (10YR 6/3) very gravelly fine sandy loam; weak fine subangular blocky structure; friable; common medium roots; common fine tubular pores; few distinct yellowish brown (10YR 5/4) clay films; 5 percent sandstone cobbles and 35 percent chert gravel; very strongly acid; clear smooth boundary.

Bt2—15 to 23 inches; pale brown (10YR 6/3) very gravelly sandy loam; weak fine subangular blocky structure; friable; few fine roots; common fine tubular pores; common distinct light gray (10YR 7/2) skeletans and common distinct brown (7.5YR 4/4) clay films on rock fragments; 10 percent sandstone cobbles and 35 percent chert gravel; very strongly acid; abrupt wavy boundary.

Bt3—23 to 35 inches; brown (7.5YR 5/3) extremely cobbly coarse sandy loam; weak fine subangular blocky structure; friable; few fine roots; few fine tubular pores; many distinct brown (7.5YR 4/4) clay films and common distinct pale brown (10YR 6/3) skeletans; 30 percent sandstone cobbles and 35 percent chert gravel; very strongly acid; abrupt smooth boundary.

R—35 inches; sandstone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2 or 3
- Texture of the fine-earth fraction—sandy loam or fine sandy loam
- Content of rock fragments—35 to 75 percent
- Reaction—very strongly acid to moderately acid

E horizon:
- Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 6
- Texture of the fine-earth fraction—sandy loam, fine sandy loam, or loam
- Content of rock fragments—35 to 75 percent
- Reaction—very strongly acid to moderately acid

Bt horizon (upper part):
- Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 6
- Texture of the fine-earth fraction—loamy sand, sandy loam, fine sandy loam, loam, or silt loam
- Content of rock fragments—35 to 75 percent
- Reaction—extremely acid to slightly acid

Bt horizon (lower part):
- Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 6
- Texture of the fine-earth fraction—coarse sandy loam, sandy loam, fine sandy loam, sandy clay loam, or loam
- Content of rock fragments—35 to 75 percent
- Reaction—extremely acid to moderately acid

Brussels Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Landform: Hillslopes
Position on the landform: Backslopes
Parent material: Gravelly colluvium over gravelly residuum derived from dolostone
Slope range: 30 to 90 percent
Elevation: 620 feet
Taxonomic classification: Clayey-skeletal, mixed, superactive, mesic Pachic Argiudolls

Taxadjunct features: The Brussels soils in this survey area have argillic horizons and a mollic epipedon that is thicker than typical. These soils are Pachic Argiudolls, rather than Typic Hapludolls, as defined for the Brussels series. These differences do not affect the use and management of the soil.

Typical Pedon

Brussels gravelly silty clay loam, in an area of Brussels-Gasconade-Rock outcrop complex, 30 to 90 percent slopes, very bouldery, in a hardwood forest; 2,450 feet east and 3,500 feet north of the southwest corner of sec. 19, T. 29 N., R. 3 W.; USGS Eminence, Missouri, topographic quadrangle; UTM coordinates 4,115,009 meters Northing and 649,361 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 10 inches; very dark grayish brown (10YR 3/2) gravelly silty clay loam; grayish brown (10YR 5/2) dry; weak fine granular structure; very friable; common very fine roots; common fine tubular pores; 30 percent dolostone gravel; slightly alkaline; clear smooth boundary.

Bt1—10 to 22 inches; very dark grayish brown (10YR 3/2) very gravelly silty clay loam; grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure; friable; common very fine roots; common fine tubular pores; few distinct very dark gray (10YR 3/1) organic stains on faces of peds; 10 percent dolostone cobbles and 30 percent

dolostone gravel; moderately alkaline; clear smooth boundary.

Bt2—22 to 35 inches; very dark grayish brown (10YR 3/2) very gravelly silty clay loam; grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure; firm; few very fine roots; common medium tubular pores; few distinct very dark gray (10YR 3/1) clay films on faces of peds; 35 percent dolostone gravel; moderately alkaline; clear smooth boundary.

Bt3—35 to 49 inches; 50 percent brown (10YR 4/3) and 50 percent dark grayish brown (10YR 4/2) very gravelly silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; common medium tubular pores; common distinct very dark grayish brown (10YR 3/2) clay films on faces of peds; 35 percent dolostone gravel; moderately alkaline; clear wavy boundary.

2Bt4—49 to 60 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; few fine tubular pores; common distinct dark brown (10YR 3/3) clay films on faces of peds and few prominent very dark gray (10YR 3/1) clay films in root channels and/or pores; 10 percent dolostone cobbles; moderately alkaline; clear wavy boundary.

2Bt5—60 to 70 inches; brown (10YR 4/3) gravelly silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; few fine tubular pores; common distinct dark brown (10YR 3/3) clay films on faces of peds; 25 percent dolostone gravel; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 20 to 40 inches
Depth to bedrock: More than 60 inches

A horizon:
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2
Texture of the fine-earth fraction—silty clay loam
Content of rock fragments—15 to 35 percent
Reaction—slightly acid to moderately alkaline

Bt horizon:
Color—hue of 10YR or 7.5YR, value of 3, and chroma of 2 or 3
Texture of the fine-earth fraction—silty clay loam, silty clay, or clay
Content of rock fragments—35 to 60 percent
Reaction—slightly acid to moderately alkaline

2Bt horizon:
Color—hue of 10YR or 7.5YR, value of 3 or 4, and chroma of 2 to 6
Texture of the fine-earth fraction—silty clay loam, silty clay, or clay
Content of rock fragments—7 to 35 percent
Reaction—slightly acid to moderately alkaline

Cedargap Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Gravelly alluvium
Slope range: 0 to 3 percent
Elevation: 790 feet
Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Cedargap gravelly loam, 0 to 3 percent slopes, rarely flooded, in a hardwood forest; 450 feet east and 2,350 feet north of the southwest corner of sec. 1, T. 30 N., R. 4 W.; USGS The Sinks, Missouri, topographic quadrangle; UTM coordinates 4,131,572 meters Northing and 647,458 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 6 inches; very dark grayish brown (10YR 3/2) gravelly loam, grayish brown (10YR 5/2) dry; weak fine granular structure; very friable; many fine and medium and common coarse roots; many fine to coarse interstitial and tubular pores; 15 percent angular chert gravel; strongly acid; clear smooth boundary.

A1—6 to 10 inches; 70 percent very dark gray (10YR 3/1) and 30 percent very dark grayish brown (10YR 3/2) gravelly loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; common fine and medium roots; common medium tubular pores; few distinct very dark brown (10YR 2/2) organic stains on faces of peds; 15 percent angular chert gravel; strongly acid; clear smooth boundary.

A2—10 to 24 inches; very dark gray (10YR 3/1) gravelly clay loam, dark gray (10YR 4/1) dry; moderate fine subangular blocky structure; friable; common fine and medium and few coarse roots; common medium tubular pores; common distinct black (10YR 2/1) and few distinct very dark grayish brown (10YR 3/2) organic stains on faces of peds; 15 percent angular chert gravel; moderately acid; clear smooth boundary.

Bw1—24 to 30 inches; dark grayish brown (10YR 4/2) very gravelly coarse sandy loam; weak fine subangular blocky structure; friable; few fine and medium roots; many coarse vesicular pores; common distinct brown (10YR 5/3) and common distinct gray (10YR 5/1) clay films on faces of peds; 50 percent angular chert gravel; moderately acid; clear wavy boundary.

Bw2—30 to 36 inches; 50 percent grayish brown (10YR 5/1) and 50 percent brown (10YR 5/3) very gravelly sandy loam; weak fine subangular blocky structure; very friable; few fine roots; many coarse vesicular pores; common distinct gray (7.5YR 5/1) clay films on faces of peds; 50 percent angular chert gravel; slightly acid; clear wavy boundary.

C1—36 to 48 inches; brown (10YR 5/3) extremely gravelly sandy clay loam; massive; very friable; many coarse voids between rock fragments pores; few distinct strong brown (7.5YR 5/6) and gray (7.5YR 5/1) clay films on sand and gravel; 75 percent angular chert gravel; neutral; clear wavy boundary.

C2—48 to 60 inches; yellowish brown (10YR 5/8) extremely gravelly sandy clay loam; massive; very friable; many coarse voids between rock fragments pores; 15 percent subangular chert stones, 20 percent subangular chert cobbles, and 40 percent angular chert gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 65 inches

A or Ap horizon:
- Color—hue of 10YR or 7.5YR, value of 2 or 3, and chroma of 1 to 3
- Texture of the fine-earth fraction—loam (upper part); silt loam, loam, clay loam, or silty clay loam (lower part)
- Content of rock fragments—15 to 35 percent (upper part); 3 to 35 percent (lower part)
- Reaction—strongly acid to neutral

Bw horizon:
- Color—hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 1 to 4
- Texture of the fine-earth fraction—sandy loam, coarse sandy loam, or sandy clay loam
- Content of rock fragments—35 to 75 percent
- Reaction—strongly acid to neutral

C horizon:
- Color—hue of 10YR to 5YR, value of 2 to 5, and chroma of 1 to 8
- Texture of the fine-earth fraction—loam, sandy clay loam, or clay loam
- Content of rock fragments—35 to 75 percent
- Reaction—neutral or slightly alkaline

Clarksville Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Moderate
Landform: Hillslopes and ridges
Position on the landform: Backslopes and shoulders
Parent material: Gravelly colluvium over clayey residuum from dolostone
Slope range: 8 to 45 percent
Elevation: 830 feet
Taxonomic classification: Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Clarksville gravelly silt loam (fig. 19), in an area of Poynor-Clarksville-Scholten complex, 8 to 15 percent slopes, stony, in a hardwood forest; 75 feet east and 640 feet south of the northwest corner of sec. 33, T. 29 N., R. 1 W.; USGS Exchange, Missouri, topographic quadrangle; UTM coordinates 4,112,195 meters Northing and 671,410 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 5 inches; dark grayish brown (10YR 4/2) gravelly silt loam; moderate fine granular structure; friable; common fine, few medium, and few coarse roots; many fine interstitial and tubular pores; 2 percent chert cobbles and 30 percent chert gravel; very strongly acid; clear smooth boundary.

E—5 to 12 inches; 60 percent light yellowish brown (10YR 6/4) and 40 percent brown (10YR 5/3) gravelly silt loam; weak fine subangular blocky structure; friable; few fine to coarse roots; few fine tubular pores; few distinct dark grayish brown (10YR 4/2) organic stains in root channels and/or pores; few prominent black (N 2/0) manganese or iron-manganese stains on rock fragments; 20 percent chert gravel; very strongly acid; clear smooth boundary.

Bt1—12 to 18 inches; light yellowish brown (10YR 6/4) gravelly silt loam; moderate fine subangular blocky structure; friable; few fine to coarse roots; common fine vesicular and tubular pores; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few prominent black (N 2/0) manganese or iron-manganese stains on faces of peds; 20 percent chert gravel; strongly acid; clear smooth boundary.

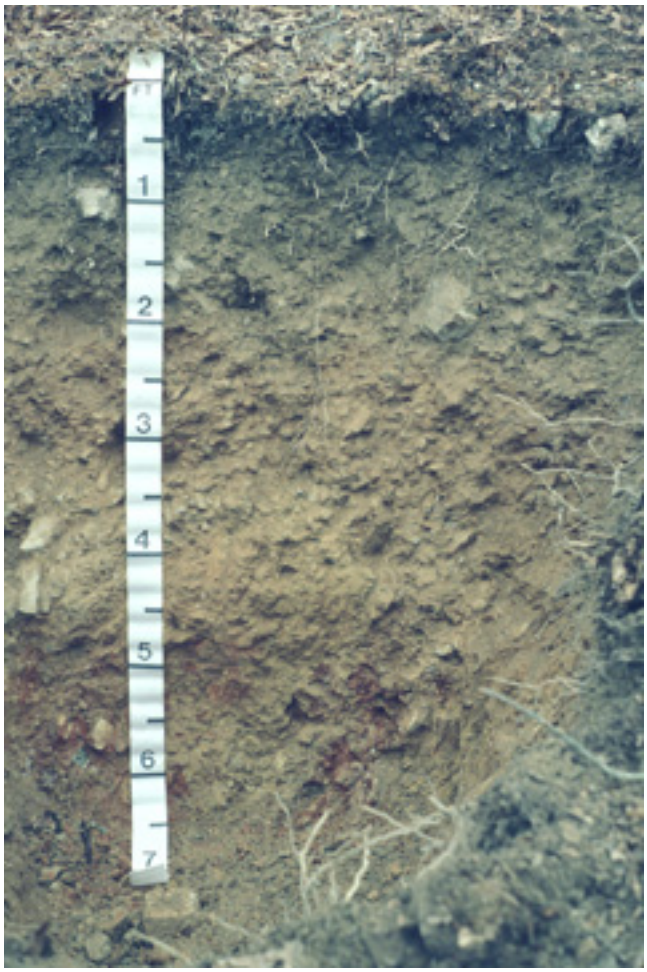

Figure 19.—Profile of Clarksville soil in an area of Clarksville-Scholten complex, 15 to 45 percent slopes, very stony. The high volume of rock fragments reduces the available water capacity of this somewhat excessively drained soil.

Bt2—18 to 29 inches; yellowish brown (10YR 5/6) very gravelly loam; weak fine subangular blocky structure; firm; few fine and medium roots; common fine tubular pores; many distinct light brownish gray (10YR 6/2) silt coats on faces of peds; few distinct strong brown (7.5YR 4/6) clay films on faces of peds; 3 percent chert cobbles and 45 percent chert gravel; strongly acid; clear smooth boundary.

2Bt3—29 to 41 inches; yellowish brown (10YR 5/6) extremely gravelly clay loam; moderate fine subangular blocky structure; firm; few fine and medium roots; common fine tubular pores; common distinct reddish brown (5YR 4/4) clay films on faces of peds; common prominent very pale brown (10YR 7/3) silt coats throughout; 15 percent chert cobbles and 55 percent chert gravel; strongly acid; clear wavy boundary.

2Bt4—41 to 52 inches; strong brown (7.5YR 5/6) very gravelly clay loam; moderate fine subangular blocky structure; firm; few fine to coarse roots; common fine tubular pores; common distinct red (2.5YR 4/6) clay films on faces of peds; few faint pale brown (10YR 6/3) silt coats on rock fragments; 10 percent chert cobbles and 40 percent chert gravel; strongly acid; gradual wavy boundary.

3Bt5—52 to 60 inches; red (2.5YR 4/6) cobbly clay; moderate fine angular blocky structure; very firm; few fine roots; few fine vesicular, interstitial, and tubular pores; common distinct strong brown (7.5YR 4/6) clay films on rock fragments and common prominent red (2.5YR 4/8) clay films on faces of peds; common distinct light brown (7.5YR 6/4) silt coats on faces of peds; 10 percent chert cobbles and 10 percent chert gravel; strongly acid.

Range in Characteristics

Depth to the 3Bt horizon: 36 to 54 inches
Depth to bedrock: More than 60 inches

A or Ap horizon:
- Color—hue of 10YR, value of 2 to 6, and chroma of 1 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—15 to 75 percent
- Reaction—extremely acid to slightly acid

BE or E horizon:
- Color—hue of 10YR, value of 4 to 7, and chroma of 2 to 6
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—15 to 60 percent
- Reaction—extremely acid to moderately acid

Bt horizon:
- Color—hue of 10YR to 2.5YR, value of 4 to 6, and chroma of 4 to 6
- Texture of the fine-earth fraction—loam or silt loam
- Content of rock fragments—15 to 75 percent
- Reaction—very strongly acid to moderately acid

2Bt horizon:
- Color—hue of 10YR to 2.5YR, value of 3 to 6, and chroma of 4 to 6
- Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam
- Content of rock fragments—35 to 75 percent
- Reaction—extremely acid to strongly acid

3Bt or 2Bt horizon (lower part):
- Color—hue of 10YR to 2.5YR, value of 3 to 6, and chroma of 4 to 6

Texture of the fine-earth fraction—clay loam or clay
Content of rock fragments—7 to 60 percent
Reaction—very strongly acid or strongly acid

Cornwall Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderately slow
Landform: Hillslopes and sinkholes
Position on the landform: Footslopes and backslopes
Parent material: Loess over sinkhole fill materials
Slope range: 0 to 3 percent
Elevation: 960 feet
Taxonomic classification: Fine-silty, mixed, active, mesic Fragiaquic Paleudults

Typical Pedon

Cornwall silt loam, 0 to 3 percent slopes, rarely ponded, in a hardwood forest; 3,250 feet east and 1,750 feet north of the southwest corner of sec. 9, T. 26 N., R. 5 W.; USGS Montier, Missouri, topographic quadrangle; UTM coordinates 4,088,480 meters Northing and 633,530 meters Easting, Zone 15, NAD27.

A—0 to 8 inches; 60 percent dark brown (10YR 3/3) and 40 percent brown (10YR 4/3) silt loam; moderate fine granular structure; very friable; many fine to coarse roots; many fine and medium interstitial and tubular pores; very strongly acid; clear smooth boundary.

Bt1—8 to 15 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; common fine and medium roots; many fine and medium tubular pores; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; very strongly acid; clear smooth boundary.

Bt2—15 to 22 inches; yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; common fine and medium roots; many fine tubular and common medium and coarse tubular pores; few faint yellowish brown (10YR 5/4) clay films on faces of peds; very strongly acid; clear smooth boundary.

Bt3—22 to 31 inches; yellowish brown (10YR 5/4) silt loam; moderate fine subangular blocky structure; friable; common fine roots; many fine and medium tubular pores; few faint yellowish brown (10YR 5/4) clay films on faces of peds; very strongly acid; clear wavy boundary.

2Btx—31 to 43 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots between peds; many fine and medium vesicular pores; common distinct grayish brown (10YR 5/2) and few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct irregular yellowish brown (10YR 5/6) masses of oxidized iron between peds; few fine faint irregular light gray (10YR 7/2) clay depletions between peds; 2 percent chert gravel; very strongly acid; gradual wavy boundary.

3Bt1—43 to 60 inches; light yellowish brown (10YR 6/4) silt loam; moderate medium subangular blocky structure; friable; many fine and medium tubular pores; common distinct yellowish red (5YR 5/6) clay films on faces of peds and few prominent dark grayish brown (10YR 4/2) clay films in root channels and/or pores; many prominent light gray (10YR 7/2) silt coats on faces of peds and few prominent light brownish gray (10YR 6/2) silt coats in root channels and/or pores; very strongly acid; gradual wavy boundary.

3Bt2—60 to 80 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; firm; many fine tubular pores; common distinct strong brown (7.5YR 4/6) and few prominent brown (7.5YR 5/2) clay films on faces of peds; few prominent light brownish gray (10YR 6/2) and few prominent very pale brown (10YR 7/3) silt coats on faces of peds; very strongly acid.

Range in Characteristics

Depth to the 2Btx horizon: 17 to 35 inches
Depth to the 3Bt horizon: 39 to 59 inches

A or Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 3 or 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 10 percent gravel
Reaction—very strongly acid to moderately acid, unless limed

Bt horizon:
Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 4 to 6
Texture of the fine-earth fraction—silt loam or silty clay loam
Content of rock fragments—0 to 10 percent gravel
Reaction—very strongly acid or strongly acid

2Btx horizon:
Color—hue of 10YR to 2.5YR, value of 4 or 5, and chroma of 4 to 6
Texture of the fine-earth fraction—silt loam or silty clay loam
Content of rock fragments—0 to 60 percent gravel; 0 to 10 percent cobbles

Reaction—very strongly acid or strongly acid

3Bt horizon:
Color—hue of 10YR to 2.5YR, value of 3 to 5, and chroma of 6 to 8
Texture of the fine-earth fraction—loam, silt loam, or silty clay loam
Content of rock fragments—3 to 70 percent gravel; 0 to 15 percent cobbles
Reaction—very strongly acid or strongly acid

Coulstone Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Moderately rapid
Landform: Hillslopes
Position on the landform: Backslopes
Parent material: Gravelly slope alluvium derived from sandstone
Slope range: 15 to 50 percent
Elevation: 1,080 feet
Taxonomic classification: Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Coulstone extremely cobbly sandy loam, in an area of Coulstone-Bender complex, 15 to 50 percent slopes, very stony, in a hardwood forest; 2,400 feet west and 2,500 feet north of the southeast corner of sec. 32, T. 28 N., R. 3 W.; USGS Winona, Missouri, topographic quadrangle; UTM coordinates 4,101,817 meters Northing and 651,284 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 5 inches; light brownish gray (10YR 5/2) extremely cobbly sandy loam; weak fine granular structure; very friable; many fine to coarse roots; many fine to coarse tubular pores; 30 percent sandstone cobbles and 35 percent chert gravel; very strongly acid; clear smooth boundary.

E1—5 to 11 inches; pale brown (10YR 6/3) very gravelly fine sandy loam; weak very fine and fine granular structure; very friable; many fine to coarse roots; many fine tubular pores; 20 percent sandstone gravel and 15 percent chert gravel; strongly acid; clear wavy boundary.

E2—11 to 15 inches; light yellowish brown (10YR 6/4) extremely cobbly fine sandy loam; weak very fine and fine subangular blocky structure; very friable; many fine to medium and common coarse roots; many fine tubular pores; 30 percent sandstone cobbles and 35 percent sandstone gravel; strongly acid; clear wavy boundary.

E3—15 to 19 inches; strong brown (7.5YR 5/4) extremely cobbly loam; moderate very fine and fine subangular blocky structure; very friable; many fine to medium and common coarse roots; many fine tubular pores; few faint brown (7.5YR 5/4) clay films on faces of peds; 30 percent sandstone cobbles 35 percent sandstone gravel; strongly acid; clear wavy boundary.

Bt1—19 to 32 inches; strong brown (7.5YR 5/6) very cobbly loam; moderate very fine and fine subangular blocky structure; friable; many very fine and fine roots; many fine tubular pores; few faint strong brown (7.5YR 4/6) clay films on faces of peds; 20 percent sandstone cobbles and 35 percent chert gravel; very strongly acid; clear smooth boundary.

Bt2—32 to 46 inches; strong brown (7.5YR 5/6) very cobbly loam; moderate very fine and fine subangular blocky structure; firm; common very fine and fine roots; common fine tubular pores; common distinct light gray (10YR 7/2) silt coats on faces of peds; common distinct red (2.5YR 4/6) clay films on faces of peds; 20 percent chert cobbles and 35 percent sandstone gravel; very strongly acid; clear smooth boundary.

2Bt3—46 to 56 inches; 80 percent yellowish red (5YR 5/8) and 20 percent red (2.5YR 4/8) sandy clay loam; moderate very fine and fine subangular blocky structure; very firm; common very fine and fine roots; common fine tubular pores; common distinct red (2.5YR 4/6) clay films on faces of peds; 7 percent chert gravel; very strongly acid; clear wavy boundary.

2Bt4—56 to 80 inches; red (2.5YR 4/6) clay; moderate medium and moderate fine subangular blocky structure; very firm; common very fine and fine roots; common fine tubular pores; common distinct dark reddish brown (2.5YR 3/4), common distinct reddish yellow (7.5YR 6/8), and few distinct reddish brown (5YR 5/4) clay films on faces of peds; 5 percent chert gravel; very strongly acid.

Range in Characteristics

Depth to the 2Bt horizon: 30 to 60 inches
Depth to bedrock: More than 60 inches

A horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 1 to 4
Texture of the fine-earth fraction—sandy loam
Content of rock fragments—0 to 40 percent cobbles or stones; 35 to 60 percent gravel
Reaction—very strongly acid to moderately acid

E horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 4
Texture of the fine-earth fraction—loam, sandy loam, fine sandy loam, or silt loam
Content of rock fragments—0 to 40 percent cobbles or stones; 35 to 60 percent gravel
Reaction—extremely acid to strongly acid

Bt horizon:
Color—hue of 5YR, 7.5YR, or 10YR; value of 3 to 7; and chroma of 3 to 6
Texture of the fine-earth fraction—sandy loam or loam (upper part); loamy sand or sandy loam (lower part)
Content of rock fragments—0 to 40 percent cobbles or stones; 35 to 60 percent gravel
Reaction—very strongly acid to moderately acid

2Bt or 3Bt horizon (if it occurs):
Color—hue of 10R, 2.5YR, or 5YR; value of 4 to 6; and chroma of 4 to 8
Texture of the fine-earth fraction—sandy loam, sandy clay loam, clay loam, sandy clay, or clay
Content of rock fragments—0 to 30 percent cobbles or stones; 5 to 60 percent gravel
Reaction—extremely acid to strongly acid

Courtois Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Basins
Position on the landform: Summits and shoulders
Parent material: Loess over clayey residuum derived from dolostone
Slope range: 3 to 15 percent
Elevation: 440 feet
Taxonomic classification: Fine, mixed, active, mesic Typic Paleudalfs

Typical Pedon

Courtois silt loam, 8 to 15 percent slopes, in a hardwood forest; 450 feet west and 1,100 feet south of the southwest corner of Highway 34 bridge over the St. Francis River in Wayne County; USGS Patterson, Missouri, topographic quadrangle; UTM coordinates 4,118,805 meters Northing and 721,481 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 7 inches; dark brown (7.5YR 3/3) silt loam; pale brown (10YR 6/3) dry; moderate fine subangular blocky structure; friable; many very fine to coarse roots; common fine tubular and many very fine and fine vesicular pores; 10 percent subangular chert gravel; strongly acid; clear wavy boundary.
BE—7 to 16 inches; brown (7.5YR 4/4) silt loam; moderate very fine subangular blocky structure; firm; many very fine to medium roots; common fine tubular and many very fine and fine vesicular pores; strongly acid; gradual smooth boundary.
Bt1—16 to 27 inches; 60 percent red (2.5YR 4/6) and 40 percent yellowish red (5YR 4/6) silty clay loam; moderate very fine and fine subangular blocky structure; very firm; common very fine and fine roots; common fine tubular and many very fine vesicular pores; common black (10YR 2/1) iron-manganese masses; strongly acid; gradual smooth boundary.
2Bt2—27 to 36 inches; 60 percent red (2.5YR 4/6) and 40 percent yellowish red (5YR 4/6) silty clay; moderate very fine and fine subangular blocky structure; very firm; common very fine and fine roots; common fine tubular and many very fine vesicular pores; common black (10YR 2/1) iron-manganese masses; strongly acid; abrupt wavy boundary.
2Bt3—36 to 50 inches; 70 percent red (10R 4/6) and 30 percent yellowish red (5YR 4/6) gravelly clay; strong very fine and fine angular blocky structure; very firm; few very fine and fine roots; many very fine vesicular pores; common black (10YR 2/1) iron-manganese masses; 30 percent angular chert gravel; strongly acid; gradual smooth boundary.
3Bt4—50 to 60 inches; 70 percent red (10R 4/6) and 30 percent yellowish red (5YR 4/6) gravelly clay; strong very fine and fine angular blocky structure; very firm; few very fine and fine roots; many very fine vesicular pores; common black (10YR 2/1) iron-manganese masses; 30 percent angular chert gravel; strongly acid; clear wavy boundary.
3Bt5—60 to 70 inches; 80 percent red (10R 4/6) and 20 percent yellowish red (5YR 4/6) clay; strong very fine angular blocky structure; very firm; few very fine and fine roots; few very fine vesicular pores; 2 percent angular chert gravel; strongly acid; gradual smooth boundary.
3Bt6—70 to 80 inches; 80 percent red (10R 4/6) and 20 percent yellowish red (5YR 4/6) clay; strong very fine angular blocky structure; very firm; few very fine and fine roots; few very fine vesicular pores; 2 percent angular chert gravel; strongly acid.

Range in Characteristics

Depth to bedrock: More than 60 inches
Depth to the 2Bt horizon: 15 to 33 inches

Ap or A horizon:
Color—hue of 10YR, 7.5YR, or 5YR; value of 3 or 4; and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 15 percent
Reaction—strongly acid to neutral

BE or E horizon (if it occurs):
Color—hue of 7.5YR or 5YR, value of 4 or 5, and chroma of 4 to 6
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 20 percent
Reaction—strongly acid to neutral

Bt horizon:
Color—hue of 2.5YR, 5YR, or 7.5YR; value of 3 or 4; and chroma of 4 to 6
Texture of the fine-earth fraction—silt loam, silty clay loam, or silty clay
Content of rock fragments—0 to 15 percent
Reaction—strongly acid or moderately acid

2Bt horizon:
Color—hue of 10R, 2.5YR, or 5YR; value of 3 to 5; and chroma of 4 to 6
Redoximorphic features—iron segregations with hue of 5YR to 10YR, value of 3 to 5, and chroma of 4 to 8
Texture of the fine-earth fraction—clay loam, silty clay loam, silty clay, or clay
Content of rock fragments—0 to 50 percent (upper part); 0 to 20 percent (lower part)
Reaction—strongly acid or moderately acid

3Bt horizon:
Color—hue of 10R, 2.5YR, or 5YR; value of 3 to 5; and chroma of 4 to 6
Redoximorphic features—iron segregations with hue of 5YR to 10YR, value of 3 to 5, and chroma of 4 to 8
Texture of the fine-earth fraction—clay
Content of rock fragments—0 to 30 percent
Reaction—strongly acid to neutral

Deible Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Very slow
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Loess over alluvium
Slope range: 1 to 3 percent
Elevation: 400 feet
Taxonomic classification: Fine, mixed, active, mesic Typic Albaqualfs

Typical Pedon

Deible silt loam, 1 to 3 percent slopes, in a cultivated field; 2,150 feet east and 250 feet south of the northwest corner of sec. 19, T. 27 N., R. 6 E. in Wayne County; USGS Hendrickson, Missouri, topographic quadrangle; UTM coordinates 4,095,981 meters Northing and 726,723 meters Easting, Zone 15, NAD27.

Ap—0 to 6 inches; brown (10YR 5/3) silt loam; moderate fine granular structure; friable; many very fine and fine roots; many very fine and fine vesicular pores; 1 percent subangular chert gravel; moderately acid; clear smooth boundary.

E1—6 to 10 inches; yellowish brown (10YR 5/3) silt loam; weak very fine subangular blocky structure; friable; many very fine and fine roots; many very fine and fine vesicular pores; common black (10YR 2/1) iron-manganese masses; 1 percent subangular chert gravel; strongly acid; clear smooth boundary.

E2—10 to 16 inches; 50 percent yellowish brown (10YR 5/3) and 50 percent pale brown (10YR 6/3) silt loam; moderate very fine and fine subangular blocky structure; firm; common very fine and fine roots; many very fine vesicular pores; many light gray (10YR 7/2) iron depletions; common iron-manganese masses; 1 percent subangular chert gravel; moderately acid; abrupt smooth boundary.

Btg1—16 to 23 inches; 60 percent grayish brown (10YR 5/2) and 40 percent gray (10YR 5/1) silty clay; moderate fine angular blocky structure; firm; few very fine roots; many very fine vesicular pores; common distinct clay films on faces of peds; common strong brown (7.5YR 4/6) masses of oxidized iron; common black (10YR 2/1) iron-manganese masses; 2 percent subangular chert gravel; neutral; gradual smooth boundary.

Btg2—23 to 33 inches; 80 percent gray (10YR 5/1) and 20 percent grayish brown (10YR 5/2) silty clay loam; moderate very fine and fine angular blocky structure; firm; few very fine roots; common very fine vesicular pores; common distinct clay films on faces of peds; many strong brown (7.5YR 4/6) masses of oxidized iron; common black (10YR 2/1) iron-manganese masses; 3 percent subangular chert gravel; slightly alkaline; gradual smooth boundary.

2Btg3—33 to 50 inches; 65 percent dark yellowish brown (10YR 4/4) and 35 percent gray (10YR 6/1)

silty clay loam; moderate very fine and fine angular blocky structure; firm; common very fine vesicular pores; few faint clay films on faces of peds; common yellowish red (5YR 5/8) masses of oxidized iron; 10 percent subangular chert gravel; slightly alkaline; gradual smooth boundary.

2Btg4—50 to 68 inches; 40 percent gray (10YR 6/1) and 30 percent yellowish brown (10YR 5/4) and 30 percent yellowish brown (10YR 5/6) silty clay loam; moderate very fine and fine subangular blocky structure; firm; many very fine vesicular pores; few faint clay films on faces of peds; common black (10YR 2/1) iron-manganese masses; 10 percent subangular chert gravel; slightly alkaline; gradual smooth boundary.

2Btg5—68 to 80 inches; 60 percent strong brown (7.5YR 4/6) and 40 percent gray (10YR 6/1) clay loam; moderate very fine and fine subangular blocky structure; firm; many very fine vesicular pores; few faint clay films on faces of peds; common red (2.5YR 4/8) masses of oxidized iron; common black (10YR 2/1) iron-manganese masses; 12 percent subangular chert gravel; moderately alkaline.

Range in Characteristics

Thickness of the solum: 30 to 60 inches or more
Depth to the Btg horizon: 13 to 22 inches
Depth to the 2Btg horizon: 30 to 40 inches

A or Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 or 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 10 percent gravel
Reaction—strongly acid to neutral

E or BE horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 or 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 15 percent gravel
Reaction—very strongly acid to neutral

Btg horizon:
Color—hue of 7.5YR, 10YR, or 2.5Y; value of 4 to 6; and chroma of 1 or 2
Texture of the fine-earth fraction—silty clay loam or silty clay
Content of rock fragments—0 to 3 percent gravel
Reaction—very strongly acid to slightly alkaline

2Btg or 2BCg horizon:
Color—hue of 7.5YR, 10YR, 2.5Y, 5Y, or N; value of 4 to 6; and chroma of 0 to 6
Texture of the fine-earth fraction—silt loam, silty clay loam, or clay loam
Content of rock fragments—0 to 15 percent gravel
Reaction—strongly acid to moderately alkaline

Delassus Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderate in the upper part; very slow in the fragipan
Landform: Mountains
Position on the landform: Summits and footslopes
Parent material: Loess over loamy residuum or colluvium derived from granite or rhyolite
Slope range: 3 to 15 percent
Elevation: 630 feet
Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Fragiudults

Typical Pedon

Delassus gravelly silt loam, 8 to 15 percent slopes, very bouldery, in a hardwood forest; 990 feet west and 250 feet south of the northeast corner of sec. 5, T. 29 N., R. 2 W.; USGS Powder Mill Ferry, Missouri, topographic quadrangle; UTM coordinates 4,110,400 meters Northing and 661,326 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 8 inches; brown (10YR 4/3) gravelly silt loam; weak fine granular structure; very friable; many fine and medium and common coarse roots; many fine and medium interstitial and tubular pores; 20 percent rhyolite gravel; very strongly acid; clear smooth boundary.

E—8 to 13 inches; yellowish brown (10YR 5/6) gravelly silt loam; weak fine granular structure; friable; many fine and medium and common coarse roots; common fine and medium tubular pores; common distinct brown (10YR 4/3) organic stains on faces of peds; 25 percent rhyolite gravel; strongly acid; clear smooth boundary.

Bt—13 to 20 inches; strong brown (7.5YR 5/6) gravelly loam; moderate medium subangular blocky structure; friable; common fine and medium and few coarse roots; common fine and medium tubular pores; few distinct brown (7.5YR 4/4) clay films on rock fragments; 25 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

2Btx1—20 to 32 inches; strong brown (7.5YR 5/6) very gravelly coarse sandy loam; weak very coarse

prismatic structure; firm; common fine and few medium roots; common fine interstitial and tubular pores; common distinct strong brown (7.5YR 4/6) clay films on faces of peds; common distinct pink (7.5YR 7/3) silt coats on faces of peds; common fine and medium irregular black (N 2/0) iron-manganese masses; 10 percent rhyolite cobbles and 40 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

2Btx2—32 to 43 inches; 60 percent brown (7.5YR 5/4) and 40 percent light gray (7.5YR 7/1) gravelly loam; weak very coarse prismatic structure; firm; few fine roots; common fine interstitial and tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds; many medium threadlike reddish yellow (7.5YR 6/8) iron-manganese masses throughout; many fine and medium threadlike light gray (5YR 7/1) iron depletions throughout; 30 percent rhyolite gravel; very strongly acid; gradual smooth boundary.

3Bt1—43 to 60 inches; 50 percent light brown (7.5YR 6/3) and 50 percent red (2.5YR 4/8) very cobbly loam; moderate medium angular blocky structure; friable; few fine roots; common fine and medium tubular pores; many distinct red (2.5YR 4/6) and common distinct strong brown (7.5YR 5/6) clay films on faces of peds; many medium irregular strong brown (7.5YR 5/8) iron-manganese masses throughout; 30 percent rhyolite cobbles and 15 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

3Bt2—60 to 80 inches; 60 percent red (2.5YR 5/8) and 40 percent light gray (7.5YR 7/1) very cobbly silty clay loam; moderate medium angular blocky structure; friable; few fine roots; common fine and medium tubular pores; common distinct red (2.5YR 4/8) and few distinct yellowish brown (10YR 5/6) clay films on faces of peds; many medium threadlike light gray (7.5YR 7/1) iron depletions throughout; many medium threadlike strong brown (7.5YR 5/8) iron-manganese masses throughout; 40 percent rhyolite cobbles and 15 percent rhyolite gravel; very strongly acid.

Range in Characteristics

Depth to the 2Btx horizon: 20 to 36 inches

A or Ap horizon:
- Color—hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 27 percent
- Reaction—very strongly acid to moderately acid, unless limed

E horizon:
- Color—hue of 10YR or 7.5YR, value of 3 to 6, and chroma 2 to 6
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 27 percent
- Reaction—very strongly acid to moderately acid

BE or Bt horizon:
- Color—hue of 10YR, 7.5YR, or 5YR; value of 4 to 6; and chroma of 3 to 6
- Texture of the fine-earth fraction—silt loam or loam
- Content of rock fragments—0 to 27 percent
- Reaction—very strongly acid to moderately acid

Bt horizon (lower part):
- Color—hue of 10YR, 7.5YR, or 5YR; value of 4 to 6; and chroma of 3 to 6
- Texture of the fine-earth fraction—silt loam, loam, or silty clay loam
- Content of rock fragments—0 to 27 percent
- Reaction—extremely acid to strongly acid

2E horizon (if it occurs):
- Color—hue of 10YR, 7.5YR, or 5YR; value of 4 to 7; and chroma of 2 to 6
- Texture of the fine-earth fraction—silt loam or loam
- Content of rock fragments—0 to 27 percent
- Reaction—extremely acid or very strongly acid

2Btx horizon:
- Color—hue of 7.5YR, 10YR, or 2.5Y; value of 4 to 7; and chroma of 1 to 8
- Texture of the fine-earth fraction—coarse sandy loam, sandy loam, loam, or silt loam
- Content of rock fragments—15 to 60 percent
- Reaction—extremely acid to strongly acid

3Bt horizon:
- Color—hue of 2.5YR to 10YR, value of 3 to 7, and chroma of 1 to 8
- Texture of the fine-earth fraction—loam, silt loam, or silty clay loam
- Rock fragments—15 to 60 percent
- Reaction—extremely acid to strongly acid

Fanchon Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Upland ridges
Position on the landform: Summits and shoulders
Parent material: Silty sediments and the underlying colluvium and residuum
Slope range: 1 to 8 percent

Elevation: 1,070 feet
Taxonomic classification: Fine-loamy, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Fanchon silt loam, in an area of Fanchon-Tonti complex, 3 to 8 percent slopes, in a hardwood forest; 1,200 feet south and 1,200 feet west of the northeast corner of sec. 8, T. 22 N., R. 9 W. in Howell County; Moody, Missouri, USGS topographic quadrangle, UTM Coordinates 4,049,850 meters north and 593,360 meters east, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; clear smooth boundary.

A—1 to 5 inches; brown (10YR 4/3) silt loam; moderate medium granular structure; very friable; many very fine and fine and few medium and coarse roots throughout; many fine irregular and tubular pores; 2 percent subangular mixed gravel; strongly acid; abrupt smooth boundary.

AB—5 to 10 inches; 60 percent dark yellowish brown (10YR 4/4) and 40 percent yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; common fine and few medium and coarse roots throughout; common fine tubular pores; few distinct brown (10YR 4/3) organic coats on faces of peds; 2 percent subangular mixed gravel; strongly acid; clear smooth boundary.

Bt1—10 to 16 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure parting to moderate fine subangular blocky; firm; common fine and few medium and coarse roots throughout; common fine tubular pores; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few distinct brown (10YR 4/3) organic coats in root channels and in pores; 5 percent subangular mixed gravel; strongly acid; clear smooth boundary.

Bt2—16 to 21 inches; brown (7.5YR 5/4) silt loam; moderate medium angular blocky structure parting to moderate fine angular blocky; firm; few medium roots throughout; few fine and medium tubular pores; few distinct yellowish red (5YR 4/6) clay films on faces of peds and few distinct brown (7.5YR 5/4) clay films throughout; 2 percent subangular sandstone stones and 5 percent subangular mixed gravel; very strongly acid; clear smooth boundary.

2Bt3—21 to 28 inches; strong brown (7.5YR 5/6) very gravelly loam; moderate fine angular blocky structure; firm; few fine roots throughout; common very fine and fine tubular pores; few distinct strong brown (7.5YR 5/6) clay films on faces of peds; few distinct brown (10YR 5/3) silt coats between sand grains; 5 percent angular sandstone flagstones and 40 percent subangular mixed gravel; strongly acid; clear wavy boundary.

2Bt4—28 to 39 inches; 60 percent red (2.5YR 4/8) and 40 percent brown (7.5YR 5/4) gravelly clay loam; moderate fine subangular blocky structure; firm; common very fine and fine irregular and tubular pores; few distinct red (2.5YR 4/6) and common distinct brown (7.5YR 4/4) clay films on faces of peds; common distinct pale brown (10YR 6/3) silt coats between sand grains; 25 percent subangular chert gravel; strongly acid; clear wavy boundary.

2Bt5—39 to 47 inches; red (2.5YR 4/8) very gravelly clay loam; weak fine subangular blocky structure; firm; many very fine and fine irregular and tubular pores; common distinct brown (7.5YR 5/2) clay films on face of peds; common prominent brown (10YR 5/4) silt coats between sand grains; 50 percent subangular chert gravel; pockets of decomposing tripolitic chert are present; strongly acid; clear wavy boundary.

3Bt6—47 to 80 inches; 80 percent red (10R 4/8) and 20 percent yellowish red (5YR 5/6) clay; moderate very fine angular and subangular blocky structure; very firm; few fine irregular and tubular pores; common prominent reddish brown (2.5YR 4/4) clay films on face of peds and few prominent brown (7.5YR 4/3) clay films in root channels and pores; few distinct yellowish brown (10YR 5/4) silt coats in root channels and in pores; 5 percent subangular mixed gravel; very strongly acid.

Range in Characteristics

A or Ap horizon:
- Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 15 percent gravel
- Reaction—very strongly acid to slightly acid

AB or BA horizon:
- Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 3 to 6
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 15 percent gravel
- Reaction—very strongly acid to slightly acid

Bt horizon:
- Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 4 or 6
- Texture of the fine-earth fraction—silt loam or silty clay loam
- Content of rock fragments—5 to 35 percent; 0 to 35 percent gravel; 0 to 5 percent stones or cobbles

Reaction—very strongly acid to slightly acid

2Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 4 to 8
Texture of the fine-earth fraction—silt loam, loam, silty clay loam, or clay loam
Content of rock fragments—15 to 50 percent; 0 to 50 percent gravel; 0 to 20 percent stones, flagstones, or cobbles
Reaction—very strongly acid to moderately acid

3Bt horizon:
Color—hue of 10R to 10YR, value of 3 to 7, and chroma of 4 to 8
Texture of the fine-earth fraction—silty clay or clay
Content of rock fragments—0 to 60 percent gravel; 0 to 15 percent stones, flagstones, or cobbles
Reaction—extremely acid to strongly acid

Farewell Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Landform: River valleys
Position on the landform: Flood plains and low stream terraces
Parent material: Loamy alluvium
Slope range: 0 to 3 percent
Elevation: 1,020 feet
Taxonomic classification: Fine-loamy, siliceous, active, mesic Typic Argiaquolls

Typical Pedon

Farewell silt loam, in an area of Batcave-Farewell complex, 0 to 3 percent slopes, frequently flooded, in a fescue pasture; 2,400 feet south and 1,700 feet east of the northwest corner of sec. 5, T. 22 N., R. 10 W., in Howell County; USGS Caulfield, Missouri, topographic quadrangle; UTM coordinates 4,051,560 meters Northing and 583,240 meters Easting, Zone 15, NAD27.

Ap—0 to 8 inches; very dark gray (N 3/0) silt loam, very dark grayish brown (2.5Y 3/2) dry; weak fine subangular blocky structure; very friable; many very fine roots throughout; many very fine irregular and tubular pores; common fine distinct rounded gray (2.5Y 6/1) iron depletions; common fine prominent rounded brown (7.5YR 4/4) masses of iron accumulation between peds; few brown (7.5YR 4/4) iron stains in root channels and in pores; 5 percent subangular chert gravel; moderately acid; clear smooth boundary.

A1—8 to 13 inches; very dark gray (N 3/0) silt loam; very dark grayish brown (2.5Y 3/2) dry; moderate fine and medium subangular blocky structure; very friable; common very fine roots throughout; few fine and medium tubular and few medium vesicular pores; common fine distinct rounded gray (2.5Y 6/1) iron depletions; few brown (7.5YR 4/4) iron stains in root channels and in pores; common fine irregular brown (7.5YR 4/4) masses of iron accumulation throughout; 2 percent chert gravel; slightly acid; clear smooth boundary.

A2—13 to 24 inches; very dark gray (10YR 3/1) gravelly silt loam; very dark grayish brown (10YR 3/2) dry; moderate fine subangular blocky structure; friable; common very fine roots throughout; few fine and medium tubular and few medium vesicular pores; few fine distinct brown (10YR 5/3) clay depletions on faces of peds; few fine prominent strong brown (7.5YR 4/6) iron stains on faces of peds; common fine rounded strong brown (7.5YR 4/6) slightly hard iron-manganese concretions throughout; 25 percent chert gravel; neutral; gradual wavy boundary.

Btg1—24 to 30 inches; light olive brown (2.5Y 5/3) gravelly loam; weak fine subangular blocky structure; friable; few very fine roots throughout; many very fine and fine irregular pores; few distinct dark grayish brown (10YR 4/2) clay films bridging sand grains; common fine faint rounded grayish brown (2.5Y 5/2) iron depletions; common fine prominent black (N 2/0) iron stains throughout; common fine rounded black (N 2/0) slightly hard iron-manganese concretions throughout; 30 percent chert gravel; neutral; abrupt wavy boundary.

Btg2—30 to 40 inches; light olive brown (2.5Y 5/3) silt loam; moderate medium subangular blocky structure; friable; few very fine roots throughout; few fine and medium tubular and few medium vesicular pores; few prominent dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct rounded light brownish gray (10YR 6/2) and gray (10YR 5/1) iron depletions; few distinct irregular strong brown (7.5YR 4/6) iron stains on faces of peds; few medium prominent irregular black (N 2/0) iron-manganese stains on faces of peds; common fine rounded black (N 2/0) slightly hard iron-manganese concretions throughout; 10 percent chert gravel; neutral; gradual wavy boundary.

Btg3—40 to 48 inches; light olive brown (2.5Y 5/3) silt loam; moderate fine and medium subangular blocky structure; firm; few very fine roots throughout; many very fine tubular and few medium

vesicular pores; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine distinct rounded light brownish gray (10YR 6/2) iron depletions; few distinct irregular strong brown (7.5YR 4/6) iron stains on faces of peds; few medium prominent irregular black (N 2/0) iron-manganese stains of faces of peds; common fine rounded black (N 2/0) slightly hard iron-manganese concretions throughout; 5 percent chert gravel; neutral; gradual wavy boundary.

Btg4—48 to 60 inches; light olive brown (2.5Y 5/4) gravelly loam; moderate fine subangular blocky structure; firm; few very fine roots throughout; many very fine tubular pores; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine distinct rounded light brownish gray (10YR 6/2) iron depletions; few medium prominent irregular black (N 2/0) iron-manganese stains throughout; common fine rounded black (N 2/0) slightly hard iron-manganese concretions throughout; 25 percent chert gravel; neutral; gradual wavy boundary.

Btg5—60 to 80 inches; brown (10YR 5/3) silt loam; weak medium subangular blocky structure parting to moderate fine subangular blocky; firm; many very fine tubular pores; few prominent brown (7.5YR 4/4) clay films on faces of peds; common fine distinct rounded light brownish gray (10YR 6/2) iron depletions between peds; few medium prominent irregular black (N 2/0) iron-manganese stains on faces of peds; few fine rounded black (N 2/0) slightly hard iron-manganese concretions throughout; 2 percent chert cobbles and 5 percent chert gravel; neutral.

Range in Characteristics

Thickness of the solum: 80 or more inches

Ap and A horizons:
Color—hue of 10YR, 2.5Y, or N; value of 2 or 3; and chroma of 0 to 2
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 5 percent
Reaction—moderately acid to slightly acid

A horizon (lower part):
Color—hue of 10YR, 2.5Y, or N; value of 2 or 3; and chroma of 0 to 2
Texture of the fine-earth fraction—loam, silt loam, or clay loam
Content of rock fragments—0 to 25 percent
Reaction—slightly acid to neutral

Btg or Bt horizon (upper part):
Color—hue of 10YR, 2.5Y, or N; value of 2 to 5; and chroma of 0 to 4
Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam
Content of rock fragments—5 to 35 percent
Reaction—slightly acid to slightly alkaline

Btg or Bt horizon (lower part):
Color—hue of 5YR to 2.5Y or N, value of 2 to 6, and chroma of 0 to 8
Texture of the fine-earth fraction—sandy loam, loam, silt loam, sandy clay loam, or clay loam
Content of rock fragments—0 to 60 percent
Reaction—neutral to slightly alkaline

Fourche Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderately slow
Landform: Hillslopes
Position on the landform: Footslopes
Parent material: Loess and the underlying residuum from dolostone
Slope range: 3 to 8 percent
Elevation: 518 feet
Taxonomic classification: Fine-silty, mixed, active, mesic Glossaquic Paleudalfs

Typical Pedon

Fourche silt loam, 3 to 8 percent slopes, in a pasture; 4,300 feet south and 3,000 feet east of the northwest corner of sec. 31, T. 30 N., R. 5 E. in Madison County; USGS Brunot topographic quadrangle; UTM coordinates 4,132,797 meters Northing and 718,040 meters Easting.

Ap—0 to 5 inches; dark yellowish brown (10YR 4/4) silt loam, yellowish brown (10YR 5/4) dry; weak fine subangular blocky structure parting to moderate very fine granular; very friable; many very fine and fine roots; moderately acid; abrupt wavy boundary.

AB—5 to 9 inches; brown (7.5YR 4/4) silt loam, brownish yellow (10YR 6/6) dry; weak fine subangular blocky structure parting to weak very fine granular; friable; common very fine and fine roots; moderately acid; clear wavy boundary.

Bt1—9 to 18 inches; strong brown (7.5YR 4/6) silty clay loam; moderate very fine subangular blocky structure; friable; common very fine roots; common faint clay films on faces of peds; very few prominent dark brown (10YR 3/3) manganese or iron-manganese stains; moderately acid; clear wavy boundary.

Bt2—18 to 23 inches; strong brown (7.5YR 4/6) silty clay loam; weak fine subangular blocky and

moderate very fine subangular blocky structure; friable; common very fine roots; few prominent clay films on vertical faces of peds and few distinct clay films on faces of peds; few faint silt coats on faces of peds; very few prominent black (10YR 2/1) manganese or iron-manganese stains; common black (10YR 2/1) iron-manganese concretions throughout; strongly acid; abrupt wavy boundary.

Bt3—23 to 30 inches; strong brown (7.5YR 5/6) silty clay loam; common fine distinct pale brown (10YR 6/3) and common medium prominent red (2.5YR 4/6) mottles; moderate medium prismatic structure parting to moderate fine subangular blocky; firm; common very fine roots; few prominent clay films on vertical faces of peds and many distinct clay films on faces of peds; few distinct light brown (7.5YR 6/4) silt coats on faces of peds; and few prominent black (10YR 2/1) manganese or iron-manganese stains; common black (10YR 2/1) iron-manganese concretions throughout; very strongly acid; clear wavy boundary.

2Bt/E—30 to 37 inches; 60 percent dark red (2.5YR 3/6) and 40 percent strong brown (7.5YR 5/6) silty clay loam (Bt); strong medium prismatic structure parting to moderate fine subangular blocky; firm; common prominent clay films on vertical faces of peds; few prominent black (10YR 2/1) manganese or iron-manganese stains; common black (10YR 2/1) iron-manganese concretions between peds; common fine and medium light gray (10YR 7/2) soft iron depletions pedogenic between peds; very strongly acid; light yellowish brown (10YR 6/4) silt loam (E); friable; few very fine roots; very strongly acid; abrupt irregular boundary.

3Bt1—37 to 56 inches; 60 percent brown (7.5YR 5/4) and 40 percent dark red (2.5YR 3/6) silty clay loam; moderate medium prismatic structure parting to moderate fine subangular blocky; firm; few very fine roots; common prominent clay films on faces of peds; very few prominent black (10YR 2/1) manganese or iron-manganese stains; few black (10YR 2/1) masses of iron-manganese accumulation between peds; common very coarse and extremely coarse light brownish gray (10YR 6/2) and common very coarse and extremely coarse light gray (10YR 7/2) soft iron depletions pedogenic between peds; very strongly acid; clear wavy boundary.

3Bt2—56 to 66 inches; 65 percent dark red (2.5YR 3/6) and 35 percent brown (7.5YR 5/4) silty clay; weak medium subangular blocky and moderate very fine subangular blocky structure; firm; many prominent clay films on faces of peds; very few prominent black (10YR 2/1) manganese or iron-manganese stains; few black (10YR 2/1) masses of iron-manganese accumulation throughout; common coarse light brownish gray (10YR 6/2) and common coarse light gray (10YR 7/2) soft iron depletions pedogenic between peds; strongly acid.

Range in Characteristics

Depth to bedrock: More than 60 inches

Ap or A horizon:
- Color—hue of 10YR, value of 4, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Reaction—moderately acid to neutral

AB or Bt horizon:
- Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 3 to 6
- Texture of the fine-earth fraction—silty clay loam or silt loam
- Reaction—very strongly to moderately acid

2Bt/E or 3Bt horizon (upper part):
- Color—hue of 10YR to 2.5YR, value of 3 to 6, and chroma of 4 to 6 (Bt); hue of 10YR, value of 5 to 7, and chroma of 1 to 4 (E)
- Redoximorphic features—iron segregations in shades of gray in some pedons
- Texture of the fine-earth fraction—silty clay loam or silty clay (Bt); silt loam (E)
- Content of rock fragments—0 to 10 percent
- Reaction—very strongly acid or strongly acid

3Bt horizon (lower part):
- Color—hue of 7.5YR to 2.5YR, value of 3 to 5, and chroma of 4 to 6
- Redoximorphic features—iron segregations in shades of brown, yellow, or gray
- Texture of the fine-earth fraction—silty clay or clay
- Content of rock fragments—0 to 15 percent
- Reaction—strongly acid to neutral

Frenchmill Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Mountains
Position on the landform: Backslopes and footslopes
Parent material: Colluvium derived from rhyolite or granite
Slope range: 15 to 45 percent
Elevation: 700 feet
Taxonomic classification: Loamy-skeletal, mixed, active, mesic Typic Paleudults

Typical Pedon

Frenchmill very cobbly silt loam, in an area of Killarney-Frenchmill complex, 15 to 45 percent slopes, rubbly, in a hardwood forest; 650 feet west and 400 feet south of the northeast corner of sec. 5, T. 28 N., R. 2 W.; USGS Powder Mill Ferry, Missouri, topographic quadrangle; UTM coordinates 4,110,332 meters Northing and 661,287 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; clear smooth boundary.

A—1 to 6 inches; very dark grayish brown (10YR 3/2) very cobbly silt loam, light brownish gray (10YR 6/2), dry; weak fine granular structure; very friable; many fine to coarse roots; many fine and medium interstitial and tubular pores; 20 percent rhyolite cobbles and 25 percent rhyolite gravel; moderately acid; clear smooth boundary.

E1—6 to 11 inches; brown (10YR 5/3) very gravelly silt loam; weak fine granular structure; very friable; common fine and medium and few coarse roots; many fine interstitial and tubular pores; 15 percent rhyolite cobbles and 35 percent rhyolite gravel; strongly acid; clear smooth boundary.

E2—11 to 19 inches; light yellowish brown (10YR 6/4) gravelly silt loam; weak fine granular structure; very friable; common fine to coarse roots; many fine tubular pores; 5 percent rhyolite cobbles and 15 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

Bt1—19 to 27 inches; pale brown (10YR 6/3) very gravelly silt loam; weak fine subangular blocky structure; friable; few fine and medium roots; many fine to coarse tubular pores; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few distinct dark grayish brown (10YR 4/2) organic stains in root channels and/or pores; 5 percent rhyolite cobbles and 40 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

2Bt2—27 to 35 inches; pale brown (10YR 6/3) very cobbly loam; weak fine subangular blocky structure; friable; few fine roots; many fine and medium tubular pores; common distinct yellowish brown (10YR 5/4) clay films on faces of peds and common distinct brown (7.5YR 5/4) clay films on rock fragments; common fine yellow (10YR 7/8) iron-manganese masses between peds; 15 percent rhyolite cobbles and 20 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

2Bt3—35 to 45 inches; 70 percent light brown (7.5YR 6/4) and 30 percent red (2.5YR 4/8) very cobbly loam; weak fine subangular blocky structure; friable; few fine roots; many fine and medium tubular pores; common distinct light brown (7.5YR 6/3) silt coats on faces of peds and common distinct brown (7.5YR 5/4) clay films in root channels and/or pores and few distinct brown (7.5YR 5/3) clay films on faces of peds and few distinct reddish brown (5YR 4/4) clay films on faces of peds and few distinct strong brown (7.5YR 4/6) clay films on faces of peds; 25 percent rhyolite cobbles and 10 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

2Bt4—45 to 58 inches; 50 percent light brown (7.5YR 6/4) and 50 percent red (2.5YR 4/6) very cobbly loam; moderate medium subangular blocky structure; friable; few fine roots; many fine and medium tubular pores; common distinct light gray (7.5YR 7/1) silt coats on faces of peds and few distinct red (2.5YR 4/6) and few distinct brown (7.5YR 5/4) clay films on faces of peds; common fine yellow (10YR 7/8) iron-manganese masses between peds; 25 percent rhyolite cobbles and 10 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

3Bt5—58 to 69 inches; 70 percent red (2.5YR 4/6) and 30 percent red (2.5YR 4/8) cobbly clay loam; moderate medium subangular blocky structure; very firm; common fine tubular pores; common distinct pale brown (10YR 6/3) silt coats in root channels and/or pores and common distinct brown (7.5YR 5/4) clay films on faces of peds and common distinct dark red (2.5YR 3/6) clay films on faces of peds; 20 percent rhyolite cobbles and 5 percent rhyolite gravel; very strongly acid; clear smooth boundary.

3Bt6—69 to 81 inches; 70 percent red (2.5YR 4/8) and 30 percent light brown (7.5YR 6/4) clay loam; weak fine angular blocky structure; very firm; common fine tubular pores; common distinct red (2.5YR 4/6) and common distinct brown (7.5YR 5/4) clay films on faces of peds; 10 percent rhyolite cobbles; very strongly acid.

Range in Characteristics

Depth to bedrock: More than 60 inches

A horizon:

Color—hue of 10YR, value of 3 to 5, and chroma of 2 or 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—35 to 60 percent
Reaction—very strongly acid to moderately acid

E horizon:

Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—silt loam or loam

Content of rock fragments—10 to 50 percent
Reaction—very strongly acid or strongly acid

Bt horizon:
Color—hue of 10YR to 5YR, value of 4 to 6, and chroma of 3 to 8
Texture of the fine-earth fraction—silt loam
Content of rock fragments—35 to 60 percent
Reaction—very strongly acid or strongly acid

2Bt horizon:
Color—hue of 10YR to 2.5YR, value of 4 to 7, and chroma of 3 to 8
Texture of the fine-earth fraction—loam or clay loam
Content of rock fragments—35 to 60 percent
Reaction—very strongly acid or strongly acid

3Bt horizon:
Color—hue of 10YR to 2.5YR, value of 3 to 6, and chroma of 4 to 8
Texture of the fine-earth fraction—sandy clay loam or clay loam
Content of rock fragments—0 to 35 percent
Reaction—very strongly acid or strongly acid

Gabriel Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Moderately slow
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Fine-silty alluvium
Slope range: 0 to 3 percent
Elevation: 450 feet
Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiaquolls

Typical Pedon

Gabriel silt loam, 0 to 3 percent slopes, rarely flooded, in a pasture; 950 feet north and 1,200 feet east of the southwest corner of sec. 6, T. 27 N., R. 4 E. in Wayne County; USGS Mill Spring, Missouri, topographic quadrangle; UTM coordinates 4,099,100 meters Northing and 707,100 meters Easting, Zone 15, NAD27.

A1—0 to 6 inches; very dark gray (7.5YR 3/1) silt loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; many very fine roots; many very fine tubular pores; few fine faint black (10YR 2/1) iron-manganese concretions; 1 percent angular chert gravel; neutral; gradual smooth boundary.

A2—6 to 13 inches; very dark gray (7.5YR 3/1) silt loam, gray (10YR 5/1) dry; moderate very fine and fine subangular blocky structure; friable; many very fine roots; many very fine tubular pores; 1 percent angular chert gravel; neutral; clear smooth boundary.

Btg1—13 to 27 inches; very dark gray (7.5YR 3/1) silt loam; moderate very fine and fine subangular blocky structure; friable; common very fine roots; many very fine tubular pores; few faint clay films on faces of peds; common fine prominent dark yellowish brown (10YR 4/6) masses of oxidized iron; 1 percent angular chert gravel; neutral; gradual smooth boundary.

Btg2—27 to 41 inches; gray (7.5YR 6/1) silt loam; moderate very fine and fine angular blocky structure; firm; many very fine tubular pores; few faint clay films on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of oxidized iron; 1 percent angular chert gravel; neutral; gradual smooth boundary.

Btg3—41 to 53 inches; gray (7.5YR 6/1) silt loam; moderate very fine and fine angular blocky structure; firm; common very fine and fine tubular pores; few faint clay films on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of oxidized iron; 1 percent angular chert gravel; neutral; clear smooth boundary.

Btg4—53 to 60 inches; gray (10YR 6/1) silty clay loam; moderate very fine and fine angular blocky structure; firm; many very fine tubular pores; few faint clay films on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of oxidized iron; few iron-manganese concretions; 1 percent angular chert gravel; neutral; gradual smooth boundary.

Btg5—60 to 74 inches; gray (10YR 6/1) silty clay loam; moderate very fine and fine angular blocky structure; firm; many very fine vesicular pores; few faint clay films on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of oxidized iron; 1 percent angular chert gravel; neutral; gradual smooth boundary.

BC—74 to 84 inches; strong brown (7.5YR 5/6) silty clay loam; moderate very fine and fine angular blocky structure; firm; many very fine vesicular pores; many fine prominent gray (7.5YR 6/1) iron depletions; neutral.

Range in Characteristics

Thickness of the solum: 80 inches or more
Depth to bedrock: 80 inches or more

A horizon:
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 to 3

Texture of the fine-earth fraction—loam or silt loam
Reaction—strongly acid to neutral

Btg horizon (upper part):
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 to 3
Redoximorphic features—iron masses with hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 3 to 6
Texture of the fine-earth fraction—silt loam, silty clay loam, or clay loam
Reaction—strongly acid to neutral

Btg horizon (lower part) or BC horizon:
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 or 2
Redoximorphic features—iron masses with hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 3 to 6
Texture of the fine-earth fraction—silt loam, silty clay loam, or clay loam
Reaction—strongly acid to neutral

Gasconade Series

Depth class: Shallow
Drainage class: Somewhat excessively drained
Permeability class: Moderately slow
Landform: Hillslopes
Position on the landform: Backslopes and shoulders
Parent material: Gravelly residuum derived from dolostone
Slope range: 3 to 50 percent
Elevation: 800 feet
Taxonomic classification: Clayey-skeletal, mixed, superactive, mesic Lithic Hapludolls

Typical Pedon

Gasconade cobbly clay, in an area of Brussels-Gasconade-Rock outcrop complex, 30 to 90 percent slopes, very bouldery, in a hardwood forest; 1,380 feet east and 1,820 feet north of the southwest corner of sec. 8, T. 30 N., R. 4 W.; USGS Round Spring, Missouri, topographic quadrangle; UTM coordinates 4,129,560 meters Northing and 641,300 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; clear smooth boundary.
A—1 to 9 inches; very dark brown (10YR 2/2) cobbly clay, very dark grayish brown (10YR 3/2) dry; moderate medium granular structure; firm; many fine to coarse roots; many fine interstitial and tubular pores; 15 percent chert gravel; slightly alkaline; clear smooth boundary.
Bw1—9 to 14 inches; 60 percent very dark brown (10YR 2/2) and 40 percent very dark grayish brown (10YR 3/2) very gravelly clay; moderate medium subangular blocky structure; firm; many fine, common medium, and common coarse roots; many fine vesicular pores; common distinct very dark gray (10YR 3/1) clay films on faces of peds; 35 percent chert gravel; slightly alkaline; clear smooth boundary.
Bw2—14 to 19 inches; very dark brown (10YR 2/2) very gravelly clay, very dark grayish brown (10YR 3/2) dry; moderate medium subangular blocky structure; firm; common fine to coarse roots; many fine vesicular pores; common distinct very dark gray (10YR 3/1) clay films on faces of peds; 55 percent chert gravel; slightly alkaline; abrupt smooth boundary.
R—19 inches; dolostone bedrock.

Range in Characteristics

Depth to bedrock: 4 to 20 inches

A horizon:
Color—hue of 10YR, value of 2 or 3, and chroma of 1 to 3
Texture of the fine-earth fraction—silty clay or clay
Content of rock fragments—0 to 35 percent
Reaction—slightly acid to slightly alkaline

Bw horizon:
Color—hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 1 to 4
Texture of the fine-earth fraction—clay, silty clay, silty clay loam, or clay loam
Content of rock fragments—35 to 70 percent
Reaction—slightly acid to slightly alkaline

Gepp Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Hillslopes
Position on the landform: Summits, backslopes, and structural benches
Parent material: Clayey residuum derived from dolostone
Slope range: 8 to 55 percent
Elevation: 820 feet
Taxonomic classification: Very fine, mixed, semiactive, mesic Typic Paleudalfs

Typical Pedon

Gepp gravelly silt loam, in an area of Rueter-Gepp complex, 8 to 15 percent slopes, stony, in a hardwood

forest; 1,000 feet west and 2,100 feet north of the southeast corner of sec. 22, T. 31 N., R. 4 W.; USGS The Sinks, Missouri, topographic quadrangle; UTM coordinates 4,136,480 meters Northing and 645,440 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 5 inches; dark grayish brown (10YR 4/2) gravelly silt loam; weak fine granular structure; very friable; many fine and medium roots and few coarse roots; many fine to coarse interstitial and tubular pores; 30 percent sandstone gravel; moderately acid; clear smooth boundary.

BA—5 to 9 inches; 60 percent yellowish brown (10YR 5/4) and 40 percent yellowish red (5YR 5/6) gravelly silt loam; weak fine granular and weak fine subangular blocky structure; friable; many fine to coarse roots; many fine to coarse tubular pores; 1 percent sandstone cobbles and 25 percent chert gravel; very strongly acid; gradual smooth boundary.

Bt1—9 to 17 inches; red (2.5YR 4/6) gravelly clay; moderate fine subangular blocky structure; friable; common fine to coarse roots; many fine and medium and few coarse tubular pores; few distinct strong brown (7.5YR 5/6) and few distinct brown (7.5YR 5/4) clay films on faces of peds; 4 percent sandstone cobbles and 25 percent chert gravel; very strongly acid; clear smooth boundary.

2Bt2—17 to 31 inches; 50 percent red (2.5YR 4/6) and 50 percent strong brown (7.5YR 4/6) clay; moderate fine subangular blocky structure; firm; many fine and medium and common coarse roots; common very fine to fine and few medium tubular pores; common distinct yellowish brown (10YR 5/6) and few distinct gray (10YR 6/1) clay films on faces of peds; common distinct red (2.5YR 4/6) silt coats on faces of peds; few distinct black (N 2/0) manganese or iron-manganese stains on faces of peds; 10 percent chert gravel; strongly acid; clear smooth boundary.

2Bt3—31 to 42 inches; 50 percent red (2.5YR 4/6) and 50 percent gray (10YR 6/1) gravelly clay; moderate medium subangular blocky structure; firm; common fine and medium roots; common very fine to fine and few medium tubular pores; few distinct reddish brown (5YR 4/4), few distinct strong brown (7.5YR 5/6), and few distinct dark red (2.5YR 3/6) clay films on faces of peds; few distinct black (N 2/0) manganese or iron-manganese stains on faces of peds; 15 percent chert gravel; strongly acid; gradual smooth boundary.

2Bt4—42 to 54 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; very firm; common fine and few medium roots; common very fine and fine tubular pores; many distinct yellowish brown (10YR 5/4) and common distinct dark red (2.5YR 3/6) clay films on faces of peds and few distinct dark grayish brown (10YR 4/2) clay films in root channels and/or pores; strongly acid; clear smooth boundary.

2Bt5—54 to 72 inches; red (2.5YR 4/6) clay; moderate fine subangular blocky structure; very firm; common fine and few medium roots; common very fine and fine tubular pores; common distinct dark red (2.5YR 3/6), few distinct strong brown (7.5YR 5/6), and few distinct dark grayish brown (10YR 4/2) clay films in root channels and/or pores; strongly acid.

Range in Characteristics

Depth to bedrock: More than 60 inches

A horizon:
- Color—hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—15 to 60 percent
- Reaction—very strongly acid to moderately acid

BA or E horizon (if it occurs):
- Color—hue of 10YR to 5YR, value of 4 to 6, and chroma 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—10 to 70 percent
- Reaction—very strongly acid to moderately acid

Bt horizon (upper part):
- Color—hue of 7.5YR to 2.5YR, value of 3 to 5, and chroma of 6 to 8
- Texture of the fine-earth fraction—clay loam, silty clay loam, silty clay, or clay
- Content of rock fragments—0 to 35 percent
- Reaction—very strongly acid to moderately acid

2Bt or Bt horizon (lower part):
- Color—hue of 7.5YR to 10R, value of 3 to 5, and chroma of 6 to 8
- Redoximorphic features—iron concentrations in shades of red and brown
- Texture of the fine-earth fraction—clay
- Content of rock fragments—0 to 15 percent
- Reaction—strongly acid or moderately acid

Gladden Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate (upper part); moderately rapid (lower part)

Landform: River valleys
Position on the landform: Stream terraces
Parent material: Loamy and gravelly alluvium
Slope range: 0 to 3 percent
Elevation: 840 feet
Taxonomic classification: Coarse-loamy, siliceous, superactive, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Gladden loam, 0 to 3 percent slopes, occasionally flooded, in a pasture; 2,100 feet east and 1,200 feet north of the southwest corner of sec. 12, T. 31 N., R. 6 W.; USGS Cedar Grove, Missouri, topographic quadrangle; UTM coordinates 4,139,509 meters Northing and 628,462 meters Easting, Zone 15, NAD27.

Ap1—0 to 5 inches; brown (10YR 4/3) loam; weak fine subangular blocky structure; very friable; common fine and medium roots; many fine vesicular pores; moderately acid; clear smooth boundary.
Ap2—5 to 10 inches; brown (10YR 4/3) loam; weak fine subangular blocky structure; friable; common fine roots; many fine vesicular pores; few distinct very dark grayish brown (10YR 3/2) organic stains on faces of peds; 1 percent angular chert gravel; moderately acid; clear smooth boundary.
Bw1—10 to 15 inches; dark yellowish brown (10YR 4/4) loam; moderate fine subangular blocky structure; friable; common fine roots; many fine vesicular pores; few distinct dark yellowish brown (10YR 3/4) and few distinct very dark grayish brown (10YR 3/2) organic stains on faces of peds; moderately acid; clear smooth boundary.
Bw2—15 to 26 inches; dark yellowish brown (10YR 4/4) loam; moderate fine subangular blocky structure; friable; few fine roots; many fine vesicular and common fine tubular pores; few distinct very dark grayish brown (10YR 3/2) and few distinct very dark grayish brown (10YR 3/2) organic stains on faces of peds; moderately acid; clear wavy boundary.
Bw3—26 to 36 inches; dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; friable; few fine roots; many fine vesicular pores; few distinct dark yellowish brown (10YR 3/4) organic stains on faces of peds; moderately acid; clear wavy boundary.
Bw4—36 to 50 inches; yellowish brown (10YR 5/6) fine sandy loam; weak fine subangular blocky structure; friable; few fine roots; many fine vesicular pores; few distinct dark yellowish brown (10YR 3/4) organic stains on faces of peds; moderately acid; clear wavy boundary.
Bw5—50 to 58 inches; yellowish brown (10YR 5/6) sandy loam; weak fine subangular blocky structure; friable; few fine roots; many coarse interstitial pores; few distinct dark yellowish brown (10YR 3/4) organic stains on faces of peds; moderately acid; clear wavy boundary.
2C—58 to 73 inches; very pale brown (10YR 8/3) sand; single grain; loose; strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 58 inches

Ap or A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 or 3
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—0 to 10 percent
Reaction—moderately acid to neutral

Bw horizon:
Color—hue of 10YR or 7.5YR, value of 3 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—sandy loam, fine sandy loam, loam, or silt loam
Content of rock fragments—0 to 35 percent
Reaction—moderately acid to neutral

2C horizon:
Color—hue of 10YR, value of 3 to 8, and chroma of 2 to 4
Texture of the fine-earth fraction—coarse sand, sand, loamy sand, coarse sandy loam, sandy loam, or loam
Content of rock fragments—0 to 70 percent
Reaction—strongly acid to slightly acid

Grandgulf Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Sinkholes
Position on the landform: Toeslopes
Parent material: Hillslope sediments
Slope range: 1 to 3 percent
Elevation: 1,050 feet
Taxonomic classification: Fine-silty, mixed, active, mesic Typic Paleudults

Typical Pedon

Grandgulf silt loam, 1 to 3 percent slopes, rarely ponded, in a hayfield; 2,200 feet north and 1,260 feet west of the southeast corner of sec. 8, T. 22 N., R. 9 W.; USGS Moody, Missouri, topographic quadrangle; UTM coordinates 4,049,180 meters north and 593,380 meters east, Zone 15, NAD27.

Ap—0 to 8 inches; dark brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure parting to moderate fine granular; very friable; many fine and very fine roots; many very fine and fine irregular pores; few fine rounded black (N 2/0) hard iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

A—8 to 13 inches; dark brown (10YR 3/3) silt loam; weak fine and medium subangular blocky structure; friable; common very fine and fine roots; many very fine tubular and few fine vesicular pores; common fine faint grayish brown (10YR 5/3) clay depletions on faces of peds; few fine rounded black (N 2/0) hard iron-manganese concretions throughout; strongly acid; clear wavy boundary.

Bt1—13 to 22 inches; dark brown (10YR 3/4) silt loam, moderate fine subangular blocky structure; friable; few very fine and fine roots; common very fine tubular and few medium vesicular pores; common fine distinct reddish brown (5YR 4/4) clay films throughout; few fine rounded black (N 2/0) hard iron-manganese concretions throughout; slightly acid; clear wavy boundary.

Bt2—22 to 33 inches; dark brown (7.5YR 4/4) silt loam, weak fine and medium subangular blocky structure; friable; very few fine roots; common very fine tubular and few very fine and fine vesicular pores; many medium distinct reddish brown (5YR 4/4) clay films on faces of peds; common fine distinct brown (10YR 5/3) clay depletions throughout; common fine distinct dark brown (10YR 3/3) masses of iron and manganese accumulation throughout; common fine rounded black (N 2/0) hard iron-manganese concretions throughout; moderately acid; gradual wavy boundary.

Bt3—33 to 42 inches; dark brown (7.5YR 4/3) silty clay loam; weak medium subangular blocky structure parting to moderate fine subangular blocky; friable; few very fine and fine tubular and few fine vesicular pores; many medium distinct reddish brown (5YR 4/4) clay films on faces of peds; common fine distinct brown (10YR 5/3) clay depletions throughout; common fine distinct black (N 2/0) masses of iron and manganese accumulation throughout; common fine rounded black (N 2/0) slightly hard iron-manganese concretions throughout; strongly acid; clear wavy boundary.

2Bt4—42 to 52 inches; reddish brown (5YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few very fine and fine tubular pores; many medium prominent dark red (2.5YR 3/6) clay films on faces of peds; common fine distinct pale brown (10YR 6/3) clay depletions throughout; common fine distinct black (N 2/0) masses of iron and manganese accumulation throughout; few fine rounded black (N 2/0) slightly hard iron-manganese concretions throughout; strongly acid; clear wavy boundary.

2Bt5—52 to 80 inches; red (2.5YR 4/6) silt loam; moderate medium subangular blocky structure; firm; few very fine tubular pores; many medium faint red (2.5YR 4/6) clay films on faces of peds; common fine rounded black (N 2/0) slightly hard iron-manganese concretions throughout; strongly acid.

Range in Characteristics

Depth to the 2Bt horizon: 30 to 50 inches

Ap or A horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 5 percent gravel
- Reaction—very strongly acid to slightly acid

Bt horizon:
- Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 to 6
- Texture of the fine-earth fraction—silt loam or silty clay loam
- Content of rock fragments—0 to 5 percent gravel
- Reaction—very strongly acid to slightly acid

2Bt horizon:
- Color—hue of 2.5YR, 5YR, or 7.5YR; value of 3 to 5; and chroma of 3 to 8
- Texture of the fine-earth fraction—silt loam or silty clay loam
- Content of rock fragments—0 to 20 percent gravel
- Reaction—extremely acid to strongly acid

Hartville Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Slow
Landform: Stream valleys
Position on the landform: High stream terraces
Parent material: Colluvium and alluvium
Slope range: 0 to 3 percent
Elevation: 1,230 feet
Taxonomic classification: Fine, mixed, active, mesic Aquic Hapludalfs

Typical Pedon

Hartville silt loam, 0 to 3 percent slopes, rarely flooded, in a grazed woodlot; 1,900 feet north and 50 feet east of the southwest corner of sec. 26, T. 30 N., R. 9 W. in Texas County; USGS Houston, Missouri, topographic quadrangle; UTM coordinates 4,125,431 meters north and 597,281 meters east, Zone 15, NAD27.

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 iron-manganese concretions; neutral; gradual smooth boundary.

Bt1—7 to 12 inches; yellowish brown (10YR 5/4) silty clay; 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 iron-manganese concretions; many medium pressure faces; few prominent grayish brown (2.5Y 5/2) iron depletions on faces of peds; very strongly acid; gradual smooth boundary.

Bt2—12 to 22 inches; yellowish brown (10YR 5/4) silty clay; 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 iron-manganese concretions; many medium pressure faces; common prominent grayish brown (2.5Y 5/2) iron depletions on faces of peds; very strongly acid; gradual smooth boundary.

Bt3—22 to 34 inches; dark yellowish brown (10YR 4/4) clay; 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 iron-manganese concretions; many medium pressure faces; many distinct grayish brown (2.5Y 5/2) iron depletions on faces of peds; moderately alkaline; 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 iron-manganese concretions; few prominent black iron-manganese stains on faces of peds; 5 percent gravel; moderately alkaline; gradual smooth boundary.

2Bt5—40 to 80 inches; gray (10YR 5/1) silty clay; 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; yellowish brown (10YR 5/6) and brown iron masses; many fine black iron-manganese concretions; many prominent black iron-manganese stains on faces of peds; 10 percent gravel; moderately alkaline.

Range in Characteristics

Other features: Some pedons have a Btg horizon with a chroma of 2 or less.

Ap horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 10 percent
- Reaction—moderately acid to neutral

E horizon (if it occurs):
- Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 10 percent
- Reaction—moderately acid to neutral

Bt horizon (upper part):
- Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6
- Redoximorphic features—iron depletions with chroma of 2 or less in the upper 10 inches of the argillic horizon
- Texture of the fine-earth fraction—silt loam, silty clay loam, or silty clay
- Content of rock fragments—0 to 10 percent
- Reaction—moderately acid to slightly acid

Bt horizon (lower part):
- Color—hue from 10R to 10YR, value of 4 to 7, and chroma of 1 to 8
- Texture of the fine-earth fraction—silty clay loam, silty clay, or clay
- Content of rock fragments—0 to 10 percent
- Reaction—extremely acid to mildly alkaline

2Bt, 2Btg, 2BC, or 2C horizons (if they occur):
- Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 6
- Texture of the fine-earth fraction— silt loam, silty clay loam, silty clay, or clay
- Content of rock fragments—0 to 60 percent
- Reaction—moderately acid or slightly acid

Hobson Series

Depth class: Very deep

Drainage class: Moderately well drained
Permeability class: Moderate above the fragipan and slow in the fragipan
Landform: Hillslopes
Position on the landform: Summits and shoulders
Parent material: Residuum from mixed sandstone and cherty dolostone
Slope range: 3 to 15 percent
Elevation: 1,150 feet
Taxonomic classification: Fine-loamy, siliceous, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Hobson silt loam, in an area of Portia-Hobson complex, 8 to 15 percent slopes, in a hardwood forest; 800 feet east and 350 feet north of the southwest corner of sec. 2, T. 31 N., R. 6 W.; USGS Cedargrove, Missouri, topographic quadrangle; UTM coordinates 4,141,102 meters Northing and 626,755 meters Easting, Zone 15, NAD27.

A—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; very friable; many fine roots; many fine interstitial and tubular pores; 2 percent chert gravel; very strongly acid; clear smooth boundary.

Bt1—8 to 13 inches; yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; many fine to coarse roots; many fine and medium tubular pores; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct light yellowish brown (10YR 6/4) silt coats on faces of peds; common distinct very dark grayish brown (10YR 3/2) organic stains on faces of peds; 2 percent chert gravel; very strongly acid; clear smooth boundary.

Bt2—13 to 20 inches; yellowish brown (10YR 5/4) silty clay loam; weak fine subangular blocky structure; friable; many fine and medium and common coarse roots; many fine and medium tubular pores; many distinct brown (7.5YR 4/4) and common distinct brown (10YR 5/3) clay films on faces of peds; 2 percent chert gravel; very strongly acid; clear smooth boundary.

Bt3—20 to 27 inches; yellowish brown (10YR 5/6) loam; weak very fine subangular blocky structure; friable; many fine, common medium, and few coarse roots; many fine tubular pores; common distinct brown (7.5YR 4/4) and common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct very pale brown (10YR 7/3) silt coats on faces of peds; 3 percent chert gravel; strongly acid; gradual wavy boundary.

2Btx—27 to 36 inches; 50 percent strong brown (7.5YR 5/6) and 50 percent light brownish gray (10YR 6/2) extremely gravelly clay loam; weak coarse prismatic structure; firm; 65 percent brittle; common fine and medium roots; common fine and medium vesicular and few coarse vesicular pores; common distinct grayish brown (10YR 5/2), common distinct red (2.5YR 4/6), few distinct red (2.5YR 4/8), and few distinct weak red (2.5YR 5/2) clay films on faces of peds; 15 percent sandstone gravel and 45 percent chert gravel; strongly acid; gradual wavy boundary.

3Bt1—36 to 52 inches; yellowish red (5YR 5/6) clay; weak fine subangular blocky structure; firm; common fine and medium roots; common fine tubular pores; common distinct dark red (2.5YR 3/6), common distinct strong brown (7.5YR 4/6), and common distinct red (2.5YR 4/6) clay films on faces of peds; 10 percent chert gravel; very strongly acid; clear smooth boundary.

3Bt2—52 to 70 inches; 90 percent red (2.5YR 4/6) and 10 percent reddish yellow (7.5YR 6/6) clay; moderate medium subangular blocky structure; very firm; few fine roots; common fine tubular pores; common distinct dark red (2.5YR 3/6) clay films on faces of peds; moderately acid.

Range in Characteristics

Depth to the 2Btx horizon: 18 to 32 inches

A horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2 or 3
- Texture of the fine-earth fraction—loam or silt loam
- Content of rock fragments—0 to 10 percent
- Reaction—very strongly acid to moderately acid

BE or E horizon (if it occurs):
- Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 or 4
- Texture of the fine-earth fraction—fine sandy loam, loam, or silt loam
- Content of rock fragments—0 to 10 percent
- Reaction—very strongly acid to moderately acid

Bt horizon:
- Color—hue of 5YR, 7.5YR, or 10YR; value of 3 to 5; and chroma of 4 to 6
- Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam
- Content of rock fragments—0 to 20 percent
- Reaction—very strongly acid to moderately acid

2Btx horizon:
- Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 1 to 6
- Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam

Content of rock fragments—20 to 60 percent
Reaction—very strongly acid or strongly acid

3Bt horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 1 to 6
Texture of the fine-earth fraction—sandy clay loam, clay loam, or clay
Content of rock fragments—5 to 60 percent
Reaction—very strongly acid to moderately acid

Hogcreek Series

Depth class: Moderately deep
Drainage class: Moderately well drained
Permeability class: Moderate above the fragipan and very slow in the fragipan
Landform: Ridges
Position on the landform: Summits
Parent material: Loess over gravelly colluvium
Slope range: 3 to 8 percent
Elevation: 1,120 feet
Taxonomic classification: Fine-loamy, siliceous, active, mesic Typic Fragiudults

Typical Pedon

Hogcreek silt loam, in an area of Tonti-Hogcreek complex, 3 to 8 percent slopes, in a hardwood forest; 1,100 feet west and 2,100 feet north of the southeast corner of sec. 3, T. 29 N., R. 5 E.; USGS Alley Spring, Missouri, topographic quadrangle; UTM coordinates 4,119,440 meters Northing and 635,380 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 3 inches; dark brown (10YR 3/3) silt loam; weak very fine granular structure; very friable; many very fine roots; many very fine interstitial pores; very strongly acid; clear smooth boundary.
AE—3 to 7 inches; yellowish brown (10YR 5/4) silt loam; weak very fine subangular blocky structure; very friable; common medium roots; many very fine tubular pores; common distinct dark brown (10YR 3/3) organic stains on faces of peds and in pores; 2 percent chert gravel; very strongly acid; clear smooth boundary.
BE—7 to 15 inches; 50 percent brown (7.5YR 4/3) and 50 percent pale brown (10YR 6/3) silt loam; weak very fine subangular blocky structure; friable; few fine and few coarse roots; many very fine tubular pores; 5 percent chert gravel; very strongly acid; clear smooth boundary.
Bt—15 to 23 inches; strong brown (7.5YR 5/6) silt loam; moderate medium subangular blocky structure; firm; few fine roots; few fine tubular pores; few faint strong brown (7.5YR 5/6) clay films on faces of peds; 10 percent chert gravel; very strongly acid; clear smooth boundary.
2Btx—23 to 40 inches; grayish brown (10YR 5/2) extremely gravelly loam; massive; firm, strongly cemented; few fine roots; few medium vesicular pores; common distinct brown (7.5YR 4/4) clay films in root channels and/or pores; 75 percent sandstone gravel; very strongly acid; abrupt smooth boundary.
R—40 inches; sandstone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches
Depth to the 2Btx horizon: 18 to 28 inches

A or AE horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 15 percent gravel
Reaction—very strongly acid to slightly acid

BE or Bt horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 8
Texture of the fine-earth fraction—silt loam or silty clay loam
Content of rock fragments—0 to 25 percent (upper part); 20 to 60 percent (lower part)
Reaction—very strongly acid to slightly acid (upper part); very strongly acid or strongly acid (lower part)

2Btx horizon:
Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
Texture of the fine-earth fraction—loam, silt loam, or clay loam
Content of rock fragments—35 to 80 percent gravel
Reaction—extremely acid to strongly acid

Horneybuck Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderately slow
Landform: Hillslopes
Position on the landform: Footslopes
Parent material: Fine-loamy colluvium over gravelly valley side alluvium
Slope range: 3 to 8 percent
Elevation: 1,130 feet

Taxonomic classification: Fine-loamy, mixed, active, mesic Aquic Paleudults

Typical Pedon

Horneybuck silt loam, 3 to 8 percent slopes, in a hay field; 460 feet east and 240 feet north of the southwest corner of sec. 8, T. 28 N., R. 6 W.; USGS Pine Crest, Missouri, topographic quadrangle; UTM coordinates 4,107,671 meters Northing and 621,777 meters Easting, Zone 15, NAD27.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; friable; many very fine and fine roots; common very fine tubular pores; common fine dark yellowish brown (10YR 4/6) masses of oxidized iron; few fine black (10YR 2/1) iron-manganese concretions; 2 percent chert gravel; slightly acid; clear smooth boundary.

Bt1—6 to 11 inches; yellowish brown (10YR 5/6) silt loam; weak fine subangular blocky structure; firm; common fine roots; many fine interstitial and tubular pores; common distinct brown (10YR 5/3) clay films on faces of peds; common fine dark yellowish brown (10YR 4/6) masses of oxidized iron; few fine black (10YR 2/1) iron-manganese concretions; 10 percent chert gravel; strongly acid; clear smooth boundary.

Bt2—11 to 18 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent yellowish brown (10YR 5/4) gravelly silt loam; moderate fine subangular blocky structure; firm; few fine roots; common fine tubular pores; common distinct yellowish brown (10YR 5/6) clay films on faces of peds; few fine faint brown (10YR 5/3) iron depletions; few fine strong brown (7.5YR 5/6) masses of oxidized iron; 15 percent chert gravel; very strongly acid; clear wavy boundary.

Bt3—18 to 26 inches; pale brown (10YR 6/3) gravelly silt loam; weak medium platy structure parting to moderate fine subangular blocky; firm; few fine roots; many very fine and fine tubular pores; common distinct strong brown (7.5YR 4/6) clay films on faces of peds; few fine faint gray (10YR 6/1) iron depletions; common fine yellowish red (5YR 4/6) masses of oxidized iron; 15 percent chert gravel; very strongly acid; gradual wavy boundary.

2Bt4—26 to 37 inches; yellowish red (5YR 4/6) gravelly silty clay loam; moderate fine subangular blocky structure; firm; few very fine roots; many very fine and fine tubular pores; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common medium prominent light brownish gray (10YR 6/2) iron depletions; few fine black (10YR 2/1) iron-manganese concretions; 15 percent chert gravel; very strongly acid; gradual wavy boundary.

2Bt5—37 to 45 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent red (2.5YR 4/6) gravelly silty clay; moderate fine subangular blocky structure parting to moderate very fine angular blocky; firm; few fine vesicular and many very fine to fine tubular pores; few distinct dark yellowish brown (10YR 4/6) clay films on faces of peds and very few distinct dark grayish brown (10YR 4/2) clay films in root channels and/or pores; 35 percent medium cylindrical grayish brown (10YR 5/2) clay bodies; 15 percent chert gravel; very strongly acid; gradual wavy boundary.

2Bt6—45 to 60 inches; 65 percent red (2.5YR 4/6) and 35 percent yellowish brown (10YR 5/6) gravelly clay loam; moderate fine subangular blocky structure parting to moderate very fine angular blocky; firm; few fine vesicular and many very fine to fine tubular pores; few distinct dark yellowish brown (10YR 4/6) clay films on faces of peds and very few distinct dark grayish brown (10YR 4/2) clay films in root channels and/or pores; 35 percent medium cylindrical grayish brown (10YR 5/2) clay bodies; 15 percent chert gravel; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

A or Ap horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 6
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—2 to 10 percent
- Reaction—strongly acid to neutral

E horizon (if it occurs):
- Color—hue of 10YR, value of 4 or 5, and chroma of 3 or 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—2 to 10 percent
- Reaction—strongly acid to neutral

Bt horizon:
- Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 3 to 6
- Redoximorphic features—clay depletions in shades of brown or gray
- Texture of the fine-earth fraction—silt loam or silty clay loam
- Content of rock fragments—1 to 30 percent
- Reaction—very strongly acid to neutral

2Bt/E horizon (if it occurs):
Color—hue of 10YR to 2.5YR, value of 4 to 7, and chroma of 1 to 6
Redoximorphic features—clay depletions in shades of brown or gray
Texture of the fine-earth fraction—silt loam or silty clay loam
Content of rock fragments—1 to 30 percent
Reaction—very strongly acid or strongly acid

2Bt horizon:
Color—hue of 10YR to 2.5YR, value of 3 to 5, and chroma of 4 to 6
Redoximorphic features—clay depletions in shades of brown or gray
Texture of the fine-earth fraction—silt loam, silty clay loam, silty clay, loam, or clay loam
Content of rock fragments—15 to 80 percent
Reaction—very strongly acid or strongly acid

Huzzah Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately rapid
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Loamy alluvium, coarse-loamy alluvium
Slope range: 0 to 3 percent
Elevation: 710 feet
Taxonomic classification: Coarse-loamy, siliceous, superactive, mesic Cumulic Hapludolls

Typical Pedon

Huzzah sandy loam, 0 to 3 percent slopes, rarely flooded, in a hay field; 420 feet west and 860 feet south of the northeast corner of sec. 30, T. 30 N., R. 4 W.; USGS Round Spring, Missouri, topographic quadrangle; UTM coordinates 4,125,307 meters Northing and 640,368 meters Easting, Zone 15, NAD27.

Ap1—0 to 6 inches; very dark grayish brown (10YR 3/2) sandy loam; grayish brown (10YR 5/2) dry; weak fine granular structure; very friable; many fine and medium roots; many fine and medium interstitial and tubular pores; neutral; clear wavy boundary.

Ap2—6 to 10 inches; very dark grayish brown (10YR 3/2) fine sandy loam; grayish brown (10YR 5/2) dry; weak fine subangular blocky structure; very friable; common fine and medium roots; many fine and medium tubular pores; common prominent very dark grayish brown (10YR 3/2) organic stains on faces of peds; neutral; clear wavy boundary.

Bw1—10 to 18 inches; very dark grayish brown (10YR 3/2) fine sandy loam; grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; very friable; common fine and medium roots; many fine and medium tubular pores; few prominent very dark grayish brown (10YR 3/2) and few distinct dark grayish brown (10YR 4/2) organic stains on faces of peds; slightly acid; clear wavy boundary.

Bw2—18 to 27 inches; dark brown (10YR 3/3) fine sandy loam; dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure; very friable; common fine and medium roots; many fine and medium tubular pores; few prominent very dark grayish brown (10YR 3/2) and few distinct dark grayish brown (10YR 4/2) organic stains on faces of peds; slightly acid; clear wavy boundary.

CB1—27 to 41 inches; 75 percent yellowish brown (10YR 5/4) and 25 percent light yellowish brown (10YR 6/4) loamy sand; weak fine subangular blocky structure parting to single grain; friable; few very fine and fine roots; many fine and medium tubular pores; few distinct brown (10YR 4/3) clay films between sand grains; slightly acid; clear wavy boundary.

CB2—41 to 60 inches; 75 percent yellowish brown (10YR 5/4) and 25 percent light gray (10YR 7/2) loamy sand; weak fine subangular blocky structure parting to single grain; loose; few very fine and fine roots; many fine and medium interstitial and tubular pores; few distinct dark grayish brown (10YR 4/2) clay films between sand grains; slightly acid.

Range in Characteristics

Depth to bedrock: More than 80 inches
Thickness of the solum: 34 to more than 60 inches

Ap or A horizon:
Color—hue of 10YR, value of 3, and chroma of 2 or 3
Texture of the fine-earth fraction—sandy loam, fine sandy loam, or loam
Content of rock fragments—0 to 10 percent gravel
Reaction—slightly acid or neutral

Bw horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 6
Texture of the fine-earth fraction—sandy loam, fine sandy loam, loam, or silt loam
Content of rock fragments—0 to 20 percent gravel
Reaction—slightly acid or neutral

CB horizon:
Color—hue of 10YR, value of 4 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—sand, fine sand, loamy sand, loamy fine sand, sandy loam, or fine sandy loam
Content of rock fragments—0 to 50 percent gravel
Reaction—moderately acid to neutral

Irondale Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Mountains
Position on the landform: Backslopes and shoulders
Parent material: Residuum derived from rhyolite
Slope range: 3 to 45 percent
Elevation: 1,100 feet
Taxonomic classification: Loamy-skeletal, mixed, active, mesic Typic Hapludults

Typical Pedon

Irondale very gravelly silt loam, 15 to 35 percent slopes, rocky, extremely bouldery, in a hardwood forest; 40 feet west and 650 feet north of the southeast corner of sec. 24, T. 28 N., R. 3 W.; USGS Stegall Mountain, Missouri, topographic quadrangle; UTM coordinates 4,104,310 meters Northing and 658,439 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 5 inches; dark grayish brown (10YR 4/2) very gravelly silt loam; weak fine granular structure; very friable; many fine to coarse roots; many fine to coarse interstitial and tubular pores; 40 percent rhyolite gravel; very strongly acid; clear wavy boundary.
E—5 to 9 inches; pale brown (10YR 6/3) very gravelly silt loam; weak very fine subangular blocky structure; very friable; many fine to coarse roots; many fine and medium interstitial and tubular pores; few distinct dark grayish brown (10YR 4/2) organic stains in root channels and/or pores; 15 percent rhyolite cobbles and 32 percent rhyolite gravel; very strongly acid; clear smooth boundary.
Bt1—9 to 17 inches; 60 percent light yellowish brown (10YR 6/4) and 40 percent pale brown (10YR 6/3) very cobbly silt loam; weak very fine and fine subangular blocky structure; very friable; common fine to coarse roots; few very fine to fine interstitial and tubular pores; few distinct brown (10YR 5/3) clay films on rock fragments; few distinct grayish brown (10YR 5/2) organic stains on faces of peds; 20 percent rhyolite cobbles and 35 percent rhyolite gravel; very strongly acid; clear wavy boundary.
Bt2—17 to 23 inches; very pale brown (10YR 7/3) very gravelly silt loam; weak very fine and fine subangular blocky structure; very friable; common fine to coarse roots; common fine and medium interstitial and tubular pores; few distinct strong brown (7.5YR 5/6) clay films on faces of peds and few distinct brown (7.5YR 5/4) clay films in root channels and/or pores; dendritic reddish yellow (7.5YR 6/6) masses of oxidized iron between peds; 10 percent rhyolite cobbles and 50 percent rhyolite gravel; very strongly acid; abrupt smooth boundary.
R—23 inches; rhyolite bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Color—hue of 10YR or 7.5YR, value of 3 or 4, and chroma of 2 or 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—15 to 50 percent
Reaction—very strongly acid to moderately acid

E horizon:
Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—silt loam
Content of rock fragments—10 to 50 percent
Reaction—extremely acid to moderately acid

Bt horizon:
Color—hue of 10YR or 7.5YR, value of 4 to 7, and chroma of 3 to 6
Texture of the fine-earth fraction—silt loam
Content of rock fragments—35 to 60 percent
Reaction—very strongly acid or strongly acid

2Bt horizon (if it occurs):
Color—hue of 10YR, 7.5YR, or 2.5YR; value of 4 or 5; and chroma of 4 to 6
Texture of the fine-earth fraction—loam, silt loam, silty clay loam, or clay loam
Content of rock fragments—35 to 60 percent
Reaction—very strongly acid or strongly acid

Jamesfin Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: River valleys

Position on the landform: Flood plains
Parent material: Fine-silty alluvium
Slope range: 0 to 3 percent
Elevation: 450 feet
Taxonomic classification: Fine-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Jamesfin silt loam, 0 to 3 percent slopes, occasionally flooded, in an area of pastureland; 3,800 feet east of the northwest corner of sec. 12, T. 30 N., R. 7 E. in Wayne County; USGS Allbright, Missouri, topographic quadrangle; UTM coordinates 4,130,821 meters Northing and 746,255 meters Easting, Zone 15, NAD27.

Ap—0 to 6 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; very friable; common very fine and fine roots; slightly acid; gradual smooth boundary.
Bw1—6 to 23 inches; dark yellowish brown (10YR 4/4) silt loam; moderate very fine and fine subangular blocky structure; friable; common very fine and fine roots; neutral; gradual wavy boundary.
Bw2—23 to 41 inches; dark yellowish brown (10YR 4/4) silt loam; moderate very fine and fine subangular blocky structure; friable; common very fine and fine roots; many organic stains; slightly acid; gradual wavy boundary.
BC1—41 to 53 inches; yellowish brown (10YR 5/4) silt loam; common fine distinct pale brown (10YR 6/3) mottles; moderate very fine and fine subangular blocky structure; friable; common very fine and fine roots; few fine iron-manganese masses; 1 percent gravel; moderately acid; gradual wavy boundary.
BC2—53 to 90 inches; brown (10YR 5/3) silt loam; common coarse prominent light gray (10YR 7/2) iron depletions and common medium prominent brown (7.5YR 4/4) iron concentrations; weak fine prismatic structure parting to moderate fine subangular blocky; friable; many medium and coarse iron-manganese masses; moderately acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches

Ap or A horizon:
Color—hue of 10YR or 7.5 YR, value of 3 or 4, and chroma of 2 or 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 3 percent
Reaction—moderately acid to slightly alkaline

Bw horizon:
Color—hue of 10YR or 7.5YR, value of 3 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 5 percent
Reaction—moderately acid to slightly alkaline

BC or 2BC horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 or 4
Texture of the fine-earth fraction—silt loam, loam, or fine sandy loam
Content of rock fragments—0 to 5 percent
Reaction— moderately acid to slightly alkaline

Killarney Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderate above the fragipan and very slow in the fragipan
Landform: Mountains
Position on the landform: Backslopes and footslopes
Parent material: Gravelly colluvium derived from loess and rhyolite or granite
Slope range: 15 to 45 percent
Elevation: 1,060 feet
Taxonomic classification: Loamy-skeletal, mixed, active, mesic Typic Fragiudults

Typical Pedon

Killarney very gravelly silt loam, in an area of Killarney-Frenchmill complex, 15 to 45 percent slopes, rubbly, in a hardwood forest; 1,300 feet west and 500 feet south of the northeast corner of sec. 22, T. 29 N., R. 3 W.; USGS Eminence, Missouri, topographic quadrangle; UTM coordinates 4,115,040 meters Northing and 654,798 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 4 inches; dark grayish brown (10YR 4/2) very gravelly silt loam; weak fine granular structure; friable; common fine roots; common fine interstitial and tubular pores; 3 percent rhyolite cobbles and 50 percent rhyolite gravel; very strongly acid; clear smooth boundary.
E—4 to 13 inches; brown (10YR 5/3) gravelly silt loam; weak fine subangular blocky structure; friable; common fine roots; common fine interstitial and tubular pores; 20 percent rhyolite gravel; very strongly acid; clear smooth boundary.
Bt1—13 to 21 inches; yellowish brown (10YR 5/4) very gravelly silt loam; moderate medium subangular blocky structure; friable; few fine roots; common fine tubular and few fine vesicular pores; common distinct brown (7.5YR 5/4) clay films on rock fragments; common distinct pale brown (10YR 6/3)

silt coats on faces of peds; 35 percent rhyolite gravel; very strongly acid; clear wavy boundary.

Bt2—21 to 28 inches; yellowish brown (10YR 5/4) very gravelly silt loam; moderate fine subangular blocky structure; firm; few fine roots; few fine vesicular and common fine tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds; few distinct pale brown (10YR 6/3) silt coats on faces of peds; 5 percent rhyolite cobbles and 45 percent rhyolite gravel; very strongly acid; clear smooth boundary.

2Btx1—28 to 37 inches; 70 percent yellowish brown (10YR 5/4) and 30 percent strong brown (7.5YR 5/6) very cobbly loam; weak coarse prismatic structure parting to moderate fine subangular blocky; very firm; 70 percent brittle; few fine roots; common fine vesicular and many fine tubular pores; common distinct gray (10YR 6/1) clay films on vertical faces of peds and common distinct strong brown (7.5YR 5/6) clay films on faces of peds; 20 percent rhyolite cobbles and 20 percent rhyolite gravel; very strongly acid; clear wavy boundary.

2Btx2—37 to 46 inches; 80 percent brown (7.5YR 4/4) and 20 percent brown (10YR 5/3) gravelly loam; weak coarse prismatic structure parting to moderate fine subangular blocky; very firm; 70 percent brittle; many fine tubular and few fine vesicular pores; common distinct reddish brown (5YR 4/4) clay films on faces of peds; few distinct brown (10YR 5/3) silt coats on faces of peds; 5 percent rhyolite cobbles and 20 percent rhyolite gravel; extremely acid; gradual wavy boundary.

3Bt1—46 to 53 inches; reddish brown (5YR 4/4) gravelly loam; weak coarse prismatic structure parting to moderate fine prismatic; firm; many fine tubular pores; common distinct gray (10YR 6/1) and few distinct yellowish red (5YR 5/6) clay films on faces of peds; 2 percent rhyolite cobbles and 15 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

3Bt2—53 to 62 inches; yellowish red (5YR 4/6) gravelly loam; moderate fine prismatic structure; firm; few fine tubular pores; common distinct gray (10YR 6/1) clay films on faces of peds and common distinct reddish brown (5YR 4/4) clay films on rock fragments; 15 percent rhyolite gravel; very strongly acid; gradual wavy boundary.

3Bt3—62 to 80 inches; 60 percent yellowish red (5YR 4/6) and 40 percent strong brown (7.5YR 4/6) gravelly loam; weak coarse prismatic structure parting to moderate medium angular blocky; firm; few fine tubular pores; common faint reddish brown (5YR 4/4) clay films on faces of peds; 15 percent rhyolite gravel; very strongly acid.

Range in Characteristics

Depth to the 2Btx horizon: 26 to 34 inches
Depth to bedrock: More than 60 inches

A horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—35 to 60 percent
- Reaction—very strongly acid to moderately acid

E and BE horizons:
- Color—hue of 10YR or 7.5YR, value of 5 or 6, and chroma of 3 or 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragment—15 to 50 percent
- Reaction—very strongly acid to moderately acid

Bt horizon:
- Color—hue of 10YR, 7.5YR, or 5YR; value of 4 to 6; and chroma of 4 to 6
- Redoximorphic features—iron segregations in shades of brown or gray
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—35 to 60 percent
- Reaction—very strongly acid or strongly acid

2Btx horizon:
- Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 2 to 6
- Texture of the fine-earth fraction—silt loam or loam
- Content of rock fragments—25 to 75 percent
- Reaction—extremely acid or very strongly acid

3Bt horizon:
- Color—hue of 7.5YR, 5YR, or 2.5YR; value of 3 to 5; and chroma of 4 to 6
- Texture of the fine-earth fraction—loam or clay loam
- Content of rock fragments—15 to 60 percent
- Reaction—very strongly acid or strongly acid

Lecoma Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Hillslopes
Position on the landform: Structural benches
Parent material: Loamy pedisediment derived from sandstone or loamy alluvium
Slope range: 1 to 15 percent
Elevation: 810 feet
Taxonomic classification: Fine-loamy, siliceous, active, mesic Typic Paleudalfs

Typical Pedon

Lecoma loam, 8 to 15 percent slopes, in a hardwood forest; 600 feet west and 1,300 feet south of the northeast corner of sec. 27, T. 29 N., R. 5 E.; USGS Alley Spring, Missouri, topographic quadrangle; UTM coordinates 4,113,385 meters Northing and 635,512 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 6 inches; brown (10YR 4/3) loam; moderate fine granular structure; friable; many fine roots; many very fine tubular pores; strongly acid; abrupt smooth boundary.

E—6 to 9 inches; 50 percent brown (10YR 4/3) and 50 percent yellowish brown (10YR 5/4) loam; weak fine subangular blocky structure; friable; few fine roots; few fine tubular pores; strongly acid; abrupt smooth boundary.

Bt1—9 to 22 inches; dark yellowish brown (10YR 4/4) loam; moderate fine subangular blocky structure; firm; few fine roots; few fine tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds; strongly acid; clear smooth boundary.

Bt21—22 to 29 inches; dark yellowish brown (10YR 4/4) loam; moderate fine subangular blocky structure; firm; few fine roots; common fine tubular pores; few distinct brown (7.5YR 4/4) clay films on faces of peds; common distinct light gray (10YR 7/2) skeletans on faces of peds; many prominent black (N 2/0) manganese or iron-manganese stains throughout; strongly acid (horizon subdivided for sampling).

Bt22—29 to 39 inches; dark yellowish brown (10YR 4/4) loam; moderate fine subangular blocky structure; firm; few fine roots; common fine tubular pores; few distinct brown (7.5YR 4/4) clay films on faces of peds; common distinct light gray (10YR 7/2) skeletans on faces of peds; many prominent black (N 2/0) manganese or iron-manganese stains throughout; strongly acid; gradual smooth boundary.

2Bt3—39 to 53 inches; yellowish red (5YR 4/6) loam; moderate medium subangular blocky structure; firm; few fine roots; few fine tubular pores; common distinct red (2.5YR 4/6) clay films on faces of peds; many distinct pale brown (10YR 6/3) silt coats on faces of peds; common prominent black (N 2/0) manganese or iron-manganese stains throughout; strongly acid; gradual smooth boundary.

2Bt4—53 to 70 inches; yellowish red (5YR 4/6) loam; moderate medium subangular blocky structure; firm; few fine roots; common medium tubular pores; few distinct strong brown (7.5YR 4/6) clay films on faces of peds; common distinct pale brown (10YR 6/3) silt coats on faces of peds; many prominent black (N 2/0) manganese or iron-manganese stains throughout; strongly acid; gradual smooth boundary.

2Bt5—70 to 90 inches; red (2.5YR 4/6) loam; moderate medium subangular blocky structure; firm; few fine roots; few fine tubular pores; common distinct red (2.5YR 4/6) clay films on faces of peds; common distinct light yellowish brown (10YR 6/4) silt coats on faces of peds; many prominent black (N 2/0) manganese or iron-manganese stains throughout; 2 percent chert gravel; strongly acid.

Range in Characteristics

Ap or A horizon:
- Color—hue of 10YR; value of 3 or 4 moist, 6 or 7 dry; and chroma of 3 or 4
- Texture of the fine-earth fraction—loam or silt loam
- Content of rock fragments—0 to 5 percent
- Reaction—strongly acid to neutral

E horizon:
- Color—hue of 10YR, value of 4 or 5, and chroma of 3 or 4
- Texture of the fine-earth fraction—loam or silt loam
- Content of rock fragments—0 to 5 percent
- Reaction—strongly acid to neutral

Bt horizon:
- Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 4 to 6
- Redoximorphic features—iron segregations in shades of red, brown, yellow, or gray
- Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam
- Content of rock fragments—0 to 5 percent
- Reaction—strongly acid to neutral

2Bt horizon:
- Color—hue of 5YR or 2.5YR, value of 4, and chroma of 4 to 6
- Redoximorphic features—iron segregations in shades of red, brown, yellow, or gray
- Texture of the fine-earth fraction—sandy clay loam, loam, silt loam, clay loam, or silty clay loam
- Content of rock fragments—0 to 10 percent
- Reaction—very strongly acid to moderately acid

Lily Series

Depth class: Moderately deep
Drainage class: Well drained

Permeability class: Moderately rapid
Landform: Hillslopes
Position on the landform: Backslopes
Parent material: Fine-loamy residuum derived from sandstone
Slope range: 3 to 15 percent
Elevation: 1,120 feet
Taxonomic classification: Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Lily loam, in an area of Lily-Bender complex, 3 to 15 percent slopes, in a hardwood forest; 600 feet east and 1,300 feet south of the northwest corner of sec. 1, T. 28 N., R. 6 W.; USGS Summersville NE, Missouri, topographic quadrangle; UTM coordinates 4,110,213 meters Northing and 627,788 meters Easting, Zone 15, NAD27.

A—0 to 4 inches; dark grayish brown (10YR 4/2) loam; weak fine granular structure; friable; common medium roots; many fine interstitial and tubular pores; 3 percent chert cobbles and 10 percent chert gravel; extremely acid; clear smooth boundary.

E—4 to 10 inches; brown (10YR 5/3) silt loam; weak fine subangular blocky structure; friable; common medium roots; common fine interstitial and tubular pores; 5 percent chert gravel; extremely acid; clear smooth boundary.

Bt1—10 to 16 inches; yellowish brown (10YR 5/6) loam; weak fine subangular blocky structure; friable; common medium roots; common fine tubular pores; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; 2 percent chert gravel; extremely acid; clear smooth boundary.

Bt2—16 to 23 inches; strong brown (7.5YR 4/6) loam; moderate fine subangular blocky structure; firm; few fine roots; many fine tubular pores; few distinct brown (7.5YR 4/4) clay films on faces of peds; 5 percent chert gravel; extremely acid; gradual wavy boundary.

Bt3—23 to 35 inches; yellowish brown (10YR 5/6) loam; common medium distinct pale brown (10YR 6/3) mottles; moderate medium platy structure; firm; few fine roots; common fine tubular pores; many prominent dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; 2 percent sandstone cobbles and 10 percent chert gravel; extremely acid; abrupt wavy boundary.

R—35 inches; sandstone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A or Ap horizon:
Color—hue of 10YR or 7.5YR, value of 2 to 6, and chroma of 2 to 4
Texture of the fine-earth fraction—loam
Content of rock fragments—0 to 15 percent
Reaction—extremely acid to strongly acid

E horizon or AB, BA, or BE horizon (if it occurs):
Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 1 to 8
Texture of the fine-earth fraction—fine sandy loam or silt loam
Content of rock fragments—0 to 15 percent
Reaction—extremely acid to strongly acid

Bt horizon:
Color—hue of 10YR, 7.5YR, or 5YR; value of 4 to 6; and chroma of 4 to 8
Texture of the fine-earth fraction—loam or clay loam
Content of rock fragments—0 to 35 percent
Reaction—extremely acid to strongly acid

BC or C horizon (if it occurs):
Color—hue of 10YR, 7.5YR, 5YR, or 2.5YR; value of 4 to 6; and chroma of 4 to 8
Texture of the fine-earth fraction—loamy sand, sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam
Content of rock fragments—0 to 35 percent
Reaction—extremely acid to strongly acid

Lowassie Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Slow
Landform: Sinkholes
Position on the landform: Toeslopes
Parent material: Silty loess over silty and clayey slope alluvium
Slope range: 0 to 3 percent
Elevation: 1,200 feet
Taxonomic classification: Fine, smectitic, mesic Vertic Epiaquults

Typical Pedon

Lowassie silt loam, 0 to 3 percent slopes, frequently ponded, in a hay field; 1,400 feet east and 600 feet south of the northwest corner of sec. 31, T. 29 N., R. 6 W.; USGS Summersville, Missouri, topographic quadrangle; UTM coordinates 4,112,163 meters Northing and 619,961 meters Easting, Zone 15, NAD27.

A—0 to 3 inches; very dark grayish brown (2.5Y 3/2)

silt loam; moderate fine granular structure; very friable; many very fine roots; common fine tubular pores; common distinct black (N 2/0) manganese or iron-manganese stains throughout; common fine black (N 2/0) iron-manganese concretions; moderately acid; clear smooth boundary.

E—3 to 13 inches; grayish brown (10YR 5/2) silt loam; weak fine subangular blocky structure; friable; common very fine roots; many very fine tubular pores; many medium irregular dark yellowish brown (10YR 4/4) masses of oxidized iron throughout; common fine black (N 2/0) iron-manganese concretions; very strongly acid; gradual smooth boundary.

Btg1—13 to 17 inches; grayish brown (2.5Y 5/2) silty clay; strong fine angular blocky structure; firm; common very fine roots; common very fine tubular pores; common distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; many medium irregular brown (7.5YR 4/4) masses of oxidized iron throughout; many medium irregular dark grayish brown (10YR 4/2) iron depletions throughout; extremely acid; clear smooth boundary.

Btg2—17 to 34 inches; very dark grayish brown (2.5Y 3/2) silty clay; strong fine subangular blocky structure; firm; common very fine roots; common very fine tubular pores; common distinct very dark grayish brown (2.5Y 3/2) clay films on faces of peds; many medium irregular very dark brown (10YR 2/2) iron-manganese masses; extremely acid; clear smooth boundary.

2Btg3—34 to 60 inches; light brownish gray (10YR 6/2) silty clay loam; strong fine subangular blocky structure; firm; common fine tubular pores; few faint light brownish gray (10YR 6/2) clay films on faces of peds; many medium irregular yellowish brown (10YR 5/6) masses of oxidized iron throughout; many medium irregular gray (10YR 5/1) iron depletions throughout; 5 percent chert gravel; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 inches or more

A horizon:
Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3
Texture of the fine-earth fraction—silt loam
Reaction—strongly acid to neutral

E or BE horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 2 or 3
Texture of the fine-earth fraction—silt loam or silty clay loam
Reaction—very strongly acid to moderately acid

Btg horizon:
Color—hue of 2.5Y or 10YR, value of 3 to 5, and chroma of 1 or 2
Redoximorphic features—iron segregations in shades of brown, yellow, and gray
Texture of the fine-earth fraction—silty clay or clay
Reaction—extremely acid to strongly acid

2Btg horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 6
Redoximorphic features—iron segregations in shades of brown, yellow, and gray
Texture of the fine-earth fraction—silty clay, silty clay loam, or silt loam
Content of rock fragments—0 to 5 percent
Reaction—extremely acid to strongly acid

Midco Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Moderately rapid
Landform: Stream valleys
Position on the landform: High flood plains
Parent material: Alluvium
Slope range: 0 to 3 percent
Elevation: 845 feet
Taxonomic classification: Loamy-skeletal, siliceous, superactive, nonacid, mesic Typic Udifluvents

Typical Pedon

Midco very gravelly loam, 0 to 3 percent slopes, occasionally flooded, in a pine forest; 690 feet east and 1,980 feet north of the southwest corner of sec. 13, T. 26 N., R. 3 W.; USGS Fremont, Missouri, topographic quadrangle; UTM coordinates 4,087,184 meters Northing and 657,021 meters Easting, Zone 15, NAD27.

A—0 to 8 inches; dark brown (10YR 3/3) very gravelly loam; pale brown (10YR 6/3) dry; weak fine granular structure; friable; many fine and medium roots; 35 percent chert fragments; slightly acid; abrupt wavy boundary.

C1—8 to 17 inches; strong brown (7.5YR 5/6) extremely gravelly sandy loam; massive; friable; common fine and medium roots; 70 percent chert fragments; moderately acid; gradual wavy boundary.

C2—17 to 26 inches; strong brown (7.5YR 5/6) very gravelly sandy loam; massive; friable; common fine roots; 50 percent chert fragments; moderately acid; clear wavy boundary.

C3—26 to 60 inches; strong brown (7.5YR 5/6) extremely gravelly sandy loam; massive; friable; few fine roots; 80 percent chert fragments; moderately acid.

Range in Characteristics

A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 to 4
Texture of the fine-earth fraction—loam
Content of rock fragments—35 to 60 percent
Reaction—moderately acid or slightly acid

C horizon (upper part):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—sandy loam or loam
Content of rock fragments—35 to 70 percent
Reaction—strongly acid to neutral

C horizon (lower part):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—loamy sand, sandy loam, or loam
Content of rock fragments—30 to 80 percent
Reaction—strongly acid to neutral

Niangua Series

Depth class: Deep
Drainage class: Well drained
Permeability class: Moderately slow
Landform: Hillslopes
Position on the landform: Backslopes
Parent material: Gravelly colluvium over clayey residuum derived from dolostone
Slope range: 15 to 50 percent
Elevation: 720 feet
Taxonomic classification: Very-fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Niangua very gravelly silt loam, in an area of Niangua-Bardley complex, 15 to 50 percent slopes, extremely stony, in a hardwood forest; 560 feet west and 700 feet north of the southeast corner of sec. 4, T. 28 N., R. 2 W.; USGS Stegall Mountain, Missouri, topographic quadrangle; UTM coordinates 4,109,638 meters Northing and 662,612 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 5 inches; brown (10YR 4/3) very gravelly silt loam; weak fine granular structure; friable; many fine and medium and few coarse roots; many fine interstitial and tubular pores; 45 percent chert gravel; strongly acid; clear wavy boundary.

Bt1—5 to 14 inches; red (2.5YR 4/6) clay; weak fine subangular blocky structure; very firm; few fine to coarse roots; many fine vesicular pores; many distinct dark red (10R 3/6) and common distinct yellowish red (5YR 5/6) clay films on faces of peds; few distinct brownish yellow (10YR 6/8) organic stains on faces of peds; 2 percent chert gravel; very strongly acid; clear smooth boundary.

2Bt2—14 to 34 inches; red (2.5YR 4/6) clay; weak fine subangular blocky structure; very firm; few fine to coarse roots; many fine vesicular pores; many distinct dark red (10R 3/6) clay films on faces of peds; common fine irregular black (N 2/0) iron-manganese concretions between peds; strongly acid; clear smooth boundary.

2BC—34 to 41 inches; 50 percent strong brown (7.5YR 5/8) and 50 percent red (10R 4/6) sandy clay; weak fine subangular blocky structure; firm; few fine roots; many fine vesicular pores; common distinct dark red (10R 3/6) clay films on faces of peds; 5 percent dolostone gravel; slightly acid; abrupt smooth boundary.

2R—41 inches; dolostone bedrock.

Range in Characteristics

Depth to bedrock: 40 to 60 inches

A horizon:
Color—hue of 10YR, value of 2 to 4, and chroma of 1 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 12 percent cobbles; 35 to 60 percent gravel
Reaction—very strongly acid to neutral

E horizon or BE horizon (if it occurs):
Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam or silty clay loam
Content of rock fragments—0 to 12 percent cobbles
Reaction—strongly acid or moderately acid

Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 3 to 5, and chroma of 4 to 8
Texture of the fine-earth fraction—silty clay or clay
Content of rock fragments—0 to 25 percent

Reaction—very strongly acid to moderately acid

2Bt horizon (upper part):
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 4 to 8
Mottles—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 3 to 8 (if it occurs)
Texture of the fine-earth fraction—clay
Content of rock fragments—0 to 25 percent
Reaction—strongly acid to neutral

2Bt (lower part) or 2BC horizon:
Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 3 to 8
Texture of the fine-earth fraction—sandy clay or clay
Reaction—moderately acid to mildly alkaline
Content of rock fragments—0 to 25 percent

Portia Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Ridges
Position on the landform: Summits and shoulders
Parent material: Colluvium over residuum
Slope range: 3 to 15 percent
Elevation: 860 feet
Taxonomic classification: Fine-loamy, siliceous, semiactive, mesic Typic Paleudalfs

Typical Pedon

Portia silt loam, in an area of Portia-Hobson complex, 8 to 15 percent slopes, in a hardwood forest; 1,900 feet east and 2,200 feet north of the southwest corner of sec. 8, T. 28 N., R. 4 W.; USGS Bartlett, Missouri, topographic quadrangle; UTM coordinates 4,108,056 meters Northing and 641,121 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 6 inches; dark grayish brown (10YR 4/2) silt loam; weak fine and medium granular structure; very friable; many fine roots; many fine interstitial pores; common distinct dark brown (10YR 3/3) organic stains on faces of peds; 1 percent subangular chert gravel; strongly acid; abrupt wavy boundary.

Bt1—6 to 10 inches; 40 percent brown (7.5YR 5/4), 30 percent brown (7.5YR 5/3), and 30 percent strong brown (7.5YR 5/6) silt loam; weak fine subangular blocky structure; friable; common medium roots; common fine tubular pores; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores and common distinct brown (10YR 4/3) organic stains on faces of peds; 1 percent subangular chert gravel; strongly acid; clear smooth boundary.

Bt2—10 to 16 inches; strong brown (7.5YR 5/6) silt loam; moderate fine subangular blocky structure; friable; common fine roots; common fine tubular pores; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; 1 percent subangular chert gravel; very strongly acid; clear smooth boundary.

Bt3—16 to 21 inches; strong brown (7.5YR 5/6) loam; moderate fine subangular blocky structure; firm; few fine roots; common fine tubular pores; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common prominent black (N 2/0) manganese or iron-manganese stains throughout; common fine spherical iron-manganese concretions; 10 percent subangular chert gravel; very strongly acid; clear wavy boundary.

2Bt4—21 to 31 inches; 60 percent brown (7.5YR 5/4) and 40 percent yellowish red (5YR 5/6) clay; moderate fine subangular blocky structure; firm; few fine and few medium roots; common fine tubular pores; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common prominent black (N 2/0) manganese or iron-manganese stains throughout; common fine spherical iron-manganese concretions; 5 percent subangular chert gravel; strongly acid; clear wavy boundary.

2Bt5—31 to 44 inches; 60 percent red (2.5YR 5/6) and 40 percent strong brown (7.5YR 5/8) clay; weak fine and medium subangular blocky structure; firm; few fine roots; few very fine tubular pores; common distinct yellowish brown (10YR 5/6) clay films on faces of peds; few fine spherical iron-manganese concretions; 7 percent subangular chert gravel; strongly acid; gradual wavy boundary.

2Bt6—44 to 60 inches; 60 percent red (2.5YR 4/6) and 40 percent strong brown (7.5YR 5/6) clay; weak fine and medium subangular blocky structure; firm; few fine roots; few very fine tubular pores; common prominent light gray (10YR 7/1) clay films on faces of peds and common distinct pressure faces on faces of peds; 4 percent subangular chert gravel; strongly acid.

Range in Characteristics

Depth to bedrock: 60 to 80 inches or more

A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 to 4

Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 10 percent
Reaction—strongly acid to slightly acid

E horizon (if it occurs):
Color—hue of 10YR, value of 5, and chroma of 3 or 4
Texture of the fine-earth fraction—sandy loam, fine sandy loam, loam, or silt loam
Content of rock fragments—0 to 10 percent
Reaction—strongly acid to slightly acid

Bt horizon:
Color—hue of 2.5YR, 5YR, or 7.5YR; value of 3 to 5; and chroma of 4 to 8
Texture of the fine-earth fraction—loam, silt loam, sandy clay loam, clay loam, or sandy clay
Content of rock fragments—0 to 10 percent
Reaction—very strongly acid to moderately acid

2Bt or 3Bt horizon:
Color—hue of 2.5YR, 5YR, or 7.5YR; value of 3 to 5; and chroma of 4 to 8
Texture of the fine-earth fraction—sandy clay loam, clay loam, sandy clay, or clay
Content of rock fragments—0 to 25 percent
Reaction—very strongly acid to moderately acid

Poynor Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: Ridges and hillslopes
Position on the landform: Summits, shoulders, and backslopes
Parent material: Gravelly colluvium over clayey residuum derived from dolostone
Slope range: 1 to 35 percent
Elevation: 1,000 feet
Taxonomic classification: Loamy-skeletal over clayey, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Poynor gravelly silt loam, in an area of Poynor-Clarksville-Scholten complex, 8 to 15 percent slopes, stony, in a hardwood forest; 100 feet east and 5,700 feet north of the southwest corner of sec. 1, T. 29 N., R. 4 W.; USGS Eminence, Missouri, topographic quadrangle; UTM coordinates 4,120,453 meters Northing and 647,010 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 3 inches; dark grayish brown (10YR 4/2) gravelly silt loam; moderate fine granular structure; very friable; many fine roots; many fine interstitial and tubular pores; 33 percent chert gravel; very strongly acid; abrupt smooth boundary.
E—3 to 8 inches; light yellowish brown (10YR 6/4) very gravelly silt loam; moderate fine subangular blocky structure; friable; common fine roots; many fine tubular pores; 3 percent chert cobbles and 40 percent chert gravel; very strongly acid; clear wavy boundary.
Bt1—8 to 20 inches; yellowish brown (10YR 5/6) very gravelly silt loam; moderate medium subangular blocky structure; firm; common fine roots; many fine tubular pores; few faint yellowish brown (10YR 5/4) clay films on faces of peds; many distinct light yellowish brown (10YR 6/4) silt coats on faces of peds; 10 percent chert cobbles and 45 percent chert gravel; very strongly acid; gradual wavy boundary.
2Bt2—20 to 28 inches; yellowish red (5YR 5/6) gravelly clay; moderate medium subangular blocky structure; firm; few fine roots; many fine tubular pores; common distinct red (2.5YR 5/6) clay films on faces of peds; common distinct light brown (7.5YR 6/4) silt coats on faces of peds; 15 percent chert gravel; very strongly acid; gradual wavy boundary.
2Bt31—28 to 44 inches; 34 percent dark red (2.5YR 3/6) and 33 percent yellowish red (5YR 5/6) and 33 percent gray (10YR 6/1) gravelly clay; strong fine angular blocky structure; very firm; few fine roots; few fine tubular pores; 20 percent chert gravel; very strongly acid (horizon subdivided for sampling).
2Bt32—44 to 63 inches; 34 percent gray (10YR 6/1) and 33 percent dark red (2.5YR 3/6) and 33 percent yellowish red (5YR 5/6) gravelly clay; strong fine angular blocky structure; very firm; few fine roots; few fine tubular pores; 20 percent chert gravel; very strongly acid; gradual wavy boundary.
3Bt4—63 to 88 inches; 60 percent dark red (2.5YR 3/6) and 40 percent yellowish red (5YR 5/6) very gravelly clay; strong fine angular blocky structure; very firm; few fine roots; few fine tubular pores; 2 percent chert stones and 8 percent chert cobbles and 25 percent chert gravel; very strongly acid.

Range in Characteristics

Depth to the 2Bt horizon: 14 to 40 inches
Depth to bedrock: 80 inches or more

A horizon:
Color—hue of 10YR, value of 2 to 6, and chroma of 1 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—15 to 35 percent

Reaction—extremely acid to neutral

E horizon:
Color—hue of 10YR, value of 2 to 6, and chroma of 1 to 4
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—15 to 75 percent
Reaction—extremely acid to slightly acid

Bt or BE horizon (if it occurs):
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam
Content of rock fragments—35 to 75 percent
Reaction—extremely acid to slightly acid

2Bt horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 3 to 8
Texture of the fine-earth fraction—clay
Content of rock fragments—0 to 20 percent
Reaction— extremely acid to strongly acid

3Bt horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 3 to 8, with gray seams
Texture of the fine-earth fraction—clay
Content of rock fragments—0 to 75 percent
Reaction—extremely acid to strongly acid

Racket Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: River valleys
Position on the landform: High flood plains
Parent material: Alluvium
Slope range: 0 to 3 percent
Elevation: 600 feet
Taxonomic classification: fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Racket loam, 0 to 3 percent slopes, occasionally flooded, in and area of cropland; 0 feet east and 1,100 feet north of the southwest corner of sec. 19, T. 29 N., R. 3 W.; USGS Eminence topographic quadrangle; UTM coordinates 4,115,660 meters Northing and 650,066 meters Easting.

A1—0 to 4 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; very friable; many very fine to medium roots; few fine interstitial pores; neutral; abrupt smooth boundary.

A2—4 to 14 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; friable; common very fine and few medium roots; common fine tubular pores; common fine wormcasts throughout; neutral; clear smooth boundary.

A3—14 to 26 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate coarse prismatic structure parting to moderate fine subangular blocky; friable; common very fine roots; common fine tubular pores; common fine wormcasts throughout; neutral; clear smooth boundary.

Bw1—26 to 35 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; common fine tubular pores; neutral; abrupt smooth boundary.

Bw2—35 to 46 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; few fine roots; few fine tubular pores; neutral; abrupt wavy boundary.

2BC—46 to 50 inches; dark yellowish brown (10YR 4/4) loamy sand; weak fine subangular blocky structure; friable; few very fine roots; few fine tubular pores; 2 percent chert gravel; neutral; abrupt wavy boundary.

2C1—50 to 59 inches; 50 percent very pale brown (10YR 8/2) and 50 percent brownish yellow (10YR 6/6) sand; single grain; loose; few very fine roots; many very fine interstitial pores; 5 percent chert gravel; neutral; abrupt wavy boundary.

2C2—59 to 80 inches; 50 percent very pale brown (10YR 8/2) and 50 percent brownish yellow (10YR 6/6) very gravelly coarse sand; single grain; loose; few very fine roots; many very fine interstitial pores; 50 percent chert gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 60 or more inches

A or Ap horizon (upper part):
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or 3
Texture of the fine-earth fraction—loam
Content of rock fragments—0 to 15 percent
Reaction—slightly acid or neutral

A horizon (lower part) or Bw horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 6
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—0 to 20 percent
Reaction—slightly acid or neutral

2BC or 2C horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 8, and chroma of 2 to 6
Texture of the fine-earth fraction—stratified sand and sandy loam
Content of rock fragments—15 to 70 percent (subhorizons may contain less)
Reaction—slightly acid or neutral

Raftville Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability class: Moderate
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Loamy alluvium derived from sandstone
Slope range: 0 to 3 percent
Elevation: 950 feet
Taxonomic classification: Fine-loamy, siliceous, semiactive, mesic Typic Hapludalfs
Taxonomic features: The Raftville soils in this survey have higher base saturation just above the bedrock layer. The bedrock is dolostone, rather than sandstone, as is common for the series. These soils are Hapludalfs, rather than Hapludults, as defined for the Raftville series. These differences do not affect the use and management of the soil.

Typical Pedon

Raftville sandy loam, in an area of Raftville-Gabriel complex, 0 to 3 percent slopes, rarely flooded, in a hardwood forest; 180 feet west and 620 feet north of the southeast corner of sec. 35, T. 29 N., R. 3 W.; USGS Powder Mill Ferry, Missouri, topographic quadrangle; UTM coordinates 4,111,192 meters Northing and 656,695 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 9 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; very friable; common fine to coarse roots; many fine interstitial and tubular pores; 1 percent chert gravel; strongly acid; clear smooth boundary.
Bt1—9 to 16 inches; yellowish red (5YR 5/6) loam; weak fine subangular blocky structure; friable; common fine to coarse roots; common fine to coarse tubular pores; few distinct light brown (7.5YR 6/3) silt coats on faces of peds; few distinct reddish brown (5YR 5/4) clay films on faces of peds; 2 percent chert gravel; very strongly acid; clear smooth boundary.
Bt2—16 to 24 inches; yellowish red (5YR 5/6) clay loam; weak fine subangular blocky structure; firm; common fine and few medium and coarse roots; common fine and medium tubular pores; few distinct reddish brown (5YR 5/4) clay films on faces of peds; few distinct light brown (7.5YR 6/3) silt coats on faces of peds; 2 percent chert gravel; very strongly acid; clear smooth boundary.
2Bt3—24 to 34 inches; strong brown (7.5YR 5/6) very gravelly clay loam; weak fine subangular blocky structure; firm; few fine roots; common fine interstitial and tubular pores; common distinct strong brown (7.5YR 5/6) clay films on faces of peds; 7 percent chert cobbles and 45 percent chert gravel; strongly acid; clear smooth boundary.
2Bt4—34 to 39 inches; strong brown (7.5YR 5/6) very gravelly clay loam; moderate fine subangular blocky structure; very firm; few fine roots; common fine interstitial and tubular pores; many distinct brown (10YR 5/3) and few distinct reddish brown (5YR 5/4) clay films on faces of peds; 2 percent dolostone cobbles and 45 percent chert gravel; very strongly acid; abrupt smooth boundary.
3R—39 inches; dolostone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 or 4
Texture of the fine-earth fraction—sandy loam
Content of rock fragments—0 to 15 percent
Reaction—very strongly acid to moderately acid

Bt horizon:
Color—hue of 5YR, 7.5YR, or 10YR; value of 4 or 5; and chroma of 3 to 8
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—0 to 15 percent
Reaction—very strongly acid or strongly acid

2Bt or 2BC horizon:
Color—hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 4 to 8
Texture of the fine-earth fraction—loam, sandy clay loam, or clay loam
Content of rock fragments—15 to 60 percent

Reaction—extremely acid to strongly acid

Razort Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: River valleys
Position on the landform: Low stream terraces
Parent material: Loamy alluvium
Slope range: 0 to 3 percent
Elevation: 1,050 feet
Taxonomic classification: Fine-loamy, mixed, active, mesic Mollic Hapludalfs

Typical Pedon

Razort silt loam, 0 to 3 percent slopes, rarely flooded, in a pasture; 2,200 feet north and 2,500 feet east of the southwest corner of sec. 2, T. 32 N., R. 12 W. in Texas County; USGS Roby topographic quadrangle; UTM coordinates 4,151,436 meters Northing and 568,594 meters Easting, Zone 15, NAD27.

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; 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; 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-manganese oxides; neutral; 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; gradual smooth boundary.

Bt3—17 to 27 inches; 50 percent dark yellowish brown (10YR 3/4) and 50 percent 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; gradual smooth boundary.

2Bt4—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; gradual smooth boundary.

2BC—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.

Range in Characteristics

Thickness of the solum: 38 to more than 80 inches

A or Ap horizon:
Color—hue of 10YR, value of 2 or 3, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 15 percent
Reaction—slightly acid or neutral

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 to 6
Texture of the fine-earth fraction—loam, silt loam, or clay loam
Content of rock fragments—0 to 25 percent
Reaction—moderately acid to neutral

2Bt or 2BC horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 to 6
Texture of the fine-earth fraction—loam
Content of rock fragments—0 to 50 percent
Reaction—moderately acid to neutral

Relfe Series

Depth class: Very deep
Drainage class: Excessively drained
Permeability class: Rapid
Landform: River valleys
Position on the landform: Flood plains
Parent material: Sandy and gravelly alluvium, gravelly alluvium
Slope range: 0 to 3 percent
Elevation: 670 feet
Taxonomic classification: Sandy-skeletal, siliceous, mesic Mollic Udifluvents

Typical Pedon

Relfe very gravelly sandy loam, in an area of Relfe-Sandbur complex, 0 to 3 percent slopes, frequently flooded, in other grass/herbaceous cover; 100 feet east and 160 feet north of the southwest corner of sec. 32,

T. 29 N., R. 2 E. in Reynolds County; USGS Clearwater Dam, Missouri, topographic quadrangle; UTM coordinates 4,112,380 meters Northing and 689,200 meters Easting, Zone 15, NAD27.

A—0 to 6 inches; dark brown (10YR 3/3) very gravelly sandy loam, brown (10YR 5/3) dry; weak fine granular structure; very friable; common medium roots throughout; many fine high continuity interstitial pores; 40 percent subrounded chert gravel; slightly acid; clear smooth boundary.

C1—6 to 15 inches; 50 percent brown (10YR 5/3) and 50 percent pale brown (10YR 6/3) extremely gravelly sand; single grain; loose; few fine and few medium roots throughout; many fine high continuity interstitial pores; 70 percent subrounded chert gravel; moderately acid; clear smooth boundary.

C2—15 to 24 inches; brown (10YR 5/3) extremely gravelly loamy sand; weak fine subangular blocky structure; very friable; few fine and few medium roots throughout; many fine high continuity interstitial pores; 70 percent subrounded chert gravel; moderately acid; clear smooth boundary.

C3—24 to 40 inches; pale brown (10YR 6/3) very gravelly sand; single grain; very friable; few fine roots throughout; many fine high continuity interstitial pores; 40 percent subrounded chert gravel; moderately acid; clear smooth boundary.

C41—40 to 50 inches; 50 percent pale brown (10YR 6/3) and 50 percent brown (10YR 5/3) very gravelly sand; single grain; loose; few fine roots throughout; many fine high continuity interstitial pores; 45 percent subrounded chert gravel; neutral (horizon subdivided for sampling).

C42—50 to 60 inches; 50 percent pale brown (10YR 6/3) and 50 percent brown (10YR 5/3) very gravelly sand; single grain; loose; few fine roots throughout; many fine high continuity interstitial pores; 45 percent subrounded chert gravel; neutral.

Range in Characteristics

Depth to bedrock: 60 inches or more

A or Ap horizon:
- Color—hue of 10YR or 7.5YR, value of 3, and chroma of 2 to 4
- Texture of the fine-earth fraction—coarse sandy loam or sandy loam
- Content of rock fragments—0 to 60 percent
- Reaction—strongly acid to neutral

C horizon:
- Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 3 to 6
- Texture of the fine-earth fraction—coarse sand, loamy coarse sand, or sand; stratified coarse sand and loamy sand in some pedons
- Content of rock fragments—35 to 75 percent
- Reaction—strongly acid to neutral

Rueter Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Moderate
Landform: Ridges and hillslopes
Position on the landform: Summits and backslopes
Parent material: Gravelly colluvium over gravelly residuum derived from dolostone
Slope range: 3 to 35 percent
Elevation: 670 feet
Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Typic Paleudalfs

Typical Pedon

Rueter very gravelly silt loam, in an area of Alred-Rueter complex, 15 to 35 percent slopes, very stony, in a hardwood forest; 2,100 feet east and 2,880 feet north of the southwest corner of sec. 21, T. 29 N., R. 2 W.; USGS Powder Mill Ferry, Missouri, topographic quadrangle; UTM coordinates 4,114,232 meters Northing and 662,322 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 5 inches; brown (10YR 4/3) very gravelly silt loam; weak fine granular structure; friable; many fine to coarse roots; many fine to coarse interstitial and tubular pores; 35 percent chert gravel; moderately acid; clear smooth boundary.

E—5 to 14 inches; yellowish brown (10YR 5/4) gravelly silt loam; weak fine granular structure; friable; common fine and medium roots; common medium tubular pores; 20 percent chert gravel; strongly acid; clear smooth boundary.

Bt1—14 to 23 inches; light yellowish brown (10YR 6/4) very gravelly silt loam; weak fine subangular blocky structure; friable; common fine and medium roots; common medium tubular pores; common distinct yellowish brown (10YR 5/4) and few distinct dark yellowish brown (10YR 3/4) clay films on faces of peds; 35 percent chert gravel; strongly acid; clear smooth boundary.

Bt2—23 to 40 inches; brown (7.5YR 5/4) very gravelly silt loam; weak fine subangular blocky structure; friable; common fine and medium roots; few fine

tubular pores; common distinct brown (7.5YR 5/4) and few distinct dark brown (7.5YR 3/2) clay films on faces of peds; 50 percent chert gravel; strongly acid; clear smooth boundary.

Bt3—40 to 54 inches; brown (7.5YR 5/4) extremely gravelly loam; weak fine subangular blocky structure; friable; few fine roots; few fine tubular pores; common distinct strong brown (7.5YR 5/6) clay films on faces of peds and common distinct brown (7.5YR 4/3) clay films on faces of peds and in pores; 10 percent chert cobbles and 60 percent chert gravel; strongly acid; clear wavy boundary.

Bt4—54 to 64 inches; brown (7.5YR 5/4) extremely gravelly silt loam; weak fine subangular blocky structure; friable; few fine roots; few fine tubular pores; common distinct strong brown (7.5YR 5/6) and common distinct red (2.5YR 4/6) clay films on faces of peds; 22 percent chert cobbles and 45 percent chert gravel; strongly acid; clear wavy boundary.

2Bt5—64 to 80 inches; 60 percent red (2.5YR 4/6) and 40 percent yellowish red (5YR 5/6) very gravelly silty clay loam; moderate fine subangular blocky structure; firm; few fine roots; few fine tubular pores; common distinct dark red (2.5YR 3/6) and common distinct dark reddish brown (5YR 3/4) clay films on faces of peds; 10 percent chert cobbles and 30 percent chert gravel; strongly acid.

Range in Characteristics

Depth to bedrock: More than 60 inches

A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—15 to 60 percent
Reaction—very strongly acid to moderately acid

E horizon:
Color—hue of 10YR, value of 4 to 7, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—20 to 50 percent
Reaction—very strongly acid to moderately acid

Bt horizon:
Color—hue of 10YR to 2.5YR, value of 3 to 6, and chroma of 3 to 8
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—35 to 75 percent
Reaction—very strongly acid or strongly acid

2Bt horizon:
Color—hue of 10YR to 10R, value of 3 to 7, and chroma of 1 to 8
Texture of the fine-earth fraction—clay loam, silty clay loam, silty clay, or clay
Content of rock fragments—35 to 60 percent
Reaction—strongly acid or moderately acid

3Bt horizon (if it occurs):
Color—hue of 10YR to 10R, value of 3 to 7, and chroma of 1 to 8
Texture of the fine-earth fraction—clay
Content of rock fragments—5 to 60 percent
Reaction—strongly acid to slightly acid

Sandbur Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Rapid
Landform: River valleys
Position on the landform: Flood plains
Parent material: Loamy alluvium
Slope range: 0 to 3 percent
Elevation: 470 feet
Taxonomic classification: Coarse-loamy, siliceous, superactive, nonacid, mesic Mollic Udifluvents

Typical Pedon

Sandbur fine sandy loam, in an area of Relfe-Sandbur complex, 0 to 3 percent slopes, frequently flooded, in a hardwood forest; 500 feet west and 400 feet north of the southeast corner of sec. 26, T. 30 N., R. 5 W.; USGS Round Spring, Missouri, topographic quadrangle; UTM coordinates 4,124,640 meters Northing and 637,460 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 7 inches; dark brown (10YR 3/3) fine sandy loam, brown (10YR 5/3), dry; weak fine granular structure; very friable; many fine and medium roots; 12 percent chert gravel; moderately acid; clear smooth boundary.

C1—7 to 15 inches; brown (10YR 4/3) fine sandy loam; weak fine granular structure; very friable; many fine and common medium roots; moderately acid; clear smooth boundary.

C2—15 to 25 inches; dark brown (7.5YR 3/4) fine sandy loam; weak fine granular structure; very friable; common fine roots; moderately acid; clear smooth boundary.

C3—25 to 38 inches; brown (7.5YR 4/3) fine sandy loam; weak medium prismatic structure; very friable; common fine and medium roots; moderately acid; clear smooth boundary.

C4—38 to 50 inches; brown (7.5YR 4/3) fine sandy loam; single grain; loose; common fine and medium roots; moderately acid; clear smooth boundary.

2C5—50 to 60 inches; dark brown (7.5YR 3/4) very gravelly sandy loam; single grain; loose; few fine and medium roots; 50 percent rounded chert gravel; moderately acid.

Range in Characteristics

A or Ap horizon:
Color—hue of 10YR, value of 3, and chroma of 2 or 3
Texture of the fine-earth fraction—fine sandy loam
Content of rock fragments—0 to 15 percent
Reaction—moderately acid to neutral

C horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 1 to 6
Texture of the fine-earth fraction—stratified fine sand, loamy fine sand, fine sandy loam, loam, and silt loam
Content of rock fragments—0 to 15 percent
Reaction—moderately acid to neutral

2Bt horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 1 to 6
Texture of the fine-earth fraction—loamy coarse sand, coarse sandy loam, sandy loam, or loam
Content of rock fragments—35 to 75 percent
Reaction—strongly acid to slightly acid

2C horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 1 to 6
Texture of the fine-earth fraction—loamy sand, loamy fine sand, or sandy loam
Content of rock fragments—35 to 75 percent
Reaction—moderately acid to neutral

Scholten Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderate above the fragipan, very slow in the fragipan, and moderately rapid below the fragipan
Landform: Hillslopes and ridges
Position on the landform: Backslopes, shoulders, and summits
Parent material: Gravelly colluvium derived from cherty dolostone
Slope range: 1 to 45 percent
Elevation: 1,040 feet
Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Typic Fragiudults

Typical Pedon

Scholten very gravelly silt loam, in an area of Scholten-Bendavis-Poynor complex, 1 to 8 percent slopes, stony, in a hardwood forest; 2,400 feet west and 900 feet south of the northeast corner of sec. 33, T. 29 N., R. 5 W.; USGS Alley Spring, Missouri, topographic quadrangle; UTM coordinates 4,111,902 meters Northing and 633,340 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 4 inches; dark grayish brown (10YR 4/2) very gravelly silt loam; moderate fine granular structure; very friable; many very fine roots; common fine tubular pores; 35 percent chert gravel; very strongly acid; clear smooth boundary.

E—4 to 8 inches; yellowish brown (10YR 5/4) gravelly silt loam; moderate fine subangular blocky structure; friable; common fine and medium roots; common fine tubular pores; 20 percent chert gravel; very strongly acid; clear wavy boundary.

Bt1—8 to 15 inches; yellowish brown (10YR 5/6) very gravelly silt loam; moderate medium subangular blocky structure; friable; common fine and medium roots; common fine tubular pores; few faint yellowish brown (10YR 5/6) clay films on faces of peds; 35 percent chert gravel; very strongly acid; clear wavy boundary.

Bt2—15 to 23 inches; strong brown (7.5YR 5/6) very gravelly silt loam; weak medium subangular blocky structure parting to strong fine angular blocky; firm; few fine roots; many fine tubular and common medium vesicular pores; many distinct yellowish brown (10YR 5/4) silt coats on faces of peds; few faint yellowish brown (10YR 5/6) clay films on faces of peds; 55 percent chert gravel; very strongly acid; clear smooth boundary.

2Btx1—23 to 34 inches; brown (10YR 5/3) extremely cobbly silt loam; weak extremely coarse prismatic structure; very firm; brittle; many fine vesicular pores; many distinct reddish brown (5YR 4/4) clay films on faces of peds and few distinct grayish brown (10YR 5/2) skeletans on vertical faces of peds; 8 percent chert stones and 20 percent chert cobbles and 35 percent chert gravel; very strongly acid; clear wavy boundary.

2Btx2—34 to 45 inches; brown (10YR 5/3) extremely gravelly silty clay loam; weak extremely coarse prismatic structure; very firm; brittle; common fine vesicular pores; common distinct dark yellowish

brown (10YR 4/6) clay films on faces of peds and few prominent grayish brown (10YR 5/2) skeletans on vertical faces of peds; 10 percent chert cobbles and 50 percent chert gravel; very strongly acid; clear wavy boundary.

3Bt1—45 to 61 inches; 34 percent red (2.5YR 4/8), 33 percent yellowish red (5YR 5/6), and 33 percent strong brown (7.5YR 5/6) very cobbly silty clay loam; strong medium subangular blocky structure; very firm; common very fine tubular pores; common distinct dark reddish gray (5YR 4/2) clay films on faces of peds; 25 percent chert cobbles and 20 percent chert gravel; very strongly acid; gradual wavy boundary.

3Bt2—61 to 72 inches; 50 percent red (2.5YR 4/6) and 50 percent yellowish red (5YR 5/6) very cobbly clay; moderate fine angular blocky structure; very firm; few fine roots; common very fine tubular pores; common distinct yellowish red (5YR 5/6) clay films on faces of peds; 20 percent chert cobbles and 20 percent chert gravel; very strongly acid.

Range in Characteristics

Depth to the 2Btx horizon: 14 to 36 inches

Ap or A horizon:
- Color—hue of 10YR, value of 3 to 5, chroma of 2 or 3
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—15 to 60 percent
- Reaction—extremely acid to slightly acid

E horizon:
- Color—hue of 10YR, value of 4 to 6, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam, silt, or loam
- Content of rock fragments—20 to 50 percent
- Reaction—extremely acid to moderately acid

Bt horizon:
- Color—hue of 10YR to 5YR, value of 4 to 6, chroma of 4 to 6
- Redoximorphic features—iron segregations in shades of gray or brown just above the fragipan in some pedons
- Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam
- Content of rock fragments—30 to 75 percent
- Reaction—extremely acid to slightly acid

2Btx horizon:
- Color—hue of 10YR to 2.5YR, value of 4 to 6, and chroma of 3 to 6
- Redoximorphic features—iron segregations in shades of red, brown, or gray
- Texture of the fine-earth fraction—loam, silt loam, clay loam, or silty clay loam
- Content of rock fragments—35 to 75 percent
- Reaction—extremely acid to moderately acid

3Bt horizon:
- Color—hue of 2.5YR to 7.5YR, value of 3 to 5, and chroma of 4 to 8
- Redoximorphic features—iron segregations in shades of brown, yellow, or gray
- Texture of the fine-earth fraction—clay loam, silty clay loam, silty clay, or clay
- Content of rock fragments—15 to 60 percent
- Reaction—extremely acid to strongly acid

Secesh Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: River valleys
Position on the landform: Stream terraces
Parent material: About 2 feet of loamy material over gravelly residuum or alluvium, loamy alluvium
Slope range: 0 to 3 percent
Elevation: 1,150 feet
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, in a hayfield; 300 feet west and 6,000 feet south of the northeast corner of sec. 6, T. 29 N., R. 6 W.; USGS Summersville, Missouri, topographic quadrangle; UTM coordinates 4,120,840 meters Northing and 621,070 meters Easting, Zone 15, NAD27.

Ap—0 to 8 inches; brown (10YR 4/3) silt loam; moderate medium granular structure; friable; common fine roots; common very fine and fine interstitial and tubular pores; 1 percent chert gravel; neutral; abrupt smooth boundary.

Bt1—8 to 15 inches; dark yellowish brown (10YR 4/6) silt loam; strong fine subangular blocky structure; friable; common fine roots; common fine tubular pores; few distinct brown (10YR 4/3) organic stains on faces of peds; 1 percent chert gravel; slightly acid; clear wavy boundary.

Bt2—15 to 23 inches; dark yellowish brown (10YR 4/6) loam; moderate fine subangular blocky structure;

friable; common fine roots; common fine tubular pores; few faint dark yellowish brown (10YR 4/6) clay films on faces of peds; 1 percent chert gravel; moderately acid; clear smooth boundary.

Bt3—23 to 30 inches; dark yellowish brown (10YR 4/6) loam; weak fine subangular blocky structure; friable; few fine roots; few fine tubular pores; common faint dark yellowish brown (10YR 4/6) clay films on faces of peds; 1 percent chert gravel; strongly acid; clear wavy boundary.

2Bt4—30 to 39 inches; dark yellowish brown (10YR 4/4) sandy loam; weak fine subangular blocky structure; friable; few fine roots; few fine tubular pores; 7 percent chert gravel; strongly acid; abrupt wavy boundary.

2Bt5—39 to 44 inches; dark yellowish brown (10YR 4/4) loam; moderate medium subangular blocky structure; friable; few fine roots; common fine tubular pores; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; 5 percent chert gravel; strongly acid; clear wavy boundary.

2C1—44 to 50 inches; dark yellowish brown (10YR 4/4) very gravelly coarse sandy loam; weak fine subangular blocky structure; very friable; common medium interstitial and tubular pores; common fine black (N 2/0) iron concretions; 40 percent chert gravel; strongly acid; clear wavy boundary.

2C2—50 to 68 inches; dark yellowish brown (10YR 4/4) very gravelly coarse sandy loam; single grain; loose; common medium interstitial and tubular pores; common distinct brown (10YR 5/3) silt coats between sand grains; 50 percent chert gravel; moderately acid.

Range in Characteristics

Thickness of the solum: 21 to more than 60 inches

Ap or A horizon:
Color—hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 15 percent
Reaction—strongly acid to neutral

AB horizon or BE horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 2 to 4
Texture of the fine-earth fraction—loam, silt loam, or silty clay loam
Content of rock fragments—0 to 15 percent
Reaction—strongly acid or slightly acid

Bt horizon:
Color—hue of 10YR, 7.5YR, or 5YR; value of 4 or 5; and chroma of 4 to 8
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—0 to 35 percent
Reaction—very strongly acid to moderately acid, unless limed

2Bt horizon:
Color—hue of 10YR, 7.5YR, or 5YR; value of 4 or 5; and chroma of 4 to 8
Texture of the fine-earth fraction—sandy loam, loam, sandy clay loam, clay loam, or sandy clay
Content of rock fragments—5 to 50 percent
Reaction—very strongly acid to moderately acid

2C horizon:
Color—hue of 10YR, 7.5YR, or 5YR; value of 4 or 5; and chroma of 4 to 8
Texture of the fine-earth fraction—coarse sandy loam, sandy loam, or sandy clay loam
Content of rock fragments—35 to 75 percent
Reaction—very strongly acid to moderately acid

Splitlimb Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Moderate
Landform: Sinkholes
Position on the landform: Toeslopes
Parent material: Silty loess over silty colluvium
Slope range: 0 to 3 percent
Elevation: 1,230 feet
Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Paleudults

Typical Pedon

Splitlimb silt loam, 0 to 3 percent slopes, frequently ponded, in a hayfield; 2,600 feet south and 1,700 feet east of the northwest corner of sec. 6, T. 28 N., R. 6 W.; USGS Summersville, Missouri, topographic quadrangle; UTM coordinates 4,109,924 meters Northing and 620,059 meters Easting, Zone 15, NAD27.

A—0 to 4 inches; brown (10YR 4/3) silt loam; moderate fine granular structure; friable; many fine roots; many fine interstitial and tubular pores; strongly acid; clear smooth boundary.

E—4 to 9 inches; brown (10YR 5/3) silt loam; moderate fine subangular blocky structure; friable; common fine roots; common fine tubular pores; common distinct dark brown (10YR 3/3) manganese or iron-manganese stains throughout; strongly acid; clear smooth boundary.

Bt1—9 to 14 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky

structure; friable; common fine roots; many fine tubular pores; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; many fine irregular dark yellowish brown (10YR 4/6) masses of oxidized iron throughout; many medium irregular grayish brown (10YR 5/2) iron depletions throughout; common fine black (N 2/0) iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

Bt2—14 to 21 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; few fine roots; many fine tubular pores; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; many medium irregular gray (10YR 5/1) iron depletions throughout; common fine black (N 2/0) iron-manganese concretions throughout; very strongly acid; clear smooth boundary.

Bt3—21 to 34 inches; grayish brown (10YR 5/2) silt loam; moderate medium angular blocky structure; firm; few fine roots; many fine tubular pores; few faint grayish brown (10YR 5/2) clay films on faces of peds; many fine dark gray (10YR 4/1) iron-manganese concretions throughout; common fine irregular dark grayish brown (10YR 4/2) iron depletions throughout; very strongly acid; clear smooth boundary.

2Bt4—34 to 43 inches; 50 percent grayish brown (10YR 5/2) and 50 percent strong brown (7.5YR 4/6) silty clay loam; moderate fine subangular blocky structure; firm; common fine tubular pores; many distinct strong brown (7.5YR 4/6) clay films on faces of peds; 5 percent chert gravel; extremely acid; abrupt smooth boundary.

2Bt5—43 to 60 inches; 50 percent gray (10YR 5/1) and 50 percent red (2.5YR 4/6) silty clay loam; moderate medium subangular blocky structure; firm; common fine tubular pores; common distinct dark gray (10YR 4/1) clay films on faces of peds; extremely acid.

Range in Characteristics

A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 5 percent gravel
Reaction—very strongly acid to slightly acid

E horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 3
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 5 percent gravel
Reaction—strongly acid to neutral

Bt horizon:
Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 2 to 8
Redoximorphic features—iron segregations
Texture of the fine-earth fraction—silt loam or silty clay loam
Content of rock fragments—0 to 5 percent gravel
Reaction—very strongly acid to slightly acid

2Bt horizon:
Color—Hue of 2.5YR to 10YR, value of 3 to 7, and chroma of 1 to 6
Redoximorphic features—iron segregations in shades of gray, brown, or red
Texture of the fine-earth fraction—silt loam, silty clay loam, or silty clay
Content of rock fragments—0 to 10 percent gravel
Reaction—extremely acid to strongly acid

Taterhill Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Landform: River valleys
Position on the landform: Footslopes
Parent material: Loess over gravelly colluvium derived from dolostone
Slope range: 1 to 8 percent
Elevation: 960 feet
Taxonomic classification: Fine-loamy, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Taterhill silt loam, 1 to 3 percent slopes, in a hay field; 1,900 feet east and 1,450 feet north of the southwest corner of sec. 28, T. 27 N., R. 5 W.; USGS Montier, Missouri, topographic quadrangle; UTM coordinates 4,093,230 meters Northing and 633,100 meters Easting, Zone 15, NAD27.

Ap—0 to 11 inches; brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; common fine roots throughout; common fine tubular pores; 1 percent chert subangular gravel; neutral; clear smooth boundary.

BA—11 to 15 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine subangular blocky structure; friable; common fine roots throughout; many very fine tubular pores and common medium tubular pores filled with brown (10YR 4/3) wormcasts; 1 percent subangular chert gravel; neutral; clear smooth boundary.

Bt1—15 to 20 inches; brown (7.5YR 4/4) silt loam; moderate medium subangular blocky structure; friable; common fine roots throughout; common medium tubular pores; few distinct brown (7.5YR 4/4) clay films on faces of peds; 2 percent subangular chert gravel; slightly acid; clear smooth boundary.

Bt2—20 to 28 inches; strong brown (7.5YR 5/6) silt loam; moderate medium subangular blocky structure; friable; common fine roots throughout; common medium tubular pores; few distinct strong brown (7.5YR 4/6) clay films on faces of peds; few prominent black (N 2/0) iron-manganese stains throughout; 2 percent subangular chert cobbles and 10 percent subangular chert gravel; slightly acid; clear wavy boundary.

2Bt3—28 to 36 inches; yellowish red (5YR 5/6) gravelly silt loam; moderate medium subangular blocky structure; firm; few fine roots throughout; common medium tubular pores; few prominent red (2.5YR 4/6) clay films on faces of peds; 2 percent subangular chert cobbles and 25 percent subangular chert gravel; strongly acid; gradual wavy boundary.

2Bt4—36 to 48 inches; 50 percent red (2.5YR 4/6) and 50 percent strong brown (7.5YR 5/6) gravelly silty clay loam; moderate medium subangular blocky structure; firm; common medium tubular pores; many prominent light brown (7.5YR 6/3) silt coats in root channels and/or pores; common distinct red (2.5YR 4/6) clay films in root channels and/or pores; 5 percent subangular chert cobbles and 20 percent subangular chert gravel; very strongly acid; gradual wavy boundary.

2Bt5—48 to 80 inches; red (2.5YR 4/6) silty clay loam; strong fine angular blocky structure; firm; common medium vesicular pores; common distinct red (2.5YR 4/6) clay films in root channels and pores; common prominent pinkish gray (7.5YR 6/2) silt coats in root channels and pores; 2 percent subangular chert cobbles and 10 percent subangular chert gravel; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 80 inches
Depth to the 2Bt horizon: 14 to 40 inches

A or Ap horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 10 percent gravel
Reaction—very strongly acid to neutral

BA horizon (if it occurs):
Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 4 tor 6
Texture of the fine-earth fraction—silt loam
Content of rock fragments—0 to 10 percent gravel
Reaction—very strongly acid to neutral

Bt horizon:
Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6
Texture of the fine-earth fraction—silt loam, silty clay loam, or loam
Content of rock fragments—0 to 35 percent
Reaction—very strongly acid to slightly acid

2Bt horizon:
Color—hue of 7.5YR to 2.5YR, value of 4 to 6, and chroma of 4 to 8
Texture of the fine-earth fraction—silt loam, silty clay loam, loam, clay loam, or sandy clay loam
Content of rock fragments—5 to 60
Reaction—very strongly acid or strongly acid

Taumsauk Series

Depth class: Shallow
Drainage class: Somewhat excessively drained
Permeability class: Moderate
Landform: Mountains
Position on the landform: Backslopes and shoulders
Parent material: Thin residuum from rhyolite
Slope range: 3 to 35 percent
Elevation: 990 feet
Taxonomic classification: Loamy-skeletal, mixed, active, mesic Lithic Hapludults

Typical Pedon

Taumsauk cobbly silt loam, in an area of Taumsauk-Irondale-Rock outcrop complex, 3 to 15 percent slopes, very stony, in a hardwood forest; 100 feet east and 1,350 feet south of the northwest corner of sec. 1, T. 28 N., R. 3 W.; USGS Powder Mill Ferry, Missouri, topographic quadrangle; UTM coordinates 4,110,030 meters Northing and 656,853 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 5 inches; very dark grayish brown (10YR 3/2) cobbly silt loam; weak fine granular structure; very friable; many fine to coarse roots; common fine to coarse tubular and common coarse interstitial and

tubular pores; 20 percent rhyolite cobbles and 12 percent rhyolite gravel; very strongly acid; clear smooth boundary.

Bt—5 to 16 inches; yellowish brown (10YR 5/4) very cobbly silt loam; weak fine subangular blocky structure; friable; many fine to coarse roots; many fine tubular and common medium and coarse tubular pores; common distinct gray (10YR 6/1) and brown (10YR 5/3) clay films on faces of peds; few distinct black (N 2/0) manganese or iron-manganese stains on faces of peds; 5 percent rhyolite stones, 20 percent rhyolite cobbles, and 20 percent rhyolite gravel; very strongly acid; abrupt smooth boundary.

R—16 inches; rhyolite bedrock.

Range in Characteristics

Thickness of the solum: 4 to 20 inches
Depth to bedrock: 4 to 20 inches

A horizon:
Color—hue of 10YR, value of 2 to 4, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—15 to 35 percent
Reaction—extremely acid to moderately acid

Bt horizon:
Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6
Texture of the fine-earth fraction—silt loam, clay loam, or silty clay loam
Content of rock fragments—35 to 75 percent
Reaction—extremely acid to strongly acid

Tick Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Landform: Hillslopes
Position on the landform: Summits and shoulders
Parent material: Silty colluvium over clayey residuum derived from mudstone
Slope range: 3 to 15 percent
Elevation: 1,000 feet
Taxonomic classification: Fine, mixed, subactive, mesic Typic Hapludults

Typical Pedon

Tick extremely gravelly silt loam, 8 to 15 percent slopes, stony, in a hardwood forest; 1,100 feet west and 750 feet north of the southeast corner of sec. 6, T. 27 N., R. 5 W.; USGS Jam Up Cave, Missouri, topographic quadrangle; UTM coordinates 4,099,500 meters Northing and 630,570 meters Easting, Zone 15, NAD27.

A—0 to 4 inches; 50 percent brown (10YR 5/3) and 50 percent brown (10YR 4/3) extremely gravelly silt loam; moderate fine granular structure; very friable; common fine, few medium, and few coarse roots; many fine and medium interstitial and tubular pores; 60 percent chert gravel; very strongly acid; clear smooth boundary.

AB—4 to 11 inches; 60 percent light yellowish brown (10YR 6/4) and 40 percent brown (10YR 5/3) silt loam; moderate fine subangular blocky structure; friable; few fine, few medium, and few coarse roots; common fine and medium tubular pores; common distinct brown (10YR 4/3) organic stains on faces of peds; 5 percent chert gravel; very strongly acid; clear wavy boundary.

Bt1—11 to 15 inches; 50 percent light yellowish brown (10YR 6/4) and 50 percent brownish yellow (10YR 6/6) silty clay loam; weak fine subangular blocky structure; friable; few fine, few medium, and few coarse roots; many fine tubular pores; common distinct brownish yellow (10YR 6/6) clay films on faces of peds; common distinct light yellowish brown (10YR 6/4) silt coats throughout; 3 percent chert gravel; very strongly acid; gradual wavy boundary.

Bt2—15 to 25 inches; brownish yellow (10YR 6/6) silty clay; moderate fine subangular blocky structure; friable; few fine, few medium roots, and few coarse roots; many fine tubular pores; common distinct strong brown (7.5YR 5/6) clay films on faces of peds; common distinct light yellowish brown (10YR 6/4) silt coats throughout; 10 percent chert gravel; very strongly acid; clear smooth boundary.

2Cd1—25 to 33 inches; 60 percent yellowish red (5YR 5/6), 20 percent brownish yellow (10YR 6/6), and 20 percent red (2.5YR 5/8) silty clay; weak medium platy structure parting to moderate fine angular blocky; firm; few very fine and fine roots; common fine tubular pores; common distinct red (2.5YR 5/8) clay films on faces of peds; very strongly acid; clear wavy boundary.

2Cd2—33 to 45 inches; 50 percent white (7.5YR 8/1), 40 percent pale yellow (2.5Y 8/4), and 10 percent yellow (10YR 7/6) silty clay; strong medium platy structure parting to strong medium angular blocky; extremely firm; few very fine and fine roots; common very fine and fine tubular pores; common prominent yellowish brown (10YR 5/4) clay films on horizontal faces of peds; extremely acid; clear wavy boundary.

2Cd3—45 to 60 inches; 40 percent white (10YR 8/1), 30 percent light reddish brown (2.5YR 7/3), and 30

percent pale yellow (2.5Y 8/4) silty clay loam; strong medium platy structure parting to strong medium angular blocky; extremely firm; few very fine and fine roots; few fine tubular pores; few prominent brown (7.5YR 5/4) clay films on all faces of peds; extremely acid.

Range in Characteristics

Depth to the 2Cd horizon: 22 to 60 inches

A horizon:
Color—hue of 10YR, value of 3 to 6, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—35 to 60 percent gravel
Reaction—very strongly acid to slightly acid

AB or E horizon:
Color—hue of 10YR, value of 4 to 6, and chroma of 3 to 6
Texture of the fine-earth fraction—silt loam or loam
Content of rock fragments—5 to 60 percent gravel
Reaction—extremely acid to strongly acid

Bt horizon (upper part):
Color—hue of 10YR to 7.5YR, value of 4 to 8, and chroma of 2 to 8
Texture of the fine-earth fraction—loam, clay loam, or silty clay loam
Content of rock fragments—0 to 35 percent gravel
Reaction—extremely acid to strongly acid

Bt horizon (lower part):
Color—hue of 5YR to 10YR, value of 5 to 8, and chroma of 6 or 8
Texture of the fine-earth fraction—silty clay or clay
Content of rock fragments—0 to 35 percent gravel
Reaction—extremely acid to strongly acid

2Cd horizon:
Color—multicolored
Texture of the fine-earth fraction—silty clay or clay; silty clay loam in the lower part of some pedons
Content of rock fragments—0 to 60 percent gravel
Reaction—extremely acid to strongly acid

Tilk Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately rapid
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Loamy and sandy alluvium with a high content of rock fragments
Slope range: 0 to 3 percent
Elevation: 1,000 feet
Taxonomic classification: Loamy-skeletal, siliceous, active, mesic Ultic Hapludalfs

Typical Pedon

Tilk very gravelly sandy loam, 0 to 3 percent slopes, rarely flooded, in a hardwood forest; 1,600 feet west and 800 north of the southeast corner of sec. 3, T. 27 N., R. 5 W.; USGS Bartlett, Missouri, topographic quadrangle; UTM coordinates 4,099,449 meters Northing and 635,316 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 10 inches; dark grayish brown (10YR 4/2) very gravelly sandy loam; weak fine granular structure; loose; many very fine and fine roots; many fine interstitial pores; common distinct very dark gray (10YR 3/1) organic stains on faces of peds; 55 percent chert gravel; strongly acid; clear smooth boundary.

AB—10 to 15 inches; dark yellowish brown (10YR 4/4) very gravelly loam; weak fine subangular blocky structure; very friable; common fine and few medium roots; many fine interstitial and tubular pores; common distinct dark grayish brown (10YR 4/2) organic stains on faces of peds; 35 percent chert gravel; very strongly acid; clear smooth boundary.

Bt1—15 to 21 inches; dark yellowish brown (10YR 4/4) very gravelly sandy loam; weak fine subangular blocky structure; friable; few fine roots; common fine tubular pores; common distinct strong brown (7.5YR 4/6) clay films on faces of peds and few distinct black (N 2/0) manganese or iron-manganese stains on sand and gravel; 45 percent chert gravel; very strongly acid; clear wavy boundary.

Bt2—21 to 28 inches; brown (7.5YR 4/4) extremely gravelly coarse sandy loam; weak fine subangular blocky structure; loose; common fine roots; many fine interstitial and tubular pores; few faint clay bridging between sand grains; 75 percent chert gravel; very strongly acid; clear smooth boundary.

Bt3—28 to 34 inches; yellowish brown (10YR 5/4) very gravelly coarse sandy loam; weak fine subangular blocky structure; very friable; few fine roots; many fine tubular and common fine interstitial pores; common distinct strong brown (7.5YR 5/6 and 4/6) clay films on faces of peds; few distinct black (N 2/0) manganese or iron-manganese stains on sand and gravel; 45 percent chert gravel; very strongly acid; clear smooth boundary.

Bt4—34 to 41 inches; yellowish brown (10YR 5/4) very

gravelly loam; weak fine subangular blocky structure; very friable; few fine roots; common fine tubular and few fine interstitial pores; common distinct brown (7.5YR 4/4) clay films on faces of peds; common distinct black (N 2/0) manganese or iron-manganese stains on sand and gravel; 50 percent chert gravel; very strongly acid; clear smooth boundary.

Bt5—41 to 52 inches; strong brown (7.5YR 4/6) gravelly loam; moderate medium subangular blocky and moderate medium angular blocky structure; firm; few fine and few medium roots; many fine tubular pores; common distinct yellowish red (5YR 5/6) clay films on faces of peds; common prominent pale brown (10YR 6/3) silt coats; common distinct black (N 2/0) manganese or iron-manganese stains; 20 percent chert gravel; strongly acid; clear smooth boundary.

Bt6—52 to 69 inches; strong brown (7.5YR 4/6) very gravelly sandy loam; moderate fine subangular blocky structure; friable; few fine roots; many fine tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds; few distinct light brown (7.5YR 6/3) silt coats on faces of peds; common distinct black (N 2/0) manganese or iron-manganese stains on rock fragments; 40 percent chert gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 36 to 70 inches

A horizon:
Color—hue of 10YR or 7.5YR, value of 2 to 4, and chroma of 2 to 4
Texture of the fine-earth fraction—sandy loam or loam
Content of rock fragments—35 to 60 percent
Reaction—strongly acid to slightly acid

AB or E horizon:
Color—hue of 10YR or 7.5YR, value of 4, and chroma of 3 or 4
Texture of the fine-earth fraction—loam or coarse sandy loam
Content of rock fragments—35 to 75 percent
Reaction—very strongly acid to moderately acid

Bt horizon:
Color—hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 3 to 6
Texture of the fine-earth fraction—coarse sandy loam, sandy loam, or loam
Content of rock fragments—35 to 75 percent; subhorizons may contain less
Reaction—very strongly acid to neutral

2BC and 2C horizons:
Color—hue of 10YR or 7.5YR, value of 3 or 4, and chroma of 4 to 6
Texture of the fine-earth fraction—coarse sandy loam, sandy loam, or loamy coarse sand
Content of rock fragments—35 to 75 percent
Reaction—strongly acid to neutral

Tonti Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderate above the fragipan and slow within the fragipan
Landform: Ridges and hillslopes
Position on the landform: Summits and shoulders
Parent material: Loess over gravelly colluvium over clayey residuum derived from dolostone
Slope range: 1 to 8 percent
Elevation: 1,120 feet
Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Fragiudults

Typical Pedon

Tonti silt loam, in an area of Tonti-Hogcreek complex, 3 to 8 percent slopes, in a pine and hardwood forest; 1,600 feet east and 150 feet north of the southwest corner of sec. 7, T. 33 N., R. 3 W. in Reynolds County; USGS Stone Hill, Missouri, topographic quadrangle; UTM coordinates 4,158,560 meters Northing and 649,500 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 3 inches; dark grayish brown (10YR 4/2) silt loam; moderate fine subangular blocky structure; friable; common fine to coarse roots; many very fine interstitial and tubular pores; very strongly acid; clear smooth boundary.

E—3 to 6 inches; brown (10YR 5/3) silt loam; weak fine subangular blocky structure; friable; common fine and medium and few coarse roots; many fine tubular pores; common distinct dark grayish brown (10YR 4/2) organic stains on vertical faces of peds; very strongly acid; clear smooth boundary.

Bt1—6 to 12 inches; strong brown (7.5YR 4/6) silty clay loam; moderate fine subangular blocky structure; friable; common fine and medium and few coarse roots; many fine tubular pores; common distinct brown (7.5YR 5/4) clay films on faces of peds; common distinct pale brown (10YR 6/3) silt coats on faces of peds; very strongly acid; clear smooth boundary.

Bt2—12 to 22 inches; strong brown (7.5YR 4/6) silty clay loam; moderate fine subangular blocky structure; friable; common medium and few very fine roots; many fine tubular pores; common distinct brown (7.5YR 4/4) clay films on faces of peds; few faint light brownish gray (10YR 6/2) silt coats on faces of peds; 1 percent chert gravel; very strongly acid; clear smooth boundary.

Bt3—22 to 28 inches; 70 percent pale brown (10YR 6/3) and 30 percent yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; few very fine to medium roots; many very fine tubular pores; few distinct strong brown (7.5YR 5/8) and brown (7.5YR 4/3) clay films on faces of peds; many distinct gray (10YR 6/1) silt coats on faces of peds; 5 percent chert gravel; very strongly acid; clear wavy boundary.

2Btx—28 to 38 inches; very pale brown (10YR 7/3) extremely gravelly silt loam; weak medium prismatic structure; firm; 80 percent brittle; few very fine and fine roots between peds; few fine tubular pores; common distinct strong brown (7.5YR 5/6) clay films on faces of peds and common distinct clay films on vertical faces of peds; many distinct light brownish gray (10YR 6/2) silt coats on faces of peds; 5 percent sandstone cobbles, 25 percent sandstone gravel, and 25 percent chert gravel; very strongly acid; clear wavy boundary.

3Bt1—38 to 46 inches; yellowish red (5YR 5/6) clay; moderate fine subangular blocky structure; firm; common very fine roots; common very fine tubular pores; many distinct light brownish gray (10YR 6/2), common distinct yellowish brown (10YR 5/4), and common distinct gray (7.5YR 5/1) clay films on faces of peds; 10 percent chert gravel; very strongly acid; clear wavy boundary.

3Bt2—46 to 56 inches; 70 percent strong brown (10YR 4/6) and 30 percent red (2.5YR 4/8) gravelly clay; moderate fine subangular blocky and moderate fine angular blocky structure; firm; common fine roots; common very fine tubular pores; many distinct dark grayish brown (10YR 4/2) clay films throughout, common distinct brown (7.5YR 5/3) clay films on faces of peds, and common distinct yellowish red (5YR 5/6) clay films on faces of peds; 5 percent sandstone cobbles and 10 percent chert gravel; very strongly acid; clear wavy boundary.

3Bt3—56 to 66 inches; 80 percent reddish brown (5YR 4/4) and 20 percent yellowish brown (10YR 5/6) very gravelly clay; moderate fine angular blocky structure; very firm; common very fine tubular pores; many distinct strong brown (7.5YR 4/6) clay films on faces of peds, common distinct red (10R 4/6) clay films on rock fragments, and common distinct reddish brown (5YR 4/4) clay films on rock fragments; 5 percent chert cobbles, 5 percent sandstone gravel, and 40 percent chert gravel; very strongly acid.

Range in Characteristics

Depth to the 2Btx horizon: 13 to 28 inches
Depth to bedrock: More than 60 inches

Ap or A horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 15 percent
- Reaction—very strongly acid to slightly acid

E horizon:
- Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 15 percent
- Reaction—very strongly acid to slightly acid

Bt horizon:
- Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 4 to 8
- Redoximorphic features—iron concentrations in shades of brown
- Content of rock fragments—0 to 25 percent
- Texture of the fine-earth fraction—silt loam or silty clay loam
- Reaction—extremely acid to slightly acid

2Btx horizon:
- Color—hue of 10YR or 7.5YR, value of 4 or 5, chroma of 4 to 6
- Redoximorphic features—iron segregations in shades of gray, brown, or red
- Texture of the fine-earth fraction—loam, silt loam, or silty clay loam
- Content of rock fragments—35 to 60 percent
- Reaction—extremely acid to strongly acid

3Bt horizon:
- Color—hue of 10YR to 2.5YR, value of 3 to 5, and chroma of 4 to 8
- Redoximorphic features—iron segregations in shades of brown or gray
- Texture of the fine-earth fraction—silty clay or clay
- Content of rock fragments—20 to 90 percent (varies within short distances); subhorizons may contain less
- Reaction—extremely acid to strongly acid

Viburnum Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderately slow
Landform: Ridges
Position on the landform: Summits
Parent material: Loess over clayey residuum
Slope range: 1 to 8 percent
Elevation: 1,140 feet
Taxonomic classification: Fine, mixed, active, mesic Aquic Paleudults

Typical Pedon

Viburnum silt loam, 3 to 8 percent slopes; in a hardwood forest, 2,000 feet west and 5,400 feet south of the northeast corner of sec. 3, T. 29 N., R. 5 W.; USGS Alley Spring, Missouri, topographic quadrangle; UTM coordinates 4,120,914 meters Northing and 635,029 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.

A—1 to 3 inches; dark grayish brown (10YR 4/2) silt loam; moderate fine granular structure; friable; many fine roots; common fine tubular pores; 1 percent chert gravel; very strongly acid; abrupt smooth boundary.

E—3 to 8 inches; pale brown (10YR 6/3) silt loam; weak very fine subangular blocky structure; friable; common medium roots; common fine tubular pores; 1 percent chert gravel; very strongly acid; abrupt wavy boundary.

BE—8 to 11 inches; yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; common fine roots; common fine tubular pores; 1 percent chert gravel; very strongly acid; abrupt wavy boundary.

Bt1—11 to 18 inches; brown (7.5YR 4/4) silty clay loam; moderate fine subangular blocky structure; friable; common medium roots; common fine tubular pores; 5 percent chert gravel; very strongly acid; abrupt smooth boundary.

2Bt2—18 to 26 inches; strong brown (7.5YR 5/6) silty clay; moderate fine subangular blocky structure; firm; few fine roots; few fine tubular pores; many distinct strong brown (7.5YR 4/6) clay films on faces of peds and in pores; 7 percent chert gravel; very strongly acid; clear wavy boundary.

2Bt3—26 to 38 inches; 75 percent strong brown (7.5YR 5/6) and 25 percent yellowish red (5YR 4/6) clay; moderate fine subangular blocky structure; firm; few fine roots; few fine tubular pores; many distinct strong brown (7.5YR 5/6) clay films throughout; common fine faint light brownish gray (10YR 6/2) iron depletions; 7 percent chert gravel; very strongly acid; clear wavy boundary.

3Bt4—38 to 52 inches; 40 percent yellowish brown (10YR 5/8), 35 percent grayish brown (10YR 5/2), and 25 percent red (2.5YR 4/6) gravelly clay; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; few fine tubular pores; few prominent dark grayish brown (10YR 4/2) clay films on faces of peds and in pores; 15 percent chert gravel; very strongly acid; clear wavy boundary.

3Bt5—52 to 65 inches; 40 percent grayish brown (10YR 5/2), 35 percent yellowish brown (10YR 5/8), and 25 percent dark red (2.5YR 3/6) gravelly clay; moderate medium angular blocky structure; firm; few fine roots; few fine tubular pores; common prominent dark grayish brown (10YR 4/2) clay films on faces of peds and in pores; 25 percent chert gravel; extremely acid; abrupt irregular boundary.

3R—65 inches; chert bedrock.

Range in Characteristics

Thickness of the solum: More than 60 inches

A horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2 or 3
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 12 percent
- Reaction—very strongly acid to slightly acid

E or BE horizon:
- Color—hue of 10YR or 7.5YR, value of 5 or 6, and chroma of 3 or 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 20 percent
- Reaction—very strongly acid to slightly acid

Bt horizon:
- Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6
- Texture of the fine-earth fraction—silty clay loam
- Content of rock fragments—0 to 25 percent
- Reaction—very strongly acid or strongly acid

2Bt horizon:
- Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6
- Redoximorphic features—iron segregations in shades of red, brown, yellow, or gray
- Texture of the fine-earth fraction—silty clay loam or silty clay
- Content of rock fragments—7 to 45 percent
- Reaction—extremely acid to strongly acid

3Bt horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 1 to 8
Texture of the fine-earth fraction—silty clay or clay
Content of rock fragments—15 to 75 percent
Reaction—extremely acid to strongly acid

Waben Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately rapid
Landform: Hillslopes
Position on the landform: Footslopes
Parent material: Gravelly alluvium and/or gravelly colluvium
Slope range: 3 to 8 percent
Elevation: 950 feet
Taxonomic classification: Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults
Taxonomic features: The Waben soils in this survey area have a lower base saturation and a thicker argillic horizon than is defined for the Waben series. These soils are Typic Paleudults, rather than Ultic Hapludalfs, as defined for the series. These differences do not affect the use and management of the soil.

Typical Pedon

Waben gravelly silt loam, 3 to 8 percent slopes, in a hardwood forest; 1,100 feet west and 10 feet north of the southeast corner of sec. 9, T. 26 N., R. 5 W.; USGS Birch Tree, Missouri, topographic quadrangle; UTM coordinates 4,087,953 meters Northing and 633,871 meters Easting, Zone 15, NAD27.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 4 inches; dark grayish brown (10YR 4/2) gravelly silt loam; weak fine granular structure; very friable; many fine to coarse roots; many fine interstitial and tubular pores; 20 percent angular chert gravel; strongly acid; clear smooth boundary.
BA—4 to 10 inches; yellowish brown (10YR 5/4) gravelly silt loam; weak fine subangular blocky structure; friable; many fine to coarse roots; many fine and medium tubular pores; common distinct dark grayish brown (10YR 4/2) organic stains on faces of peds; 25 percent angular chert gravel; strongly acid; clear smooth boundary.
Bt1—10 to 22 inches; yellowish brown (10YR 5/4) very cobbly silt loam; weak fine subangular blocky structure; friable; common fine and medium roots; many fine tubular pores; few faint brown (7.5YR 5/4) clay films on faces of peds; 30 percent angular sandstone cobbles and 20 percent angular chert gravel; very strongly acid; gradual irregular boundary.
Bt2—22 to 31 inches; brown (7.5YR 5/4) very cobbly silt loam; weak fine subangular blocky structure; friable; few fine and medium roots; many fine and medium vesicular pores; common distinct red (2.5YR 4/6) clay films on rock fragments; common fine and medium threadlike extremely weakly cemented black (N 2/0) iron-manganese concretions between peds; 10 percent subangular sandstone cobbles, 25 percent subangular chert cobbles, and 15 percent subangular chert gravel; very strongly acid; clear wavy boundary.
2Bt3—31 to 47 inches; reddish brown (5YR 5/4) extremely gravelly clay loam; weak fine angular blocky structure; firm; few fine roots; many fine and medium vesicular pores; common distinct red (2.5YR 4/6) clay films on faces of peds; common distinct very pale brown (10YR 7/3) silt coats on faces of peds and few distinct light gray (10YR 7/2) silt coats on rock fragments; 20 percent subangular chert cobbles and 50 percent subangular chert gravel; very strongly acid; gradual wavy boundary.
2Bt4—47 to 64 inches; reddish brown (5YR 5/4) extremely gravelly clay loam; moderate medium angular blocky structure; very firm; many fine tubular pores; common distinct brown (7.5YR 5/4) and few distinct red (2.5YR 4/6) clay films on faces of peds; few distinct pink (7.5YR 7/3) silt coats on faces of peds; 15 percent subangular chert cobbles and 50 percent subangular chert gravel; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 80 inches
Depth to bedrock: More than 80 inches

A or Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
Texture of the fine-earth fraction—silt loam
Content of rock fragments—15 to 35 percent
Reaction—strongly acid to slightly acid

BA horizon:
Color—hue of 10YR, value of 4 to 6, and chroma of 3 or 4
Texture of the fine-earth fraction—silt loam or loam
Content of rock fragments—25 to 80 percent
Reaction—strongly acid to slightly acid

Bt horizon:
Color—hue of 10YR, 7.5YR, or 5YR; value of 4 or 5; and chroma of 4 to 6
Redoximorphic features—iron concentrations in shades of brown
Texture of the fine-earth fraction—loam or silt loam
Content of rock fragments—35 to 60 percent
Reaction—very strongly acid to moderately acid

2Bt or 3Bt horizon:
Color—hue of 10YR, 7.5YR, or 5YR; value of 4 or 5; and chroma of 4 to 6
Redoximorphic features—iron concentrations in shades of brown
Texture of the fine-earth fraction—sandy clay loam or clay loam
Content of rock fragments—35 to 70 percent
Reaction—very strongly acid or strongly acid

Wideman Series

Depth class: Very deep
Drainage class: Excessively drained
Permeability class: Moderately rapid
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Sandy alluvium
Slope range: 0 to 3 percent
Elevation: 830 feet
Taxonomic classification: Sandy, siliceous, mesic Typic Udifluvents

Typical Pedon

Wideman fine sandy loam, 0 to 3 percent slopes, occasionally flooded, in a hay field; 1,980 feet south and 1,107 feet east of the northwest corner of sec. 13, T. 26 N., R. 5 E. in Butler County; USGS Hendrickson, Missouri, topographic quadrangle; UTM coordinates 4,087,120 meters Northing and 724,780 meters Easting, Zone 15.

Ap—0 to 9 inches; brown (10YR 4/3) fine sandy loam; pale brown (10YR 6/3), dry; weak medium platy structure; very friable; many fine roots; many fine pores; few wormcasts; moderately acid; abrupt smooth boundary.
C1—9 to 13 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine subangular blocky structure; very friable; many fine roots; many fine pores; few wormcasts; moderately acid; abrupt wavy boundary.
C2—13 to 16 inches; dark yellowish brown (10YR 4/4) loamy sand; single grain; very friable; common fine roots; many fine pores; few wormcasts; moderately acid; abrupt wavy boundary.
C3—16 to 21 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine subangular blocky structure; very friable; common fine roots; many fine pores; moderately acid; abrupt wavy boundary.
C4—21 to 60 inches; yellowish brown (10YR 5/4) loamy fine sand; single grain; very friable; few fine roots; many fine pores; slightly acid.

Range in Characteristics

A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
Texture of the fine-earth fraction—fine sandy loam
Content of rock fragments—0 to 10 percent
Reaction—strongly acid to neutral

C horizon:
Color—hue of 10YR or 7.5YR, value of 4 to 7, and chroma of 2 to 6
Texture of the fine-earth fraction—sand, loamy sand, or fine sand with thick layers or thin strata of loamy very fine sand or finer textures
Content of rock fragments—none; some pedons have thin lenses that contain 1 to 75 percent gravel
Reaction—strongly acid to neutral

Yelton Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderate above the fragipan and slow in the fragipan
Landform: Hillslopes
Position on the landform: Footslopes
Parent material: Loess over colluvium derived from sandstone
Slope range: 3 to 8 percent
Elevation: 900 feet
Taxonomic classification: Fine-loamy, siliceous, active, mesic Typic Fragiudults

Typical Pedon

Yelton silt loam, 3 to 8 percent slopes, in a hardwood forest; 360 feet east and 100 feet south of the northwest corner of sec. 24, T. 29 N., R. 1 W. in Reynolds County; USGS Exchange, Missouri, topographic quadrangle; UTM coordinates 4,117,290 meters Northing and 676,489 meters Easting, Zone 15.

Oi—0 to 1 inch; partially decomposed organic matter; abrupt smooth boundary.
A—1 to 5 inches; dark grayish brown (10YR 4/2) silt loam; moderate fine granular structure; friable; 2

percent chert gravel; very strongly acid; clear smooth boundary.

BE—5 to 9 inches; brown (10YR 5/3) silt loam; weak fine subangular blocky structure; friable; many fine and medium roots; many fine tubular pores; few distinct brown (7.5YR 4/4) and dark yellowish brown (10YR 4/4) clay films on faces of peds; 1 percent chert gravel; very strongly acid; clear smooth boundary.

Bt—9 to 22 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common fine to coarse roots; many fine and medium tubular pores; many distinct brown (7.5YR 4/4) clay films on faces of peds; common distinct light yellowish brown (10YR 6/4) silt coats on faces of peds; 4 percent chert gravel; extremely acid; clear smooth boundary.

2Btx1—22 to 30 inches; 70 percent pinkish gray (7.5YR 6/2) and 30 percent light yellowish brown (10YR 6/4) loam; weak medium subangular blocky structure; firm; 65 percent brittle; common fine and few medium and coarse roots; many fine and medium vesicular pores; common distinct brown (7.5YR 4/4) and few distinct strong brown (7.5YR 5/6) clay films on faces of peds and few distinct gray (7.5YR 5/1) clay films in root channels and/or pores and on faces of peds; 10 percent chert gravel; extremely acid; clear wavy boundary.

2Btx2—30 to 40 inches; 65 percent pinkish gray (5YR 6/2) and 35 percent red (2.5YR 4/8) very gravelly loam; weak fine subangular blocky structure; firm; 70 percent brittle; common fine and few medium and coarse roots; many fine to coarse vesicular pores; common distinct dark gray (7.5YR 4/1) and few distinct red (2.5YR 4/6) clay films on faces of peds and few distinct brown (7.5YR 5/3) clay films on rock fragments; 40 percent chert gravel; extremely acid; clear smooth boundary.

3Bt1—40 to 54 inches; 70 percent red (2.5YR 4/6) clay loam, 20 percent red (2.5YR 4/8), and 10 percent light brown (7.5YR 6/4); moderate medium subangular blocky structure; firm; few fine and few coarse roots; many fine and medium tubular pores; common distinct reddish brown (2.5YR 4/4) clay films on faces of peds and few distinct dark gray (5YR 4/1) clay films in root channels and/or pores; 5 percent chert gravel; extremely acid; clear smooth boundary.

3Bt2—54 to 70 inches; 50 percent pale red (2.5YR 6/2) and 50 percent red (2.5YR 4/6) clay loam; moderate medium angular blocky and strong coarse subangular blocky structure; firm; few fine roots; common fine vesicular pores; common faint red (2.5YR 4/6) and few distinct yellowish red (5YR 4/6) clay films on faces of peds and few distinct dark reddish gray (2.5YR 4/1) clay films in root channels and/or pores; 5 percent sandstone cobbles and 3 percent chert gravel; extremely acid.

Range in Characteristics

Depth to the fragipan: 18 to 27 inches

Ap or A horizon:
- Color—hue of 7.5 YR or 10YR, value of 3 to 5, and chroma of 2 to 4
- Texture of the fine-earth fraction—silt loam
- Content of rock fragments—0 to 10 percent
- Reaction—extremely acid to slightly acid

E or BE horizon (if it occurs):
- Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 to 6
- Texture of the fine-earth fraction—loam or silt loam
- Content of rock fragments—0 to 10 percent
- Reaction—extremely acid to slightly acid

Bt horizon:
- Color—hue of 5YR, 7.5YR, or 10YR; value of 3 to 6; and chroma of 3 to 8
- Texture of the fine-earth fraction—loam or silty clay loam
- Content of rock fragments—0 to 12 percent
- Reaction—extremely acid to strongly acid

2Btx horizon:
- Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 8
- Texture of the fine-earth fraction—sandy loam or loam
- Content of rock fragments—0 to 60 percent
- Reaction—extremely acid to strongly acid

3Bt horizon:
- Color—hue of 10R to 10YR, value of 3 to 7, and chroma of 2 to 8
- Texture of the fine-earth fraction—sandy clay loam, loam, or clay loam
- Content of rock fragments—0 to 60 percent
- Reaction—extremely acid to strongly acid

Zanoni Series

Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately rapid
Landform: River valleys
Position on the landform: Stream terraces
Parent material: Loamy alluvium

Slope range: 0 to 3 percent
Elevation: 580 feet
Taxonomic classification: Coarse-loamy, siliceous, active, mesic Ultic Hapludalfs

Typical Pedon

Zanoni fine sandy loam, 1 to 3 percent slopes, rarely flooded, in a hay field; 2,500 feet east and 100 feet south of the northwest corner of sec. 17, T. 29 N., R. 2 W.; USGS Powder Mill Ferry, Missouri, topographic quadrangle; UTM coordinates 4,116,896 meters Northing and 660,775 meters Easting, Zone 15, NAD27.

Ap—0 to 8 inches; brown (7.5YR 4/4) fine sandy loam; weak very fine and fine granular structure; very friable; many very fine and fine roots; few fine tubular pores; moderately acid; clear smooth boundary.

AB—8 to 14 inches; 50 percent strong brown (7.5YR 4/6) and 50 percent brown (7.5YR 4/4) fine sandy loam; weak very fine and fine granular structure; very friable; many very fine and fine roots; few fine tubular pores; strongly acid; clear smooth boundary.

Bt1—14 to 22 inches; strong brown (7.5YR 4/6) fine sandy loam; weak fine prismatic structure; friable; few very fine and fine roots; common fine tubular pores; many prominent yellowish red (5YR 4/6) clay films on faces of peds; strongly acid; clear smooth boundary.

Bt2—22 to 47 inches; strong brown (7.5YR 4/6) fine sandy loam; moderate very fine and fine subangular blocky structure; friable; few very fine and fine roots; few very fine and fine tubular pores; common distinct yellowish red (5YR 4/6) clay films on faces of peds; common fine spherical black (N 2/0) iron-manganese concretions between peds; moderately acid; gradual smooth boundary.

Bt3—47 to 59 inches; strong brown (7.5YR 4/6) loam; weak very fine and fine subangular blocky structure; friable; few very fine and fine tubular pores; common faint brown (7.5YR 4/4) clay films on faces of peds; common fine spherical black (N 2/0) iron-manganese concretions between peds; 1 percent subrounded chert gravel; strongly acid; clear smooth boundary.

2Bt4—59 to 72 inches; strong brown (7.5YR 4/6) coarse sandy loam; moderate very fine and fine subangular blocky structure; friable; few very fine and fine tubular pores; common faint brown (7.5YR 4/4) clay films on faces of peds; few fine irregular black (N 2/0) iron-manganese masses between peds; 1 percent subrounded chert gravel; strongly acid; clear smooth boundary.

2Bt5—72 to 83 inches; strong brown (7.5YR 4/6) gravelly coarse sandy loam; weak very fine subangular blocky structure; very friable; common fine interstitial and tubular pores; few faint brown (7.5YR 4/4) clay films on faces of peds; 25 percent subrounded chert gravel; strongly acid; gradual smooth boundary.

2C—83 to 85 inches; strong brown (7.5YR 4/6) very gravelly loamy coarse sand; single grain; loose; common fine interstitial and tubular pores; few faint yellowish red (5YR 4/6) clay films on faces of peds and few faint light yellowish brown (10YR 6/4) clay films between sand grains; 50 percent subrounded chert gravel; strongly acid.

Range in Characteristics

Depth to bedrock: More than 80 inches
Thickness of the solum: 34 to more than 60 inches

A horizon:
- Color—hue of 10YR or 7.5YR, value of 3 or 4, and chroma of 2 to 4
- Texture of the fine-earth fraction—fine sandy loam
- Content of rock fragments—0 to 15 percent gravel
- Reaction—very strongly acid to neutral

AB horizon:
- Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 3 to 6
- Texture of the fine-earth fraction—sandy loam, fine sandy loam, loam, or coarse sandy loam
- Content of rock fragments—0 to 15 percent gravel
- Reaction—strongly acid to neutral

Bt horizon:
- Color—hue of 10YR to 2.5YR, value of 4 to 6, and chroma of 4 to 6
- Texture of the fine-earth fraction—sandy loam, fine sandy loam, sandy clay loam, or loam
- Content of rock fragments—0 to 35 percent gravel
- Reaction—strongly acid to neutral

2Bt or 2C horizon:
- Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6
- Texture of the fine-earth fraction—coarse sand, sand, loamy coarse sand, loamy sand, coarse sandy loam, or sandy loam
- Content of rock fragments—0 to 80 percent gravel or cobbles
- Reaction—very strongly acid to neutral

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 and physiography 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. It determines the limits of the chemical and mineral composition of the soil. The soils in Shannon County formed in residuum, colluvium, loess, alluvium, or in a combination of these materials.

Residuum consists primarily of material weathered from one of the different kinds of rock that occur in the area—rhyolite, sandstone, dolostone, and cherty dolostone. Shallow soils generally form solely in residuum. Shallow soils in the area and the kind of rock material are: Taumsauk soils—rhyolite and Gasconade soils—dolostone. Deeper soils generally have some loess or colluvium deposits in the upper part of the profile, but have a layer of residuum at some depth within the soil profile.

Colluvium, or hillslope sediment, is the debris which has accumulated on slopes from the weathering of rock. Horneybuck and Waben soils formed in thick colluvial deposits. The upper part of most deep and very deep soils on hillsides consists of colluvium. Killarney and Frenchmill soils formed in colluvium from rhyolite and granite.

Loess is a silty material deposited by the wind. Older, stable parts of the landscape have thin deposits of loess, or have had them in the past. Commonly, the thickness is 18 to 24 inches. The upper part of the Tonti, Fanchon, and Viburnum soils is loess. On other, more sloping and less stable parts of the landscape, loess has been eroded from or mixed with the surface layer.

Alluvium is material transported by water and deposited in the nearly level or gently sloping flood plains along rivers and streams. The Current River and its tributaries are the major streams. The south part of the county is drained by the Eleven Point River. The alluvial material was washed from the watersheds of these rivers and streams and their tributaries. It ranges from silt to sand and gravel. Relfe soils have a high content of gravel and sand. Jamesfin soils are mostly silt with some clay. Gladden soils are loamy.

Stream terraces are older flood plains that are now higher than the immediate flood plain because of downcutting of the stream channels to a lower elevation. Bearthicket and Secesh soils formed in old alluvium.

Most deep soils in Shannon County formed in a combination of loess, colluvium, and residuum. For example, in the Tonti soil, the parent materials are loess (0 to 22 inches), colluvium (22 to 38 inches), and residuum (38 to 66 inches). On the steep slopes, loess is mixed with the gravelly colluvium to a depth of about 18 inches. Parent materials in the Clarksville soil are colluvium that is mixed with loess (0 to 29 inches), a second layer of colluvium (29 to 52 inches),

and residuum (52 to 60 inches). The colluvium and residuum formed from cherty dolostone. Alred and Rueter soils also formed in colluvium and residuum from cherty dolostone (fig. 20).

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. Burrowing animals and insects loosen and mix various soil horizons.

Trees and other plants in the forest community have significantly affected soil formation (Pritchett, 1979). Mature trees require a large root system for support and a supply of water and nutrients. As the roots decay, soil material from the upper horizons fills the old root channels. The result is pockets of dark material in many forested soils, such as Clarksville soils. The soil in these old root channels has more humus and is more porous than the surrounding soil. Old root channels are most prevalent in the upper part of the subsoil, generally within a depth of about 1.5 feet.

When trees are blown down during periods of high winds, a large amount of soil is unearthed with the roots. These tree-tip mounds are common in the survey area. They alter the topography on a small scale. Although only a small area is affected by one tree, over a period of many years the surface layer is mixed with the underlying soil. The accumulation of this mixing can greatly affect soil formation.

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 cause rotting of organic materials, fix nitrogen, and improve tilth. Burrowing animals and insects loosen and mix various soil horizons.

Figure 20.—Blue Spring flows beneath an outcrop of Eminence dolostone.

In a relatively short time, human activities have greatly affected the processes of soil formation. The major alterations have resulted in vegetation, drainage of wet areas, and accelerated erosion. Row crops have replaced native grasses and many 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.

The glacial periods that so greatly affected the soil-forming processes were a result of climatic changes. Thousands of years of cold temperatures resulted in glaciers that moved into the area. Several soil-forming periods have occurred since the last ice sheet left northern Missouri. Geologic evidence indicates that the climate was colder and wetter than the present climate during some soil-forming periods and was warmer during others. The warmer weather and high winds resulted in severe geologic erosion, and much of the area was covered by loess.

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.

The youngest soils in Shannon County formed in alluvium. Relfe soils, for example, show little profile development. Alluvial material is added to the surface nearly every year. Bearthicket, Deible, and Secesh soils are older alluvial soils. They are on stream terraces and show moderate profile development.

The oldest soils in the survey area formed in areas at the highest elevations in the county. Tonti and Viburnum soils are examples. They have well developed, distinct horizons. The carbonates originally present in their parent material have been leached to a great depth, leaving the soil quite acid throughout. Clay has been concentrated in distinct subsoil horizons through translocation by water. Tonti soils have a distinct fragipan. Although the formation of the fragipan is obscure, it is clear that some time is required for its formation.

Most of the soils in Shannon County are intermediate in age. Clarksville and Alred soils formed on steep slopes. They have an eluviated subsurface horizon and translocated clay in the subsoil horizons.

The age of a soil, as expressed in profile characteristics, is not necessarily a reflection of time in years, but is a result of the interaction of various soil-forming factors over periods of time. The age is influenced by topography and climate. It is determined by the degree of profile development and not by the years the soil material has existed.

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Glossary

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

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

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

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

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

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

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

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

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.

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.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

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

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.

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

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

Channeled. Refers to a drainage area in which natural meandering or repeated branching and convergence of a streambed have created deeply incised cuts, either active or abandoned, in alluvial material.

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.

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 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.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

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

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

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

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

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

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 to water (in tables). Deep to permanent water during the dry season.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

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.

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.

Dune. A mound, ridge, or hill of loose, windblown granular material (generally sand), either bare or covered with vegetation.

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.

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

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

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.

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

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

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

Flooding (in tables). Soil flooded by moving water from stream overflow or runoff.

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

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.

Gypsum. A mineral consisting of hydrous calcium sulfate.

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

Hard to pack (in tables). Difficult to compact using regular earthwork construction equipment.

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.

High erodibility (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.

Igneous rock. Rock formed by solidification from a molten or partially molton state. Major varieties include plutonic and volcanic rock.

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.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

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

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.

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.

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.

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.

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.

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.

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

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

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

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been

removed. These zones are indications of the chemical reduction of iron resulting from saturation.

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

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

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

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

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

Rhyolite. A volcanic rock chemically equivalent to granite, usually light colored, very fine grained, or glassy-looking. May have tiny visible crystals of quartz and/or feldspar dispersed in a glassy white, green, or pink groundmass.

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.

Rubble land. Areas that have more than 90 percent of the surface covered by stones or boulders. Voids contain no soil material and virtually no vegetation other than lichens. The areas commonly are at the base of mountain slopes, but some are on mountain slopes as deposits of cobbles, stones, and boulders left by Pleistocene glaciation or by periglacial phenomena.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

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

Salinity. The electrical conductivity of a saline soil. It is expressed, in millimhos per centimeter, as follows:

Nonsaline	0 to 4
Slightly saline	4 to 8
Moderately saline	8 to 16
Strongly saline	more than 16

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sandy 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.

Sedimentary rock. Rock made up of particles

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

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

Series, soil. A group of soils that have profiles that are almost alike, 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.

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.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

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

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

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

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.

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 of 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.

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

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

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

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

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

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

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

Tailwater. The water directly downstream from a structure.

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

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

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

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine." 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, SC—sandy clay, SCL—sandy clay loam, SIC—silty clay, SICL—silty clay loam, SIL—silt loam, and SL—sandy loam*. Terms used in lieu of texture descriptions are *BR—bedrock*, *MPM—moderately decomposed plant material,* and SPM—slightly decomposed plant material. The texture modifiers that may apply to textural classes are *CB—cobbly, CBV—very cobbly, CBX—extremely cobbly, FLV—very flaggy, GR—gravelly, GRV—very gravelly, GRX—extremely gravelly, SR—stratified,* 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.

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.

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.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting

colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Very deep soil. A soil that is more than 60 inches deep over bedrock.

Very shallow soil. A soil that is less than 10 inches deep over bedrock.

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 West Plains, 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-----	43.5	20.5	32.0	73	-7	7	2.34	0.86	3.58	4	3.7
February----	48.1	24.5	36.3	77	0	15	2.93	1.51	4.18	4	3.7
March-------	58.7	34.2	46.4	84	11	81	4.63	2.49	6.51	7	2.1
April-------	69.7	43.7	56.7	88	24	236	4.39	2.46	6.10	7	0.2
May---------	77.0	52.4	64.7	90	33	456	4.51	2.43	6.33	7	0.0
June--------	84.5	60.8	72.6	96	44	678	4.34	2.43	6.03	6	0.0
July--------	89.7	65.7	77.7	101	50	857	3.10	1.41	4.56	5	0.0
August------	88.2	63.7	76.0	101	49	804	3.60	1.57	5.34	5	0.0
September---	80.5	56.9	68.7	96	36	560	3.87	1.57	5.81	5	0.0
October-----	71.1	43.9	57.5	90	25	257	3.18	0.76	5.09	4	0.0
November----	57.9	34.1	46.0	79	12	68	4.16	1.84	6.14	5	0.7
December----	46.5	24.9	35.7	72	-1	14	4.00	1.87	5.84	6	2.7
Yearly:											
Average---	67.9	43.8	55.9	---	---	---	---	---	---	---	---
Extreme---	107	-18	---	103	-9	---	---	---	---	---	---
Total-----	---	---	---	---	---	4,032	45.05	37.95	51.67	65	13.0

* 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 ind Fall

(Recorded in the period 1961-90 at West Plains, 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. 7	Apr. 19	May 1
2 year in 10 later than--	Apr. 2	Apr. 14	Apr. 26
5 year in 10 later than--	Mar. 23	Apr. 4	Apr. 16
First freezing temperature in fall:			
1 yr in 10 earlier than--	Oct. 26	Oct. 14	Oct. 4
2 yr in 10 earlier than--	Oct. 31	Oct. 19	Oct. 8
5 yr in 10 earlier than--	Nov. 10	Oct. 28	Oct. 17

Table 3.--Growing Season

(Recorded in the period 1961-90 at West Plains, 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	211	184	165
8 years in 10	218	192	171
5 years in 10	230	206	183
2 years in 10	243	220	195
1 year in 10	250	227	201

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
70022	Tonti silt loam, 3 to 8 percent slopes	6,598	1.2
70026	Tonti silt loam, 1 to 3 percent slopes	229	*
73013	Lowassie silt loam, 0 to 3 percent slopes, frequently ponded	1,039	0.2
73019	Poynor very gravelly silt loam, 1 to 8 percent slopes	318	*
73021	Poynor very gravelly silt loam, 15 to 35 percent slopes, stony	37	*
73042	Niangua-Bardley complex, 15 to 50 percent slopes, extremely stony	20,534	3.7
73053	Lily-Bender complex, 3 to 15 percent slopes	1,524	0.3
73054	Viburnum silt loam, 1 to 3 percent slopes	706	0.1
73055	Alred-Rueter complex, 15 to 35 percent slopes, very stony	21,619	3.9
73068	Tick very gravelly silt loam, 3 to 15 percent slopes, stony	1,812	0.3
73073	Scholten-Poynor complex, 8 to 15 percent slopes	16,862	3.1
73080	Alred-Bardley-Rock outcrop complex, 15 to 60 percent slopes, very stony	726	0.1
73081	Bender-Alred-Rock outcrop complex, 15 to 60 percent slopes, very stony	105	*
73139	Poynor-Clarksville-Scholten complex, 8 to 15 percent slopes, stony	20,758	3.8
73140	Clarksville-Scholten complex, 15 to 45 percent slopes, very stony	77,434	14.1
73143	Courtois silt loam, 3 to 8 percent slopes	1,797	0.3
73144	Courtois silt loam, 8 to 15 percent slopes	1,186	0.2
73147	Fourche silt loam, 3 to 8 percent slopes	343	*
73155	Gasconade-Rock outcrop complex, 3 to 35 percent slopes	1,690	0.3
73159	Yelton silt loam, 3 to 8 percent slopes	140	*
73176	Bendavis-Poynor complex, 8 to 15 percent slopes, stony	299	*
73197	Viburnum silt loam, 3 to 8 percent slopes	13,823	2.5
73220	Poynor extremely gravelly silt loam, 8 to 15 percent slopes	324	*
73221	Poynor very gravelly silt loam, karst, 3 to 35 percent slopes, stony	84	*
73222	Splitlimb silt loam, 0 to 3 percent slopes, frequently ponded	984	0.2
73223	Coulstone-Bender complex, 15 to 50 percent slopes, very stony	50,955	9.3
73236	Scholten-Poynor complex, 3 to 8 percent slopes	11,528	2.1
73242	Fanchon-Tonti complex, 3 to 8 percent slopes	1,444	0.3
73269	Brussels-Gasconade-Rock outcrop complex, 30 to 90 percent slopes, very bouldery	3,246	0.6
73295	Taterhill silt loam, 3 to 8 percent slopes	3,314	0.6
73298	Tonti-Hogcreek complex, 3 to 8 percent slopes	17,691	3.2
73301	Tick very gravelly silt loam, 3 to 8 percent slopes	2,224	0.4
73308	Grandgulf silt loam, 1 to 3 percent slopes, rarely ponded	263	*
73309	Clarksville-Bendavis complex, 15 to 35 percent slopes, stony	94	*
73310	Scholten-Bendavis-Poynor complex, 1 to 8 percent slopes	4,599	0.8
73311	Scholten-Bendavis-Poynor complex, 8 to 15 percent slopes	89,654	16.4
73313	Fanchon-Tonti complex, 1 to 3 percent slopes	838	0.2
73333	Taterhill silt loam, 1 to 3 percent slopes	1,212	0.2
73334	Horneybuck silt loam, 3 to 8 percent slopes	901	0.2
73335	Hobson-Rueter complex, 3 to 8 percent slopes	1,127	0.2
73336	Rueter-Gepp complex, bench, 8 to 15 percent slopes	4,584	0.8
73337	Tonti-Portia complex, 3 to 8 percent slopes	547	*
73338	Portia-Hobson complex, 8 to 15 percent slopes	939	0.2
73339	Arkana-Gepp complex, 8 to 15 percent slopes, rocky, stony	4,831	0.9
73340	Rueter-Gepp complex, 8 to 15 percent slopes, stony	6,856	1.3
73341	Gepp-Arkana complex, 15 to 55 percent slopes, rocky	25,526	4.7
73342	Alred-Arkana complex, 8 to 15 percent slopes, rocky	5,674	1.0
73361	Coulstone-Alred complex, 15 to 50 percent slopes, very stony	59,258	10.8
74627	Hartville silt loam, 1 to 3 percent slopes, rarely flooded	384	*
74636	Lecoma loam, 3 to 8 percent slopes	1,424	0.3
74637	Lecoma loam, 8 to 15 percent slopes	1,682	0.3
74642	Cornwall silt loam, 0 to 3 percent slopes, rarely ponded	1,053	0.2
74643	Lecoma silt loam, 1 to 3 percent slopes	183	*
74644	Deible silt loam, 1 to 3 percent slopes	285	*
74648	Aslinger silt loam, 3 to 8 percent slopes	750	0.1
74651	Waben gravelly silt loam, 3 to 8 percent slopes	970	0.2
74658	Zanoni fine sandy loam, 1 to 3 percent slopes, rarely flooded	1,349	0.2
75381	Bearthicket silt loam, 0 to 3 percent slopes, rarely flooded	890	0.2
75390	Razort silt loam, 0 to 3 percent slopes, rarely flooded	520	*
75394	Relfe gravelly sandy loam, 0 to 3 percent slopes, rarely flooded	3,549	0.6
75395	Jamesfin silt loam, 0 to 3 percent slopes, occasionally flooded	83	*
75408	Secesh silt loam, 0 to 3 percent slopes, rarely flooded	3,802	0.7

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
75409	Relfe sandy loam, 0 to 3 percent slopes, occasionally flooded	3,046	0.6
75411	Tilk very gravelly sandy loam, 0 to 3 percent slopes, rarely flooded	8,469	1.5
75416	Gladden loam, 0 to 3 percent slopes, occasionally flooded	449	*
75417	Relfe-Sandbur complex, 0 to 3 percent slopes, frequently flooded	7,101	1.3
75420	Secesh-Tilk complex, 0 to 3 percent slopes, occasionally flooded	2,788	0.5
75426	Gabriel silt loam, 0 to 3 percent slopes, rarely flooded	581	0.1
75430	Wideman fine sandy loam, 0 to 3 percent slopes, occasionally flooded	193	*
75433	Racket loam, 0 to 3 percent slopes, occasionally flooded	243	*
75451	Gladden silt loam, 0 to 3 percent slopes, occasionally flooded	612	0.1
75462	Huzzah sandy loam, 0 to 3 percent slopes, occasionally flooded	2,752	0.5
75463	Huzzah sandy loam, 0 to 3 percent slopes, rarely flooded	458	*
75464	Cedargap gravelly loam, 0 to 3 percent slopes, rarely flooded	3,786	0.7
75465	Raftville-Gabriel complex, 0 to 3 percent slopes, rarely flooded	606	0.1
75466	Midco very gravelly loam, 0 to 3 percent slopes, occasionally flooded	851	0.2
75470	Farewell gravelly silt loam, 0 to 3 percent slopes, rarely flooded	201	*
77000	Killarney-Frenchmill complex, 15 to 45 percent slopes, rubbly	2,830	0.5
77003	Delassus gravelly silt loam, 8 to 15 percent slopes, very bouldery	541	*
77004	Irondale gravelly silt loam, 15 to 35 percent slopes, rocky, extremely bouldery	1,839	0.3
77007	Taumsauk-Irondale-Rock outcrop complex, 15 to 45 percent slopes, extremely stony	1,125	0.2
77011	Taumsauk-Irondale-Rock outcrop complex, 3 to 15 percent slopes, very stony	1,629	0.3
99001	Water	126	*
99013	Riverwash, frequently flooded	2,857	0.5
	Total	548,283	100.0

* Less than 0.1 percent.

Table 5.--Land Capability and Yields per Acre of Crops

(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	Corn	Grain sorghum	Soybeans	Winter wheat
		Bu	Bu	Bu	Bu
70022:					
Tonti	3e	---	---	---	36
70026:					
Tonti	2e	---	60	---	38
73013:					
Lowassie	5w	---	---	---	---
73019:					
Poynor	4e	55	---	---	29
73021:					
Poynor	7e	---	---	---	---
73042:					
Niangua	7e	---	---	---	---
Bardley	7e	---	---	---	---
73053:					
Lily	4e	---	---	---	---
Bender	6e	---	---	---	---
73054:					
Viburnum	2e	50	---	---	43
73055:					
Alred	7s	---	---	---	---
Rueter	7s	---	---	---	---
73068:					
Tick	6e	---	---	---	---
73073:					
Scholten	6e	---	---	---	---
Poynor	6e	---	---	---	---
73080:					
Alred	7e	---	---	---	---
Bardley	7e	---	---	---	---
Rock outcrop	8s	---	---	---	---
73081:					
Bender	7e	---	---	---	---
Alred	7e	---	---	---	---
Rock outcrop	8s	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat
		Bu	Bu	Bu	Bu
73139:					
Poynor	6e	---	---	---	---
Clarksville	6e	---	---	---	---
Scholten	6e	---	---	---	---
73140:					
Clarksville	7s	---	---	---	---
Scholten	7s	---	---	---	---
73143:					
Courtois	3e	75	---	---	35
73144:					
Courtois	4e	65	---	---	25
73147:					
Fourche	3e	110	95	40	45
73155:					
Gasconade	7s	---	---	---	---
Rock outcrop	8s	---	---	---	---
73159:					
Yelton	3e	---	---	---	36
73176:					
Bendavis	6e	---	---	---	---
Poynor	6e	---	---	---	---
73197:					
Viburnum	3e	50	---	---	38
73220:					
Poynor	6e	---	---	---	---
73221:					
Poynor	7e	---	---	---	---
73222:					
Splitlimb	2w	91	80	34	50
73223:					
Coulstone	7e	---	---	---	---
Bender	7e	---	---	---	---
73236:					
Scholten	4e	---	---	---	19
Poynor	4e	---	---	---	29
73242:					
Fanchon	3e	90	---	---	41
Tonti	3e	---	---	---	36

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat
		Bu	Bu	Bu	Bu
73269:					
Brussels	7s	---	---	---	---
Gasconade	7s	---	---	---	---
Rock outcrop	8s	---	---	---	---
73295:					
Taterhill	3e	90	---	---	43
73298:					
Tonti	3e	60	55	---	36
Hogcreek	3e	---	55	---	36
73301:					
Tick	4e	---	---	---	38
73308:					
Grandgulf	1	130	---	45	46
73309:					
Clarksville	7e	---	---	---	---
Bendavis	7e	---	---	---	---
73310:					
Scholten	4e	---	---	---	19
Bendavis	4e	---	---	---	19
Poynor	4e	---	---	---	29
73311:					
Scholten	6e	---	---	---	---
Bendavis	6e	---	---	---	---
Poynor	6e	---	---	---	---
73313:					
Fanchon	2e	90	---	---	43
Tonti	2e	---	60	---	38
73333:					
Taterhill	2e	60	70	23	---
73334:					
Horneybuck	3e	78	68	29	32
73335:					
Hobson	3e	---	---	---	35
Rueter	4e	---	---	---	---
73336:					
Rueter	7s	---	---	---	---
Gepp	4e	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat
		Bu	Bu	Bu	Bu
73337:					
Tonti	3e	60	55	---	36
Portia	3e	70	---	---	---
73338:					
Portia	4e	---	---	---	---
Hobson	4e	---	---	---	---
73339:					
Arkana	4e	---	---	---	---
Gepp	4e	---	---	---	---
73340:					
Rueter	7s	---	---	---	---
Gepp	4e	---	---	---	---
73341:					
Gepp	4e	---	---	---	---
Arkana	4e	---	---	---	---
73342:					
Alred	6s	---	---	---	---
Arkana	4e	---	---	---	---
73361:					
Coulstone	7e	---	---	---	---
Alred	7s	---	---	---	---
74627:					
Hartville	2e	85	---	---	38
74636:					
Lecoma	3e	83	73	30	43
74637:					
Lecoma	4e	---	---	---	40
74642:					
Cornwall	1	80	80	25	30
74643:					
Lecoma	2e	85	75	32	35
74644:					
Deible	4w	90	70	30	35
74648:					
Aslinger	3e	75	70	29	33
74651:					
Waben	3s	59	52	22	24
74658:					
Zanoni	2e	---	---	---	38
75381:					
Bearthicket	1	125	110	45	40

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat
		Bu	Bu	Bu	Bu
75390:					
Razort	2e	85	80	35	48
75394:					
Relfe	4s	---	---	---	---
75395:					
Jamesfin	2w	115	95	40	44
75408:					
Secesh	2s	80	72	43	40
75409:					
Relfe	4s	55	48	---	26
75411:					
Tilk	3s	70	54	---	31
75416:					
Gladden	2w	90	70	30	35
75417:					
Relfe	4s	---	---	---	---
Sandbur	3w	---	5	---	---
75420:					
Secesh	2w	---	---	---	41
Tilk	3w	72	58	25	26
75426:					
Gabriel	4w	95	81	45	50
75430:					
Wideman	3s	60	50	26	30
75433:					
Racket	2w	97	85	36	48
75451:					
Gladden	2w	75	60	25	30
75462:					
Huzzah	2w	---	---	---	---
75463:					
Huzzah	2w	94	74	31	39
75464:					
Cedargap	3s	85	---	30	31
75465:					
Raftville	3e	---	---	---	29
Gabriel	2w	135	118	50	55
75466:					
Midco	3s	---	---	---	30
75470:					
Farewell	3w	---	---	---	53

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Soybeans	Winter wheat
		Bu	Bu	Bu	Bu
77000:					
Killarney	7s	---	---	---	---
Frenchmill	7s	---	---	---	---
77003:					
Delassus	4e	70	65	30	30
77004:					
Irondale	7s	---	---	---	---
77007:					
Taumsauk	7s	---	---	---	---
Irondale	7s	---	---	---	---
Rock outcrop	8s	---	---	---	---
77011:					
Taumsauk	7s	---	---	---	---
Irondale	7s	---	---	---	---
Rock outcrop	8s	---	---	---	---
99001.					
Water					
99013:					
Riverwash	7w	---	---	---	---

Table 6.--Pasture and Hayland Suitability Groups and Yields per Acre of Hay 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. See text for descriptions of groups listed in this table.)

Map symbol and soil name	Pasture and hayland group	Alfalfa hay	Caucasian bluestem	Orchardgrass -red clover	Tall fescue	Warm season grasses
		Tons	Tons	Tons	Tons	Tons
70022:						
Tonti	LyP	3.6	3.9	3.0	4.0	4.2
70026:						
Tonti	LyP	3.6	3.9	3.0	4.0	4.2
73013:						
Lowassie	WCU	---	1.8	7.4	8.2	9.5
73019:						
Poynor	GrU	4.0	4.2	3.2	4.0	4.5
73021:						
Poynor	GrU	---	4.2	---	4.4	4.5
73042:						
Niangua	GNS	---	---	---	---	---
Bardley	GNS	---	---	---	---	---
73053:						
Lily	MDU	---	6.7	5.8	5.3	6.8
Bender	MDU	---	6.7	5.8	5.3	6.8
73054:						
Viburnum	CyU	7.5	8.0	7.5	7.0	7.5
73055:						
Alred	GNS	---	---	---	---	---
Rueter	GNS	---	---	---	---	---
73068:						
Tick	GrU	3.0	3.0	2.4	2.7	3.2
73073:						
Scholten	GrP	1.0	1.1	0.8	2.0	1.2
Poynor	GrU	4.0	4.2	3.2	4.0	4.5
73080:						
Alred	GNS	---	---	---	---	---
Bardley	GNS	---	---	---	---	---
Rock outcrop.						
73081:						
Bender	GNS	---	---	---	---	---
Alred	GNS	---	---	---	---	---
Rock outcrop.						

Table 6.--Pasture and Hayland Suitability Groups and Yields per Acre of Hay and Pasture--Continued

Map symbol and soil name	Pasture and hayland group	Alfalfa hay	Caucasian bluestem	Orchardgrass -red clover	Tall fescue	Warm season grasses
		Tons	Tons	Tons	Tons	Tons
73139:						
Poynor	GrU	6.2	7.1	5.8	5.3	6.8
Clarksville	GrU	6.2	7.1	5.8	5.3	6.8
Scholten	GrP	2.2	2.7	1.1	2.2	2.7
73140:						
Clarksville	GNS	---	---	---	---	---
Scholten	GNS	---	---	---	---	---
73143:						
Courtois	CyU	7.5	8.0	7.5	7.0	7.5
73144:						
Courtois	CyU	7.5	8.0	7.5	7.0	7.5
73147:						
Fourche	LyU	9.5	8.0	7.4	6.7	8.0
73155:						
Gasconade	ShU	---	2.2	---	1.4	2.1
Rock outcrop.						
73159:						
Yelton	LyP	4.4	5.8	4.8	5.0	5.8
73176:						
Bendavis	MDU	2.0	2.2	1.6	2.0	2.4
Poynor	GrU	4.0	4.2	3.2	4.0	4.5
73197:						
Viburnum	CyU	7.5	8.0	7.5	7.0	7.5
73220:						
Poynor	GrU	4.0	4.2	3.2	4.0	4.5
73221:						
Poynor	GrU	6.2	7.1	5.8	5.3	6.8
73222:						
Splitlimb	LyU	8.4	9.0	6.7	5.5	9.6
73223:						
Coulstone	GNS	---	---	---	---	---
Bender	GNS	---	---	---	---	---
73236:						
Scholten	GrP	1.0	1.1	0.8	2.0	1.2
Poynor	GrU	4.0	4.2	3.2	4.0	4.5
73242:						
Fanchon	LyU	6.2	6.1	5.0	5.5	6.4
Tonti	LyP	3.6	3.9	3.0	4.0	4.2

Table 6.--Pasture and Hayland Suitability Groups and Yields per Acre of Hay and Pasture--Continued

Map symbol and soil name	Pasture and hayland group	Alfalfa hay	Caucasian bluestem	Orchardgrass -red clover	Tall fescue	Warm season grasses
		Tons	Tons	Tons	Tons	Tons
73269:						
Brussels	GNS	---	---	---	---	---
Gasconade	GNS	---	---	---	---	---
Rock outcrop.						
73295:						
Taterhill	LyU	9.5	8.0	7.4	6.7	8.0
73298:						
Tonti	LyP	4.4	5.8	4.8	5.0	5.8
Hogcreek	LyP	4.4	5.8	4.8	5.0	5.8
73301:						
Tick	GrU	6.2	7.1	5.8	5.3	6.8
73308:						
Grandgulf	LyU	9.5	8.0	7.4	6.7	8.0
73309:						
Clarksville	GNS	---	---	---	---	---
Bendavis	GNS	---	---	---	---	---
73310:						
Scholten	GrP	2.2	2.7	1.1	2.2	2.7
Bendavis	MDU	5.8	6.7	5.8	5.3	6.8
Poynor	GRU	6.2	7.1	5.8	5.3	6.8
73311:						
Scholten	GrP	---	---	---	---	---
Bendavis	MDU	---	---	---	---	---
Poynor	GrU	---	---	---	---	---
73313:						
Fanchon	LyU	9.5	8.0	7.4	6.7	8.0
Tonti	LyP	4.4	5.8	4.8	5.0	5.8
73333:						
Taterhill	LyU	9.5	8.0	7.4	6.7	8.0
73334:						
Horneybuck	WtP	---	---	5.0	7.3	8.2
73335:						
Hobson	LyP	4.4	5.8	4.8	5.0	5.8
Rueter	GrU	6.2	7.1	5.8	5.3	6.8
73336:						
Rueter	GrU	---	---	---	---	---
Gepp	GrU	6.2	7.1	5.8	5.3	6.8

Table 6.--Pasture and Hayland Suitability Groups and Yields per Acre of Hay and Pasture--Continued

Map symbol and soil name	Pasture and hayland group	Alfalfa hay	Caucasian bluestem	Orchardgrass -red clover	Tall fescue	Warm season grasses
		Tons	Tons	Tons	Tons	Tons
73337:						
Tonti	LyP	4.4	5.8	4.8	5.0	5.8
Portia	LyU	9.5	8.0	7.4	6.7	8.0
73338:						
Portia	LyU	9.5	8.0	7.4	6.7	8.0
Hobson	LyP	4.4	5.8	4.8	5.0	5.8
73339:						
Arkana	MDU	5.8	6.7	5.8	5.3	6.8
Gepp	GrU	6.2	7.1	5.8	5.3	6.8
73340:						
Rueter	GrU	---	---	---	---	---
Gepp	GrU	6.2	7.1	5.8	5.3	6.8
73341:						
Gepp	GrU	6.2	7.1	5.8	5.3	6.8
Arkana	MDU	5.8	6.7	5.8	5.3	6.8
73342:						
Alred	GrU	6.2	7.1	5.8	5.3	6.8
Arkana	MDU	5.8	6.7	5.8	5.3	6.8
73361:						
Coulstone	GNS	---	---	---	---	---
Alred	GNS	---	---	---	---	---
74627:						
Hartville	WCB	---	---	6.0	6.6	7.8
74636:						
Lecoma	LyU	9.5	8.0	7.4	6.7	8.0
74637:						
Lecoma	LyU	9.5	8.0	7.4	6.7	8.0
74642:						
Cornwall	LyU	9.5	8.0	7.4	6.7	8.0
74643:						
Lecoma	LyU	9.5	8.0	7.4	6.7	8.0
74644:						
Deible	WCB	---	---	7.1	8.0	9.2
74648:						
Aslinger	LyO	8.9	8.9	7.4	6.8	9.2
74651:						
Waben	GrU	6.2	7.1	5.8	5.3	6.8
74658:						
Zanoni	LyO	8.9	8.9	7.4	6.8	9.2

Table 6.--Pasture and Hayland Suitability Groups and Yields per Acre of Hay and Pasture--Continued

Map symbol and soil name	Pasture and hayland group	Alfalfa hay	Caucasian bluestem	Orchardgrass -red clover	Tall fescue	Warm season grasses
		Tons	Tons	Tons	Tons	Tons
75381:						
Bearthicket	LyO	8.9	8.9	7.4	6.8	9.2
75390:						
Razort	LyO	8.7	9.3	7.0	6.8	9.8
75394:						
Relfe	SyO	3.5	3.0	3.2	3.2	3.3
75395:						
Jamesfin	LyO	8.9	8.9	7.4	6.8	9.2
75408:						
Secesh	LyO	8.9	8.9	7.4	6.8	9.2
75409:						
Relfe	SyO	3.5	3.0	3.2	3.2	3.3
75411:						
Tilk	GrO	2.7	4.0	1.2	2.7	3.7
75416:						
Gladden	LyO	8.9	8.9	7.4	6.8	9.2
75417:						
Relfe	SyO	2.0	2.3	1.6	3.0	2.4
Sandbur	LyO	6.6	7.0	5.2	6.8	7.4
75420:						
Secesh	LyO	8.9	8.9	7.4	6.8	9.2
Tilk	GrO	2.7	4.0	1.2	2.7	3.7
75426:						
Gabriel	WLO	---	---	8.5	8.0	9.5
75430:						
Wideman	SyO	3.5	3.0	3.2	3.2	3.3
75433:						
Racket	LyO	8.9	8.9	7.4	6.8	9.2
75451:						
Gladden	LyO	8.9	8.9	7.4	6.8	9.2
75462:						
Huzzah	LyO	8.9	8.9	7.4	6.8	9.2
75463:						
Huzzah	LyO	---	---	---	---	---
75464:						
Cedargap	GrO	2.7	4.0	1.2	2.7	3.7
75465:						
Raftville	LyO	8.9	8.9	7.4	6.8	9.2
Gabriel	WLB	---	---	7.1	8.1	9.5
75466:						
Midco	GrO	2.7	4.0	1.2	2.7	3.7

Table 6.--Pasture and Hayland Suitability Groups and Yields per Acre of Hay and Pasture--Continued

Map symbol and soil name	Pasture and hayland group	Alfalfa hay	Caucasian bluestem	Orchardgrass -red clover	Tall fescue	Warm season grasses
		Tons	Tons	Tons	Tons	Tons
75470:						
Farewell	WLB	---	---	7.1	8.1	9.5
77000:						
Killarney	GNS	---	---	---	---	---
Frenchmill	GNS	---	---	---	---	---
77003:						
Delassus	LyP	4.4	5.8	4.8	5.0	5.8
77004:						
Irondale	GNS	---	---	---	---	---
77007:						
Taumsauk	GNS	---	---	---	---	---
Irondale	GNS	---	---	---	---	---
Rock outcrop.						
77011:						
Taumsauk	ShU	---	---	---	---	---
Irondale	MDU	---	---	---	---	---
Rock outcrop.						
99001.						
Water						
99013.						
Riverwash						

Table 7.--Forest 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: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
70022:				
Tonti	black oak	60	43	black oak, shortleaf pine
	post oak	---	---	
	shortleaf pine	53	71	
70026:				
Tonti	black oak	60	43	black oak, shortleaf pine
	post oak	---	---	
	shortleaf pine	53	71	
73013:				
Lowassie	black oak	50	29	black oak, shortleaf pine
	blackjack oak	---	---	
	post oak	45	29	
73019:				
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	
73021:				
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	
73042:				
Niangua	black oak	56	43	northern red oak, Shumard's oak
	northern red oak	---	---	
	white oak	54	43	
Bardley	black oak	54	43	black oak, eastern redcedar
	post oak	45	29	
	white oak	42	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	---	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
73055:				
Alred	black oak	60	43	black oak, shortleaf pine, white oak
	shortleaf pine	60	86	
	white oak	56	43	
Rueter	black oak	53	43	black oak, shortleaf pine
	hickory	---	---	
	post oak	45	29	
73068:				
Tick	black oak	55	43	black oak
	post oak	45	29	
	white oak	50	29	
73073:				
Scholten	black oak	50	29	black oak, eastern redcedar, shortleaf pine
	blackjack oak	---	---	
	hickory	---	---	
	post oak	---	---	
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	
73080:				
Alred	black oak	60	43	black oak, shortleaf pine, white oak
	shortleaf pine	60	86	
	white oak	56	43	
Bardley	black oak	54	43	black oak, eastern redcedar, shortleaf pine
	post oak	48	29	
	white oak	42	29	
Rock outcrop.				
73081:				
Bender	black oak	52	29	black oak, scarlet oak, shortleaf pine
	scarlet oak	---	---	
	shortleaf pine	53	71	
	white oak	50	29	
Alred	black oak	60	43	black oak, shortleaf pine, white oak
	shortleaf pine	60	86	
	white oak	56	43	
Rock outcrop.				
73139:				
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	
Clarksville	black oak	61	43	black oak, northern red oak, shortleaf pine, white oak
	northern red oak	---	---	
	shortleaf pine	58	86	
	white oak	55	43	
Scholten	black oak	50	29	black oak, eastern redcedar, shortleaf pine
	blackjack oak	---	---	
	hickory	---	---	
	post oak	---	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
73140:				
Clarksville	black oak	61	43	black oak, northern red oak, shortleaf pine, white oak
	northern red oak	---	---	
	shortleaf pine	58	86	
	white oak	55	43	
Scholten	black oak	50	29	black oak, eastern redcedar, shortleaf pine
	blackjack oak	---	---	
	hickory	---	---	
	post oak	---	---	
73143:				
Courtois	northern red oak	---	---	northern red oak, white oak
	shortleaf pine	65	100	
	white oak	60	43	
73144:				
Courtois	northern red oak	---	---	northern red oak, white oak
	shortleaf pine	65	100	
	white oak	60	43	
73147:				
Fourche	black oak	---	---	black oak, northern red oak, white ash, white oak
	northern red oak	---	---	
	white ash	---	---	
	white oak	62	43	
73155:				
Gasconade	blackjack oak	---	---	eastern redcedar
	chinkapin oak	40	29	
	eastern redcedar	27	29	
	post oak	---	---	
Rock outcrop.				
73159:				
Yelton	black oak	60	43	black oak, shortleaf pine
	white oak	55	43	
73176:				
Bendavis	black oak	54	43	scarlet oak, shortleaf pine
	post oak	47	29	
	scarlet oak	---	---	
	shortleaf pine	55	86	
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	
73197:				
Viburnum	black oak	62	43	scarlet oak, shortleaf pine, white oak
	post oak	---	---	
	scarlet oak	---	---	
	shortleaf pine	58	86	
	white oak	---	---	
73220:				
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
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	
73236:				
Scholten	black oak	50	29	black oak, shortleaf pine, white oak
	blackjack oak	---	---	
	hickory	---	---	
	post oak	---	---	
Poynor	black oak	53	43	shortleaf pine, white oak
	shortleaf pine	55	86	
	white oak	48	29	
73242:				
Fanchon	northern red oak	65	43	black walnut, shortleaf pine, white oak
	white oak	65	43	
Tonti	black oak	60	43	black oak, shortleaf pine
	post oak	---	---	
	shortleaf pine	53	71	
73269:				
Brussels	black oak	---	---	northern red oak, white oak
	northern red oak	60	43	
	shagbark hickory	---	---	
	white oak	58	---	
Gasconade	blackjack oak	---	---	eastern redcedar
	chinkapin oak	40	29	
	eastern redcedar	27	29	
	post oak	---	---	
Rock outcrop.				
73295:				
Taterhill	northern red oak	65	43	black walnut, shortleaf pine, white oak
	white oak	65	43	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
73298:				
Tonti	black oak	60	43	black oak, shortleaf pine
	post oak	---	---	
	shortleaf pine	53	71	
Hogcreek	black oak	60	43	black locust, black oak, shortleaf pine, white ash
	post oak	---	---	
73301:				
Tick	black oak	55	43	black oak
	post oak	45	29	
	white oak	50	29	
73308:				
Grandgulf	American sycamore	---	---	black walnut, cherrybark oak, northern red oak, white ash, white oak
	black walnut	---	---	
	cherrybark oak	95	129	
	common hackberry	---	---	
	pin oak	96	86	
	red maple	---	---	
73309:				
Clarksville	black oak	61	43	northern red oak, white oak
	northern red oak	---	---	
	shortleaf pine	58	86	
	white oak	55	43	
Bendavis	black oak	55	43	black oak, scarlet oak, shortleaf pine
	post oak	45	29	
	scarlet oak	---	---	
	shortleaf pine	56	86	
73310:				
Scholten	black oak	50	29	black oak, eastern redcedar, shortleaf pine
	blackjack oak	---	---	
	hickory	---	---	
	post oak	---	---	
Bendavis	black oak	55	43	black oak, scarlet oak, shortleaf pine
	post oak	45	29	
	scarlet oak	---	---	
	shortleaf pine	56	86	
Poynor	black oak	60	43	black oak, shortleaf pine
	shortleaf pine	58	86	
	white oak	54	43	
73311:				
Scholten	black oak	50	29	black oak, shortleaf pine
	blackjack oak	---	---	
	hickory	---	---	
	post oak	---	---	
Bendavis	black oak	55	43	shortleaf pine
	post oak	45	29	
	scarlet oak	---	---	
	shortleaf pine	56	86	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
73311:				
Poynor	black oak	60	43	black oak,
	shortleaf pine	58	86	shortleaf pine
	white oak	54	43	
73313:				
Fanchon	northern red oak	65	43	black walnut,
	white oak	65	43	shortleaf pine,
				white oak
Tonti	black oak	60	43	black oak,
	post oak	---	---	shortleaf pine
	shortleaf pine	53	71	
73333:				
Taterhill	eastern redcedar	50	57	eastern redcedar,
	northern red oak	70	57	northern red oak,
	shortleaf pine	70	114	shortleaf pine,
				white oak
73334:				
Horneybuck	black oak	57	43	black oak,
	post oak	---	---	shortleaf pine,
	white oak	55	43	white oak
73335:				
Hobson	black oak	60	43	black oak,
	shortleaf pine	---	---	shortleaf pine,
	white oak	55	43	white oak
Rueter	black oak	61	43	northern red oak,
	northern red oak	61	43	white oak
	white oak	58	43	
73336:				
Rueter	black oak	61	43	---
	northern red oak	61	43	
	white oak	58	43	
Gepp	black oak	53	43	black oak,
	shortleaf pine	55	43	shortleaf pine,
	white oak	48	29	white oak
73337:				
Tonti	black oak	65	43	black oak,
	post oak	---	---	shortleaf pine
	shortleaf pine	53	43	
Portia	loblolly pine	75	---	loblolly pine,
	shortleaf pine	70	114	shortleaf pine
73338:				
Portia	loblolly pine	75	---	loblolly pine,
	shortleaf pine	72	114	shortleaf pine,
	sweetgum	80	---	tuliptree
	tuliptree	90	---	
Hobson	black oak	60	43	black oak,
	shortleaf pine	---	---	shortleaf pine,
	white oak	55	43	white oak

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
73339:				
Arkana	eastern redcedar	35	---	eastern redcedar, shortleaf pine
	northern red oak	55	---	
	shortleaf pine	55	72	
	white oak	---	---	
Gepp	black oak	53	43	black oak, shortleaf pine, white oak
	shortleaf pine	55	43	
	white oak	48	29	
73340:				
Rueter	black oak	61	43	---
	northern red oak	61	43	
	white oak	58	43	
Gepp	black oak	53	43	black oak, shortleaf pine, white oak
	shortleaf pine	55	43	
	white oak	48	29	
73341:				
Gepp	black oak	53	43	black oak, shortleaf pine, white oak
	shortleaf pine	55	43	
	white oak	48	29	
Arkana	eastern redcedar	35	---	eastern redcedar, shortleaf pine
	northern red oak	55	---	
	shortleaf pine	55	72	
	white oak	---	---	
73342:				
Alred	black oak	53	43	black oak, shortleaf pine, white oak
	shortleaf pine	55	43	
	white oak	48	29	
Arkana	eastern redcedar	35	---	eastern redcedar, shortleaf pine
	northern red oak	55	---	
	shortleaf pine	55	72	
	white oak	---	---	
73361:				
Coulstone	black oak	56	43	black oak, scarlet oak, shortleaf pine
	scarlet oak	---	---	
	shortleaf pine	57	86	
	white oak	55	43	
Alred	black oak	60	43	black oak, shortleaf pine, white oak
	shortleaf pine	60	86	
	white oak	56	43	
74627:				
Hartville	northern red oak	---	---	green ash, northern red oak, white oak
	white oak	55	43	
74636:				
Lecoma	black oak	65	43	northern red oak, shortleaf pine, white oak
	northern red oak	65	43	
	white oak	60	43	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
74637:				
Lecoma	black oak	65	43	northern red oak, shortleaf pine, white oak
	northern red oak	65	43	
	white oak	60	43	
74642:				
Cornwall	black oak	65	43	northern red oak, shortleaf pine, white oak
	eastern redcedar	45	43	
	northern red oak	65	43	
	post oak	---	---	
	shortleaf pine	60	86	
	white oak	60	43	
74643:				
Lecoma	black oak	75	57	green ash, northern red oak, white oak
	northern red oak	75	57	
	white oak	65	43	
74644:				
Deible	green ash	---	---	eastern cottonwood, green ash, pin oak, silver maple
	pin oak	76	57	
	silver maple	---	---	
74648:				
Aslinger	black oak	60	43	scarlet oak, shortleaf pine
	scarlet oak	60	43	
	shortleaf pine	---	---	
	white oak	---	---	
74651:				
Waben	black oak	71	57	black oak, northern red oak, shortleaf pine, white oak
	northern red oak	66	57	
	shortleaf pine	70	114	
	white oak	66	43	
74658:				
Zanoni	American sycamore	85	86	black walnut, shortleaf pine
	black walnut	---	---	
	shortleaf pine	---	---	
	white oak	75	57	
75381:				
Bearthicket	American sycamore	---	---	black walnut, cherrybark oak, green ash, northern red oak, white oak
	black walnut	---	---	
	common hackberry	---	---	
	pin oak	96	86	
	red maple	---	---	
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	
75394:				
Relfe	American sycamore	---	---	black oak, shortleaf pine
	black oak	60	43	
	shortleaf pine	---	---	
	white oak	55	43	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
75395:				
Jamesfin	American sycamore	90	100	black walnut, eastern cottonwood, green ash
	black walnut	---	---	
	eastern cottonwood	---	---	
	river birch	---	---	
75408:				
Secesh	American sycamore	---	---	American sycamore, black walnut, shortleaf pine
	black oak	---	---	
	black walnut	---	---	
	shortleaf pine	---	---	
	white oak	60	43	
75409:				
Relfe	American sycamore	---	---	black oak, shortleaf pine
	black oak	60	43	
	shortleaf pine	---	---	
	white oak	55	43	
75411:				
Tilk	black oak	50	29	eastern redcedar, shortleaf pine
	eastern redcedar	---	---	
	post oak	45	29	
	scarlet oak	50	29	
	shortleaf pine	55	86	
75416:				
Gladden	American sycamore	85	86	black walnut, northern red oak, white ash, white oak
	bitternut hickory	---	---	
	black walnut	---	---	
	blackgum	---	---	
	northern red oak	---	---	
	white oak	75	57	
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	
75420:				
Secesh	American sycamore	---	---	American sycamore, black walnut, shortleaf pine
	black oak	---	---	
	black walnut	---	---	
	shortleaf pine	---	---	
	white oak	60	43	
Tilk	black oak	50	29	eastern redcedar, shortleaf pine
	eastern redcedar	---	---	
	post oak	45	29	
	scarlet oak	50	29	
	shortleaf pine	55	86	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
75426:				
Gabriel	eastern cottonwood	90	100	American sycamore, eastern cottonwood, green ash, silver maple
	silver maple	80	29	
75430:				
Wideman	American sycamore	80	72	eastern cottonwood
	eastern cottonwood	90	100	
75433:				
Racket	American sycamore	---	---	black walnut
	black cherry	---	---	
	black walnut	72	72	
	northern red oak	---	---	
	white ash	---	---	
75451:				
Gladden	American sycamore	85	86	black walnut, green ash, white oak
	black walnut	---	---	
	shortleaf pine	---	---	
	white oak	75	57	
75462:				
Huzzah	American sycamore	---	---	black walnut, northern red oak, white ash, white oak
	black walnut	70	---	
	white oak	90	72	
75463:				
Huzzah	American sycamore	---	---	black walnut
	black cherry	---	---	
	black walnut	72	72	
	northern red oak	---	---	
	white ash	---	---	
75464:				
Cedargap	black oak	66	43	black oak, shortleaf pine
75465:				
Raftville	black oak	57	---	black oak
	post oak	---	---	
	white oak	55	---	
Gabriel	eastern cottonwood	90	100	American sycamore, common hackberry, eastern arborvitae, eastern cottonwood, green ash, silver maple
	silver maple	80	29	
75466:				
Midco	American sycamore	---	---	shortleaf pine, white oak
	black oak	60	43	
	shortleaf pine	---	---	
	white oak	55	43	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
75470:				
Farewell	American sycamore	---	---	American sycamore, green ash, swamp white oak, sweetgum
	eastern cottonwood	95	114	
	green ash	---	---	
	pin oak	85	72	
	red maple	---	---	
	swamp white oak	---	---	
77000:				
Killarney	northern red oak	60	43	northern red oak, shortleaf pine
	shortleaf pine	55	72	
	white oak	55	43	
Frenchmill	northern red oak	70	57	northern red oak, shortleaf pine, white oak
	shortleaf pine	60	86	
	white oak	65	43	
77003:				
Delassus	black oak	---	---	black oak, northern red oak, shortleaf pine, white oak
	northern red oak	60	43	
	shortleaf pine	---	---	
	white oak	47	29	
77004:				
Irondale	black oak	48	29	black oak, scarlet oak, shortleaf pine
	northern red oak	47	29	
	post oak	---	---	
	shortleaf pine	48	56	
77007:				
Taumsauk.				
Irondale	black oak	48	29	black oak, scarlet oak, shortleaf pine
	northern red oak	47	29	
	post oak	---	---	
	shortleaf pine	48	56	
Rock outcrop.				
77011:				
Taumsauk.				
Irondale	black oak	48	29	shortleaf pine
	northern red oak	47	29	
	shortleaf pine	---	---	
	white oak	62	43	
Rock outcrop.				
99001.				
Water				
99013.				
Riverwash				

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		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)	
70026:										
Tonti----------	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)	
73013:										
Lowassie-------	Limited		Limited		Very limited		Very limited		Very limited	
	seasonally ponded	0.80	seasonally ponded	0.80	seasonal wetness	1.00	seasonal wetness	1.00	seasonal wetness	1.00
	(limited)		(limited)		(very limited)		(very limited)		(very limited)	
	seasonal wetness	0.60	seasonal wetness	0.60	seasonally ponded	0.80	seasonally ponded	0.80	ponded (wetness)	1.00
	(moderately limited)		(moderately limited)		(limited)		(limited)		(very limited)	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately 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)							

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
73042:										
Niangua--------	Moderately limited		Very limited		Limited		Limited		Very limited	
	surface stones	0.42	slope	1.00	slope	0.91	slope	0.91	slope	1.00
	(moderately limited)		(very limited)		(limited)		(limited)		(very limited)	
	small stones	0.42	surface stones	0.79	large surface stones	0.60	large surface stones	0.60	large surface stones	0.60
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	slope	0.25	small stones	0.42			small stones	0.30	surface stones	0.42
	(slightly limited)		(moderately limited)				(slightly limited)		(moderately limited)	
Bardley--------	Moderately limited		Very limited		Limited		Limited		Very limited	
	surface stones	0.42	slope	1.00	slope	0.91	slope	0.91	slope	1.00
	(moderately limited)		(very limited)		(limited)		(limited)		(very limited)	
	slope	0.25	surface stones	0.79	large surface stones	0.60	large surface stones	0.60	large surface stones	0.60
	(slightly limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
									surface stones	0.42
									(moderately limited)	
73053:										
Lily----------	Not limited		Slightly limited		Moderately limited		Not limited		Moderately limited	
			slope	0.30	low strength	0.50			low strength	0.50
			(slightly limited)		(moderately limited)				(moderately limited)	
									slope	0.31
									(moderately limited)	
Bender---------	Slightly limited		Moderately limited		Not limited		Slightly limited		Moderately limited	
	large stones	0.17	large stones	0.45			large stones	0.17	slope	0.31
	(slightly limited)		(moderately limited)				(slightly limited)		(moderately limited)	
	small stones	0.03	slope	0.30						
	(slightly limited)		(slightly limited)							
			small stones	0.03						
			(slightly limited)							
73054:										
Viburnum-------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately 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)	

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
73055:										
Alred----------	Moderately limited		Limited		Moderately limited		Moderately limited		Very limited	
	small stones	0.31	slope	0.99	slope	0.60	slope	0.60	slope	1.00
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
	slope	0.14	surface stones	0.38			small stones	0.12	slippage potential	0.90
	(slightly limited)		(moderately limited)				(slightly limited)		(limited)	
			small stones	0.31						
			(moderately limited)							
Rueter---------	Slightly limited		Limited		Moderately limited		Moderately limited		Very limited	
	small stones	0.28	slope	0.99	slope	0.60	slope	0.60	slope	1.00
	(slightly limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
	slope	0.14	surface stones	0.38			small stones	0.08	slippage potential	0.90
	(slightly limited)		(moderately limited)				(slightly limited)		(limited)	
			small stones	0.28						
			(slightly limited)							
73068:										
Tick----------	Moderately limited		Moderately limited		Not limited		Slightly limited		Limited	
	small stones	0.36	slope	0.47			small stones	0.20	slope	0.76
	(moderately limited)		(moderately limited)				(slightly limited)		(limited)	
			small stones	0.36						
			(moderately limited)							
			surface stones	0.01						
			(slightly limited)							
73073:										
Scholten-------	Moderately limited		Moderately limited		Slightly limited		Slightly limited		Limited	
	small stones	0.42	slope	0.47	seasonal wetness	0.28	small stones	0.30	slope	0.76
	(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)		(limited)	
			small stones	0.42			seasonal wetness	0.28	seasonal wetness	0.28
			(moderately limited)				(slightly limited)		(slightly limited)	
Poynor---------	Moderately limited		Moderately limited		Not limited		Moderately limited		Limited	
	small stones	0.60	small stones	0.60			small stones	0.60	slope	0.76
	(moderately limited)		(moderately limited)				(moderately limited)		(limited)	
			slope	0.47						
			(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)							

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
73080:										
Bardley--------	Moderately limited		Very limited		Limited		Limited		Very limited	
	large stones	0.50	slope	1.00	slope	0.87	slope	0.87	slope	1.00
	(moderately limited)		(very limited)		(limited)		(limited)		(very limited)	
	slope	0.23	large stones	0.86			large stones	0.50		
	(slightly limited)		(limited)				(moderately limited)			
	small stones	0.07	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)	
Alred----------	Limited		Very limited		Limited		Limited		Very limited	
	large stones	0.61	slope	1.00	slope	0.68	slope	0.68	slope	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	surface stones	0.41	large stones >35%	0.99			large stones	0.61	surface stones	0.41
	(moderately limited)		(very limited)				(limited)		(moderately limited)	
	slope	0.16	surface stones	0.78						
	(slightly limited)		(limited)							
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73139:										
Poynor---------	Slightly limited		Moderately limited		Moderately limited		Not limited		Limited	
	small stones	0.14	slope	0.47	low strength	0.50			slope	0.76
	(slightly limited)		(moderately limited)		(moderately limited)				(limited)	
			small stones	0.14					slippage potential	0.50
			(slightly limited)						(moderately limited)	
			surface stones	0.02					low strength	0.50
			(slightly limited)						(moderately limited)	
Clarksville----	Slightly limited		Moderately limited		Moderately limited		Not limited		Limited	
	small stones	0.04	slope	0.47	low strength	0.50			slope	0.76
	(slightly limited)		(moderately limited)		(moderately limited)				(limited)	
			small stones	0.04					slippage potential	0.50
			(slightly limited)						(moderately limited)	
			surface stones	0.02					low strength	0.50
			(slightly 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
73139:										
Scholten-------	Slightly limited		Moderately limited		Moderately limited		Moderately limited		Limited	
	small stones	0.06	slope	0.47	low strength	0.50	seasonal wetness	0.43	slope	0.76
	(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
			small stones	0.06	seasonal wetness	0.43			slippage potential	0.50
			(slightly limited)		(moderately limited)				(moderately limited)	
			surface stones	0.02					low strength	0.50
			(slightly limited)						(moderately limited)	
73140:										
Clarksville----	Slightly limited		Very limited		Limited		Limited		Very limited	
	slope	0.20	slope	1.00	slope	0.79	slope	0.79	slope	1.00
	(slightly limited)		(very limited)		(limited)		(limited)		(very limited)	
	small stones	0.17	surface stones	0.38	low strength	0.50			slippage potential	0.90
	(slightly limited)		(moderately limited)		(moderately limited)				(limited)	
			small stones	0.17					low strength	0.50
			(slightly limited)						(moderately limited)	
Scholten-------	Limited		Limited		Moderately limited		Limited		Very limited	
	small stones	0.68	slope	0.99	slope	0.60	small stones	0.68	slope	1.00
	(limited)		(limited)		(moderately limited)		(limited)		(very limited)	
	slope	0.14	small stones	0.68			slope	0.60	slippage potential	0.90
	(slightly limited)		(limited)				(moderately limited)		(limited)	
			surface stones	0.38						
			(moderately limited)							
73143:										
Courtois-------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			slippage potential	0.50
					(moderately limited)				(moderately limited)	
									low strength	0.50
									(moderately limited)	
73144:										
Courtois-------	Not limited		Moderately limited		Moderately limited		Not limited		Limited	
			slope	0.43	low strength	0.50			slope	0.68
			(moderately limited)		(moderately limited)				(limited)	
									slippage potential	0.50
									(moderately limited)	
									low strength	0.50
									(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
73147:										
Fourche--------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength	0.50	seasonal wetness	0.10	slippage potential	0.50
					(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.10			low strength	0.50
					(slightly limited)				(moderately limited)	
									seasonal wetness	0.10
									(slightly limited)	
73155:										
Gasconade------	Moderately limited		Limited		Moderately limited		Moderately limited		Very limited	
	stickiness (surface)	0.50	slope	0.72	low strength	0.50	stickiness (surface)	0.50	slope	1.00
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
	slope	0.05	stickiness (surface)	0.50	stickiness (surface)	0.50	slope	0.20	slippage potential	0.90
	(slightly limited)		(moderately limited)		(moderately limited)		(slightly limited)		(limited)	
					slope	0.20			low strength	0.50
					(slightly limited)				(moderately limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73159:										
Yelton---------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength	0.50	seasonal wetness	0.28	low strength	0.50
					(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.28			seasonal wetness	0.28
					(slightly limited)				(slightly limited)	
73176:										
Bendavis-------	Moderately limited		Moderately limited		Slightly limited		Moderately limited		Limited	
	small stones	0.60	small stones	0.60	seasonal wetness	0.10	small stones	0.60	slope	0.76
	(moderately limited)		(moderately limited)		(slightly limited)		(moderately limited)		(limited)	
			slope	0.47			seasonal wetness	0.10	seasonal wetness	0.10
			(moderately limited)				(slightly limited)		(slightly limited)	
			surface stones	0.02						
			(slightly limited)							
Poynor---------	Slightly limited		Moderately limited		Not limited		Slightly limited		Limited	
	small stones	0.24	slope	0.47			small stones	0.01	slope	0.76
	(slightly limited)		(moderately limited)				(slightly limited)		(limited)	
			small stones	0.24						
			(slightly limited)							
			surface stones	0.02						
			(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
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)	
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)							
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)	

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
73223:										
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)	
73236:										
Scholten-------	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Slightly limited	
	small stones	0.15	small stones	0.15	seasonal wetness	0.28	seasonal wetness	0.28	seasonal wetness	0.28
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
			slope	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)			
			surface stones	0.15						
			(slightly limited)							
73242:										
Fanchon--------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	
Tonti----------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength	0.50	seasonal wetness	0.27	low strength	0.50
					(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.27			seasonal wetness	0.27
					(slightly limited)				(slightly limited)	
73269:										
Brussels-------	Limited		Very limited		Very limited		Very limited		Very limited	
	slope	0.72	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	stickiness (surface)	0.50	surface stones	0.79	large surface stones	0.60	large surface stones	0.60	slippage potential	0.90
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(limited)	
	surface stones	0.42	stickiness (surface)	0.50	stickiness (surface)	0.50	stickiness (surface)	0.50	large surface stones	0.60
	(moderately limited)		(moderately limited)		(moderately limited)		(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
73269:										
Gasconade------	Limited		Very limited		Very limited		Very limited		Very limited	
	stickiness (surface) (limited)	0.75	slope (very limited)	1.00	slope (very limited)	1.00	slope (very limited)	1.00	slope (very limited)	1.00
	surface stones (moderately limited)	0.42	surface stones (limited)	0.79	stickiness (surface) (limited)	0.75	stickiness (surface) (limited)	0.75	slippage potential (limited)	0.90
	slope (moderately limited)	0.37	stickiness (surface) (limited)	0.75	large surface stones (moderately limited)	0.60	large surface stones (moderately limited)	0.60	stickiness (surface) (limited)	0.75
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73295:										
Taterhill------	Not limited		Slightly limited		Moderately limited		Not limited		Moderately limited	
			slope (slightly limited)	0.10	low strength (moderately limited)	0.50			low strength (moderately limited)	0.50
73298:										
Tonti----------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength (moderately limited)	0.50	seasonal wetness (slightly limited)	0.20	low strength (moderately limited)	0.50
					seasonal wetness (slightly limited)	0.20			seasonal wetness (slightly limited)	0.20
Hogcreek-------	Not limited		Not limited		Moderately limited		Slightly limited		Moderately limited	
					low strength (moderately limited)	0.50	seasonal wetness (slightly limited)	0.26	low strength (moderately limited)	0.50
					seasonal wetness (slightly limited)	0.26			seasonal wetness (slightly limited)	0.26
73301:										
Tick----------	Not limited		Slightly limited		Not limited		Not limited		Not limited	
			surface stones (slightly limited)	0.01						
73308:										
Grandgulf------	Limited		Limited		Limited		Limited		Very limited	
	seasonally ponded (limited)	0.80	seasonally ponded (limited)	0.80	seasonally ponded (limited)	0.80	seasonally ponded (limited)	0.80	ponded (wetness) (very limited)	1.00
					low strength (moderately limited)	0.50			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
73309:										
Clarksville----	Limited		Limited		Moderately limited		Limited		Very limited	
	small stones	0.73	slope	0.80	slope	0.31	small stones	0.73	slope	1.00
	(limited)		(limited)		(moderately limited)		(limited)		(very limited)	
	slope	0.07	small stones	0.73			slope	0.31	slippage potential	0.90
	(slightly limited)		(limited)				(moderately limited)		(limited)	
Bendavis-------	Limited		Very limited		Limited		Limited		Very limited	
	small stones	0.67	slope	1.00	slope	0.79	slope	0.79	slope	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	slope	0.20	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)			
73310:										
Scholten-------	Moderately limited		Moderately limited		Slightly limited		Slightly limited		Slightly limited	
	small stones	0.42	small stones	0.42	seasonal wetness	0.28	small stones	0.30	seasonal wetness	0.28
	(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)	
							seasonal wetness	0.28		
							(slightly limited)			
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)			
			surface stones	0.15						
			(slightly limited)							
73311:										
Scholten-------	Moderately limited		Moderately limited		Slightly limited		Slightly limited		Limited	
	small stones	0.38	slope	0.47	seasonal wetness	0.28	seasonal wetness	0.28	slope	0.76
	(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)		(limited)	
			small stones	0.38			small stones	0.24	seasonal wetness	0.28
			(moderately limited)				(slightly limited)		(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
73311:										
Bendavis-------	Not limited		Moderately limited		Slightly limited		Slightly limited		Limited	
			slope	0.47	seasonal wetness	0.10	seasonal wetness	0.10	slope	0.76
			(moderately limited)		(slightly limited)		(slightly limited)		(limited)	
			surface stones	0.02					seasonal wetness	0.10
			(slightly limited)						(slightly limited)	
Poynor---------	Slightly limited		Moderately limited		Not limited		Slightly limited		Limited	
	small stones	0.24	slope	0.47			small stones	0.01	slope	0.76
	(slightly limited)		(moderately limited)				(slightly limited)		(limited)	
			small stones	0.24						
			(slightly limited)							
73313:										
Fanchon--------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	
Tonti----------	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)	
73333:										
Taterhill------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			slippage potential	0.50
					(moderately limited)				(moderately limited)	
									low strength	0.50
									(moderately limited)	
73334:										
Horneybuck-----	Not limited		Not limited		Moderately limited		Slightly limited		Moderately 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)	
73335:										
Hobson---------	Not limited		Slightly limited		Moderately limited		Slightly limited		Moderately limited	
			slope	0.10	low strength	0.50	seasonal wetness	0.20	low strength	0.50
			(slightly limited)		(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.20			seasonal wetness	0.20
					(slightly limited)				(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
73335:										
Rueter	Moderately limited		Moderately limited		Not limited		Slightly limited		Moderately limited	
	small stones	0.38	small stones	0.38			small stones	0.24	slippage potential	0.50
	(moderately limited)		(moderately limited)				(slightly limited)		(moderately limited)	
			slope	0.10						
			(slightly limited)							
73336:										
Rueter	Slightly limited		Moderately limited		Moderately limited		Not limited		Limited	
	small stones	0.04	slope	0.47	low strength	0.50			slope	0.76
	(slightly limited)		(moderately limited)		(moderately limited)				(limited)	
			small stones	0.04					low strength	0.50
			(slightly limited)						(moderately limited)	
Gepp	Slightly limited		Moderately limited		Moderately limited		Not limited		Limited	
	small stones	0.01	slope	0.47	low strength	0.50			slippage potential	0.90
	(slightly limited)		(moderately limited)		(moderately limited)				(limited)	
			small stones	0.01					slope	0.76
			(slightly limited)						(limited)	
									low strength	0.50
									(moderately limited)	
73337:										
Tonti	Not limited		Slightly limited		Moderately limited		Slightly limited		Moderately limited	
			slope	0.10	low strength	0.50	seasonal wetness	0.20	low strength	0.50
			(slightly limited)		(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.20			seasonal wetness	0.20
					(slightly limited)				(slightly limited)	
Portia	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	
73338:										
Portia	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)	

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
73338:										
Hobson---------	Not limited		Moderately limited		Moderately limited		Slightly limited		Limited	
			slope	0.47	low strength	0.50	seasonal wetness	0.20	slope	0.76
			(moderately limited)		(moderately limited)		(slightly limited)		(limited)	
					seasonal wetness	0.20			low strength	0.50
					(slightly limited)				(moderately limited)	
									seasonal wetness	0.20
									(slightly limited)	
73339:										
Arkana---------	Limited		Limited		Not limited		Limited		Limited	
	small stones	0.70	small stones	0.70			small stones	0.71	slope	0.76
	(limited)		(limited)				(limited)		(limited)	
			slope	0.47						
			(moderately limited)							
Gepp----------	Moderately limited		Moderately limited		Not limited		Moderately limited		Limited	
	small stones	0.56	small stones	0.56			small stones	0.54	slippage potential	0.90
	(moderately limited)		(moderately limited)				(moderately limited)		(limited)	
			slope	0.47					slope	0.76
			(moderately limited)						(limited)	
73340:										
Rueter---------	Moderately limited		Moderately limited		Not limited		Moderately limited		Limited	
	small stones	0.50	small stones	0.50			small stones	0.44	slope	0.76
	(moderately limited)		(moderately limited)				(moderately limited)		(limited)	
			slope	0.47						
			(moderately limited)							
Gepp----------	Slightly limited		Moderately limited		Moderately limited		Not limited		Limited	
	small stones	0.15	slope	0.47	low strength	0.50			slippage potential	0.90
	(slightly limited)		(moderately limited)		(moderately limited)				(limited)	
			small stones	0.15					slope	0.76
			(slightly limited)						(limited)	
									low strength	0.50
									(moderately limited)	
73341:										
Gepp----------	Very limited		Very limited		Limited		Very limited		Very limited	
	small stones	1.00	slope	1.00	slope	0.99	small stones	1.00	slope	1.00
	(very limited)		(very limited)		(limited)		(very limited)		(very limited)	
	very sandy (surface)	0.50	small stones	1.00	very sandy (surface)	0.50	slope	0.99	slippage potential	0.90
	(moderately limited)		(very limited)		(moderately limited)		(limited)		(limited)	
	slope	0.29	very sandy (surface)	0.50					very sandy (surface)	0.50
	(slightly limited)		(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
73341:										
Arkana---------	Limited		Very limited		Limited		Limited		Very limited	
	small stones	0.70	slope	1.00	slope	0.99	slope	0.99	slope	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	slope	0.29	small stones	0.70			small stones	0.70		
	(slightly limited)		(limited)				(limited)			
73342:										
Alred----------	Slightly limited		Moderately limited		Not limited		Slightly limited		Limited	
	small stones	0.24	slope	0.47			small stones	0.01	slippage potential	0.90
	(slightly limited)		(moderately limited)				(slightly limited)		(limited)	
			small stones	0.24					slope	0.76
			(slightly limited)						(limited)	
Arkana---------	Moderately limited		Moderately limited		Not limited		Slightly limited		Limited	
	small stones	0.31	slope	0.47			small stones	0.12	slope	0.76
	(moderately limited)		(moderately limited)				(slightly limited)		(limited)	
			small stones	0.31						
			(moderately limited)							
73361:										
Coulstone------	Limited		Very limited		Limited		Limited		Very limited	
	surface stones	0.66	slope	1.00	slope	0.99	slope	0.99	slope	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	small stones	0.41	surface stones >15%	1.00	large surface stones	0.52	large surface stones	0.52	surface stones	0.66
	(moderately limited)		(very limited)		(moderately limited)		(moderately limited)		(limited)	
	slope	0.29	small stones	0.41			small stones	0.29	large surface stones	0.52
	(slightly limited)		(moderately limited)				(slightly limited)		(moderately limited)	
Alred----------	Moderately limited		Very limited		Limited		Limited		Very limited	
	small stones	0.31	slope	1.00	slope	0.99	slope	0.99	slope	1.00
	(moderately limited)		(very limited)		(limited)		(limited)		(very limited)	
	slope	0.29	surface stones	0.38			small stones	0.12	slippage potential	0.90
	(slightly limited)		(moderately limited)				(slightly limited)		(limited)	
			small stones	0.31						
			(moderately limited)							
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)	

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
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)	
74642:										
Cornwall-------	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	0.34	slippage potential	0.50
					(moderately limited)		(moderately limited)		(moderately limited)	
					seasonal wetness	0.34			low strength	0.50
					(moderately limited)				(moderately limited)	
74643:										
Lecoma---------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	
74644:										
Deible---------	Moderately limited		Moderately limited		Limited		Limited		Limited	
	seasonal wetness	0.60	seasonal wetness	0.60	seasonal wetness	0.91	seasonal wetness	0.91	seasonal wetness	0.91
	(moderately limited)		(moderately limited)		(limited)		(limited)		(limited)	
					low strength	0.50			slippage potential	0.50
					(moderately limited)				(moderately limited)	
									low strength	0.50
									(moderately limited)	
74648:										
Aslinger-------	Not limited		Slightly limited		Moderately limited		Slightly limited		Moderately limited	
			slope	0.10	low strength	0.50	seasonal wetness	0.20	slippage potential	0.50
			(slightly limited)		(moderately limited)		(slightly limited)		(moderately limited)	
					seasonal wetness	0.20			low strength	0.50
					(slightly limited)				(moderately limited)	
									seasonal wetness	0.20
									(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
74651:										
Waben----------	Slightly limited		Slightly limited		Moderately limited		Not limited		Limited	
	small stones	0.05	slope	0.10	low strength	0.50			slippage potential	0.90
	(slightly limited)		(slightly limited)		(moderately limited)				(limited)	
			small stones	0.05					low strength	0.50
			(slightly limited)						(moderately limited)	
74658:										
Zanoni---------	Not limited		Not limited		Not limited		Not limited		Not limited	
75381:										
Bearthicket----	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			slippage potential	0.50
					(moderately limited)				(moderately limited)	
									low strength	0.50
									(moderately limited)	
75390:										
Razort---------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			low strength	0.50
					(moderately limited)				(moderately limited)	
75394:										
Relfe----------	Slightly limited		Slightly limited		Not limited		Not limited		Not limited	
	small stones	0.10	small stones	0.10						
	(slightly limited)		(slightly limited)							
75395:										
Jamesfin-------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			flooding	0.60
					(moderately limited)				(moderately limited)	
									low strength	0.50
									(moderately limited)	
75408:										
Secesh---------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			slippage potential	0.50
					(moderately limited)				(moderately limited)	
									low strength	0.50
									(moderately limited)	
75409:										
Relfe----------	Not limited		Not limited		Not limited		Not limited		Moderately limited	
									flooding	0.60
									(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
75411:										
Tilk----------	Limited		Limited		Not limited		Limited		Moderately limited	
	small stones	0.77	small stones	0.77			small stones	0.78	slippage potential	0.50
	(limited)		(limited)				(limited)		(moderately limited)	
75416:										
Gladden--------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			flooding	0.60
					(moderately limited)				(moderately limited)	
									slippage potential	0.50
									(moderately limited)	
									low strength	0.50
									(moderately limited)	
75417:										
Relfe----------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Very limited	
	small stones	0.58	small stones	0.58	very sandy (surface)	0.50	small stones	0.56	flooding	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	very sandy (surface)	0.50	very sandy (surface)	0.50					very sandy (surface)	0.50
	(moderately limited)		(moderately limited)						(moderately limited)	
Sandbur--------	Not limited		Not limited		Not limited		Not limited		Very limited	
									flooding	1.00
									(very limited)	
75420:										
Secesh---------	Not limited		Not limited		Moderately limited		Not limited		Moderately limited	
					low strength	0.50			flooding	0.60
					(moderately limited)				(moderately limited)	
									low strength	0.50
									(moderately limited)	
Tilk----------	Moderately limited		Moderately limited		Not limited		Slightly limited		Moderately limited	
	small stones	0.42	small stones	0.42			small stones	0.30	flooding	0.60
	(moderately limited)		(moderately limited)				(slightly limited)		(moderately limited)	
75426:										
Gabriel--------	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)	

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
75430:										
Wideman	Not limited		Not limited		Not limited		Not limited		Moderately limited flooding (moderately limited)	0.60
75433:										
Racket	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
75451:										
Gladden	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
75462:										
Huzzah	Not limited		Not limited		Not limited		Not limited		Moderately limited flooding (moderately limited)	0.60
75463:										
Huzzah	Not limited		Not limited		Not limited		Not limited		Not limited	
75464:										
Cedargap	Slightly limited small stones (slightly limited)	0.01	Slightly limited small stones (slightly limited)	0.01	Not limited		Not limited		Not limited	
75465:										
Raftville	Not limited		Not limited		Not limited		Not limited		Not limited	
Gabriel	Not limited		Not limited		Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.29	Slightly limited seasonal wetness (slightly limited)	0.29	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.29
75466:										
Midco	Limited small stones (limited)	0.67	Limited small stones (limited)	0.67	Not limited		Limited small stones (limited)	0.67	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
75470:										
Farewell-------	Moderately limited		Moderately limited		Very limited		Very limited		Very limited	
	seasonal wetness	0.60	seasonal wetness	0.60	seasonal wetness	1.00	seasonal wetness	1.00	seasonal wetness	1.00
	(moderately limited)		(moderately limited)		(very limited)		(very limited)		(very limited)	
	small stones	0.10	small stones	0.10	low strength	0.50			low strength	0.50
	(slightly limited)		(slightly limited)		(moderately limited)				(moderately limited)	
77000:										
Killarney------	Limited		Very limited		Very limited		Very limited		Very limited	
	surface stones	0.77	surface stones >15%	1.00	large surface stones	1.00	large surface stones	1.00	slope	1.00
	(limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.20	slope	1.00	slope	0.79	slope	0.79	large surface stones	1.00
	(slightly limited)		(very limited)		(limited)		(limited)		(very limited)	
	small stones	0.18	small stones	0.18	seasonal wetness	0.10	seasonal wetness	0.10	surface stones	0.77
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(limited)	
Frenchmill-----	Limited		Very limited		Very limited		Very limited		Very limited	
	surface stones	0.77	surface stones >15%	1.00	large surface stones	1.00	large surface stones	1.00	slope	1.00
	(limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.20	slope	1.00	slope	0.79	slope	0.79	large surface stones	1.00
	(slightly limited)		(very limited)		(limited)		(limited)		(very limited)	
	small stones	0.08	large stones	0.27					surface stones	0.77
	(slightly limited)		(slightly limited)						(limited)	
77003:										
Delassus-------	Moderately limited		Limited		Moderately limited		Moderately limited		Limited	
	large stones	0.38	large stones	0.70	low strength	0.50	large stones	0.38	slope	0.76
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(limited)	
	small stones	0.09	slope	0.47	seasonal wetness	0.16	seasonal wetness	0.16	slippage potential	0.50
	(slightly limited)		(moderately limited)		(slightly limited)		(slightly limited)		(moderately limited)	
			surface stones	0.38					low strength	0.50
			(moderately limited)						(moderately limited)	
77004:										
Irondale-------	Moderately limited		Limited		Moderately limited		Moderately limited		Very limited	
	surface stones	0.42	slope	0.99	slope	0.60	slope	0.60	slope	1.00
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
	large stones	0.17	surface stones	0.79	large surface stones	0.60	large surface stones	0.60	large surface stones	0.60
	(slightly limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	slope	0.14	large stones	0.45	low strength	0.50	large stones	0.17	slippage potential	0.50
	(slightly limited)		(moderately limited)		(moderately limited)		(slightly 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
77007:										
Taumsauk-------	Moderately limited		Limited		Moderately limited		Moderately limited		Very limited	
	surface 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	surface stones	0.79	large surface stones	0.60	large surface stones	0.60	large surface stones	0.60
	(slightly limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	small stones	0.02	small stones	0.02	low strength	0.50			slippage potential	0.50
	(slightly limited)		(slightly limited)		(moderately limited)				(moderately limited)	
Irondale-------	Moderately limited		Limited		Moderately limited		Moderately limited		Very limited	
	surface stones	0.42	slope	0.99	slope	0.60	slope	0.60	slope	1.00
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
	large stones	0.32	surface stones	0.79	large surface stones	0.60	large surface stones	0.60	large surface stones	0.60
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	slope	0.14	large stones	0.63			large stones	0.32	slippage potential	0.50
	(slightly limited)		(limited)				(moderately limited)		(moderately limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
77011:										
Taumsauk-------	Slightly limited		Moderately limited		Moderately limited		Not limited		Moderately limited	
	small stones	0.02	slope	0.34	low strength	0.50			low strength	0.50
	(slightly limited)		(moderately limited)		(moderately limited)				(moderately limited)	
			small stones	0.02					slope	0.45
			(slightly limited)						(moderately limited)	
Irondale-------	Slightly limited		Moderately limited		Moderately limited		Not limited		Moderately limited	
	small stones	0.05	slope	0.34	low strength	0.50			low strength	0.50
	(slightly limited)		(moderately limited)		(moderately limited)				(moderately limited)	
			small stones	0.05					slope	0.45
			(slightly limited)						(moderately limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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----------	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.12	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		
70026:										
Tonti----------	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		
73013:										
Lowassie-------	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	seasonally ponded (limited)	0.80		
							low strength (moderately limited)	0.50		
73019:										
Poynor---------	Moderately limited slope/erodibility (moderately limited)	0.38	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
73042:										
Niangua--------	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.65	Not limited		Very limited slope (very limited)	1.00	Not limited	
							large surface stones (moderately limited)	0.60		
							surface stones (moderately limited)	0.42		

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
Bardley--------	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.65	Not limited		Very limited slope (very limited) large surface stones (moderately limited) surface stones (moderately limited)	1.00 0.60 0.42	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) slope (moderately limited)	0.50 0.31	Not limited	
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
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	
73055:										
Alred----------	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Not limited		Very limited slope (very limited) slippage potential (limited)	1.00 0.90	Not limited	
Rueter---------	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Not limited		Very limited slope (very limited) slippage potential (limited)	1.00 0.90	Not limited	
73068:										
Tick----------	Limited slope/erodibility (limited)	0.75	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
73073:										
Scholten-------	Limited slope/erodibility (limited)	0.75	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---------	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited)	0.76	Limited droughty (limited)	0.84
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	
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	

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
73139:										
Poynor---------	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Limited low strength (limited)	0.80	Limited slope (limited) slippage potential (moderately limited) low strength (moderately limited)	0.76 0.50 0.50	Not limited	
Clarksville----	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Limited low strength (limited)	0.80	Limited slope (limited) slippage potential (moderately limited) low strength (moderately limited)	0.76 0.50 0.50	Not limited	
Scholten-------	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.29	Limited low strength (limited) seasonal wetness (moderately limited)	0.80 0.43	Limited slope (limited) slippage potential (moderately limited) low strength (moderately limited)	0.76 0.50 0.50	Slightly limited seasonal wetness (slightly limited) soil reaction (slightly limited)	0.26 0.12
73140:										
Clarksville----	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.59	Limited low strength (limited)	0.80	Very limited slope (very limited) slippage potential (limited) low strength (moderately limited)	1.00 0.90 0.50	Slightly limited soil reaction (slightly limited)	0.06
Scholten-------	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.49	Not limited		Very limited slope (very limited) slippage potential (limited)	1.00 0.90	Not limited	
73143:										
Courtois-------	Moderately limited slope/erodibility (moderately limited)	0.56	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	

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
73144:										
Courtois-------	Very limited		Slightly limited		Limited		Limited		Not limited	
	slope/erodibility	1.00	slope/erodibility	0.22	low strength	0.80	slope	0.68		
	(very limited)		(slightly limited)		(limited)		(limited)			
							slippage potential	0.50		
							(moderately limited)			
							low strength	0.50		
							(moderately limited)			
73147:										
Fourche--------	Moderately limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.56	slope/erodibility	0.12	low strength	0.80	slippage potential	0.50		
	(moderately limited)		(slightly limited)		(limited)		(moderately limited)			
					seasonal wetness	0.10	low strength	0.50		
					(slightly limited)		(moderately limited)			
							seasonal wetness	0.10		
							(slightly limited)			
73155:										
Gasconade------	Limited		Moderately limited		Limited		Very limited		Limited	
	slope/erodibility	0.69	slope/erodibility	0.35	low strength	0.80	slope	1.00	droughty	0.94
	(limited)		(moderately limited)		(limited)		(very limited)		(limited)	
							slippage potential	0.90		
							(limited)			
							low strength	0.50		
							(moderately limited)			
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73159:										
Yelton---------	Moderately limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.56	slope/erodibility	0.12	low strength	0.80	low strength	0.50		
	(moderately limited)		(slightly limited)		(limited)		(moderately limited)			
					seasonal wetness	0.28	seasonal wetness	0.28		
					(slightly limited)		(slightly limited)			
73176:										
Bendavis-------	Limited		Slightly limited		Slightly limited		Limited		Not limited	
	slope/erodibility	0.75	slope/erodibility	0.24	seasonal wetness	0.10	slope	0.76		
	(limited)		(slightly limited)		(slightly limited)		(limited)			
							seasonal wetness	0.10		
							(slightly limited)			
Poynor---------	Very limited		Slightly limited		Not limited		Limited		Not limited	
	slope/erodibility	1.00	slope/erodibility	0.24			slope	0.76		
	(very limited)		(slightly limited)				(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		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.44	slope/erodibility	0.08	low strength	0.80	low strength	0.50		
	(moderately limited)		(slightly limited)		(limited)		(moderately limited)			
					seasonal wetness	0.29	seasonal wetness	0.29		
					(slightly limited)		(slightly limited)			
73220:										
Poynor---------	Very limited		Slightly limited		Not limited		Limited		Limited	
	slope/erodibility	1.00	slope/erodibility	0.24			slope	0.76	droughty	0.84
	(very limited)		(slightly limited)				(limited)		(limited)	
							very sandy (surface)	0.50		
							(moderately limited)			
73221:										
Poynor---------	Limited		Slightly limited		Not limited		Limited		Limited	
	slope/erodibility	0.94	slope/erodibility	0.29			slope	0.99	droughty	0.84
	(limited)		(slightly limited)				(limited)		(limited)	
73222:										
Splitlimb------	Slightly limited		Slightly limited		Limited		Limited		Not limited	
	slope/erodibility	0.22	slope/erodibility	0.05	low strength	0.80	seasonally ponded	0.80		
	(slightly limited)		(slightly limited)		(limited)		(limited)			
					seasonal wetness	0.26	low strength	0.50		
					(slightly limited)		(moderately limited)			
							seasonal wetness	0.26		
							(slightly limited)			
73223:										
Coulstone------	Very limited		Moderately limited		Not limited		Very limited		Limited	
	slope/erodibility	1.00	slope/erodibility	0.49			slope	1.00	droughty	0.88
	(very limited)		(moderately limited)				(very limited)		(limited)	
							surface stones	0.66		
							(limited)			
							large surface stones	0.52		
							(moderately limited)			
Bender---------	Very limited		Moderately limited		Not limited		Very limited		Very limited	
	slope/erodibility	1.00	slope/erodibility	0.59			slope	1.00	droughty	1.00
	(very limited)		(moderately limited)				(very limited)		(very limited)	
							slippage potential	0.50		
							(moderately limited)			
							very sandy (surface)	0.50		
							(moderately 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
73236:										
Scholten-------	Limited slope/erodibility (limited)	0.67	Slightly limited slope/erodibility (slightly limited)	0.12	Slightly limited seasonal wetness (slightly limited)	0.28	Slightly limited seasonal wetness (slightly limited)	0.28	Not limited	
Poynor---------	Moderately limited slope/erodibility (moderately limited)	0.31	Slightly limited slope/erodibility (slightly limited)	0.10	Not limited		Not limited		Not limited	
73242:										
Fanchon--------	Moderately limited slope/erodibility (moderately limited)	0.44	Slightly limited slope/erodibility (slightly limited)	0.08	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
Tonti----------	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 0.27	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.27	Not limited	
73269:										
Brussels-------	Very limited slope/erodibility (very limited)	1.00	Very limited slope/erodibility (very limited)	1.00	Not limited		Very limited slope (very limited) slippage potential (limited) large surface stones (moderately limited)	 1.00 0.90 0.60	Slightly limited soil reaction (slightly limited)	 0.01
Gasconade------	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.78	Not limited		Very limited slope (very limited) slippage potential (limited) stickiness (surface) (limited)	 1.00 0.90 0.75	Limited droughty (limited) soil reaction (slightly limited)	 0.89 0.01
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73295:										
Taterhill------	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	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
73298:										
Tonti----------	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.12	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		
Hogcreek-------	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	
					seasonal wetness (slightly limited)	0.26	seasonal wetness (slightly limited)	0.26		
73301:										
Tick----------	Moderately limited slope/erodibility (moderately limited)	0.31	Slightly limited slope/erodibility (slightly limited)	0.10	Not limited		Not limited		Not limited	
73308:										
Grandgulf------	Slightly limited slope/erodibility (slightly limited)	0.17	Slightly limited slope/erodibility (slightly limited)	0.04	Limited low strength (limited)	0.80	Limited seasonally ponded (limited)	0.80	Not limited	
							low strength (moderately limited)	0.50		
73309:										
Clarksville----	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.39	Not limited		Very limited slope (very limited)	1.00	Not limited	
							slippage potential (limited)	0.90		
Bendavis-------	Very limited slope/erodibility (very limited)	1.00	Moderately limited slope/erodibility (moderately limited)	0.59	Slightly limited seasonal wetness (slightly limited)	0.10	Very limited slope (very limited)	1.00	Not limited	
							seasonal wetness (slightly limited)	0.10		
73310:										
Scholten-------	Moderately limited slope/erodibility (moderately limited)	0.31	Slightly limited slope/erodibility (slightly limited)	0.10	Slightly limited seasonal wetness (slightly limited)	0.28	Slightly limited seasonal wetness (slightly limited)	0.28	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
73310:										
Bendavis--------	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.10	Limited low strength (limited)	0.80	Moderately limited slippage potential (moderately limited)	0.50	Not limited	
					seasonal wetness (slightly limited)	0.10	low strength (moderately limited)	0.50		
							seasonal wetness (slightly limited)	0.10		
Poynor----------	Slightly limited slope/erodibility (slightly limited)	0.25	Slightly limited slope/erodibility (slightly limited)	0.08	Not limited		Not limited		Not limited	
73311:										
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)	0.76	Not limited	
							seasonal wetness (slightly limited)	0.28		
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)	0.76	Not limited	
							seasonal wetness (slightly limited)	0.10		
Poynor----------	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited)	0.76	Limited droughty (limited)	0.84
73313:										
Fanchon---------	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	
Tonti----------	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		

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
73333:										
Taterhill------	Slightly limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.22	slope/erodibility	0.05	low strength	0.80	slippage potential	0.50		
	(slightly limited)		(slightly limited)		(limited)		(moderately limited)			
							low strength	0.50		
							(moderately limited)			
73334:										
Horneybuck-----	Moderately limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.56	slope/erodibility	0.12	low strength	0.80	low strength	0.50		
	(moderately limited)		(slightly limited)		(limited)		(moderately limited)			
					seasonal wetness	0.26	seasonal wetness	0.26		
					(slightly limited)		(slightly limited)			
73335:										
Hobson---------	Limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.67	slope/erodibility	0.15	low strength	0.80	low strength	0.50		
	(limited)		(slightly limited)		(limited)		(moderately limited)			
					seasonal wetness	0.20	seasonal wetness	0.20		
					(slightly limited)		(slightly limited)			
Rueter---------	Moderately limited		Slightly limited		Not limited		Moderately limited		Not limited	
	slope/erodibility	0.38	slope/erodibility	0.12			slippage potential	0.50		
	(moderately limited)		(slightly limited)				(moderately limited)			
73336:										
Rueter---------	Limited		Slightly limited		Limited		Limited		Not limited	
	slope/erodibility	0.75	slope/erodibility	0.24	low strength	0.80	slope	0.76		
	(limited)		(slightly limited)		(limited)		(limited)			
							low strength	0.50		
							(moderately limited)			
Gepp----------	Limited		Slightly limited		Limited		Limited		Not limited	
	slope/erodibility	0.75	slope/erodibility	0.24	low strength	0.80	slippage potential	0.90		
	(limited)		(slightly limited)		(limited)		(limited)			
							slope	0.76		
							(limited)			
							low strength	0.50		
							(moderately 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
73337:										
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	
Portia---------	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.12	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited)	0.50	Not limited	
73338:										
Portia---------	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.24	Limited low strength (limited)	0.80	Moderately limited slope (moderately limited) low strength (moderately limited)	0.60 0.50	Not limited	
Hobson---------	Very limited slope/erodibility (very limited)	1.00	Slightly limited slope/erodibility (slightly limited)	0.29	Limited low strength (limited) seasonal wetness (slightly limited)	0.80 0.20	Limited slope (limited) low strength (moderately limited) seasonal wetness (slightly limited)	0.76 0.50 0.20	Not limited	
73339:										
Arkana---------	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited)	0.76	Not limited	
Gepp----------	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slippage potential (limited) slope (limited)	0.90 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
73340:										
Rueter	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited)	0.76	Not limited	
Gepp	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Limited low strength (limited)	0.80	Limited slippage potential (limited)	0.90	Not limited	
							slope (limited)	0.76		
							low strength (moderately limited)	0.50		
73341:										
Gepp	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.69	Not limited		Very limited slope (very limited)	1.00	Not limited	
							slippage potential (limited)	0.90		
							very sandy (surface) (moderately limited)	0.50		
Arkana	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.69	Not limited		Very limited slope (very limited)	1.00	Not limited	
73342:										
Alred	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slippage potential (limited)	0.90	Not limited	
							slope (limited)	0.76		
Arkana	Limited slope/erodibility (limited)	0.75	Slightly limited slope/erodibility (slightly limited)	0.24	Not limited		Limited slope (limited)	0.76	Not limited	
73361:										
Coulstone	Very limited slope/erodibility (very limited)	1.00	Limited slope/erodibility (limited)	0.69	Not limited		Very limited slope (very limited)	1.00	Slightly limited droughty (slightly limited)	0.11
							surface stones (limited)	0.66		
							large surface stones (moderately limited)	0.52		

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
73361:										
Alred----------	Very limited		Limited		Not limited		Very limited		Not limited	
	slope/erodibility	1.00	slope/erodibility	0.69			slope	1.00		
	(very limited)		(limited)				(very limited)			
							slippage potential	0.90		
							(limited)			
74627:										
Hartville------	Slightly limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.22	slope/erodibility	0.05	low strength	0.80	low strength	0.50		
	(slightly limited)		(slightly limited)		(limited)		(moderately limited)			
					seasonal wetness	0.20	seasonal wetness	0.20		
					(slightly limited)		(slightly limited)			
74636:										
Lecoma---------	Limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.67	slope/erodibility	0.12	low strength	0.80	low strength	0.50		
	(limited)		(slightly limited)		(limited)		(moderately limited)			
74637:										
Lecoma---------	Very limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	1.00	slope/erodibility	0.20	low strength	0.80	slope	0.60		
	(very limited)		(slightly limited)		(limited)		(moderately limited)			
							low strength	0.50		
							(moderately limited)			
74642:										
Cornwall-------	Slightly limited		Slightly limited		Limited		Limited		Slightly limited	
	slope/erodibility	0.11	slope/erodibility	0.02	low strength	0.80	seasonally ponded	0.80	seasonal wetness	0.11
	(slightly limited)		(slightly limited)		(limited)		(limited)		(slightly limited)	
					seasonal wetness	0.34	slippage potential	0.50		
					(moderately limited)		(moderately limited)			
							low strength	0.50		
							(moderately limited)			
74643:										
Lecoma---------	Slightly limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.22	slope/erodibility	0.05	low strength	0.80	low strength	0.50		
	(slightly limited)		(slightly limited)		(limited)		(moderately 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
74644:										
Deible---------	Slightly limited		Slightly limited		Limited		Limited		Limited	
	slope/erodibility	0.22	slope/erodibility	0.05	seasonal wetness	0.91	seasonal wetness	0.91	seasonal wetness	0.91
	(slightly limited)		(slightly limited)		(limited)		(limited)		(limited)	
					low strength	0.80	slippage potential	0.50		
					(limited)		(moderately limited)			
							low strength	0.50		
							(moderately limited)			
74648:										
Aslinger-------	Limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.67	slope/erodibility	0.15	low strength	0.80	slippage potential	0.50		
	(limited)		(slightly limited)		(limited)		(moderately limited)			
					seasonal wetness	0.20	low strength	0.50		
					(slightly limited)		(moderately limited)			
							seasonal wetness	0.20		
							(slightly limited)			
74651:										
Waben----------	Moderately limited		Slightly limited		Limited		Limited		Slightly limited	
	slope/erodibility	0.38	slope/erodibility	0.12	low strength	0.80	slippage potential	0.90	droughty	0.03
	(moderately limited)		(slightly limited)		(limited)		(limited)		(slightly limited)	
							low strength	0.50		
							(moderately limited)			
74658:										
Zanoni---------	Slightly limited		Slightly limited		Moderately limited		Not limited		Not limited	
	slope/erodibility	0.06	slope/erodibility	0.02	low strength	0.50				
	(slightly limited)		(slightly limited)		(moderately limited)					
75381:										
Bearthicket----	Slightly limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.17	slope/erodibility	0.04	low strength	0.80	slippage potential	0.50		
	(slightly limited)		(slightly limited)		(limited)		(moderately limited)			
							low strength	0.50		
							(moderately limited)			
75390:										
Razort---------	Slightly limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.17	slope/erodibility	0.04	low strength	0.80	low strength	0.50		
	(slightly limited)		(slightly limited)		(limited)		(moderately limited)			
75394:										
Relfe----------	Slightly limited		Slightly limited		Not limited		Not limited		Very limited	
	slope/erodibility	0.08	slope/erodibility	0.04					droughty	1.00
	(slightly limited)		(slightly limited)						(very 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
75395:										
Jamesfin--------	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) low strength (moderately limited)	0.60 0.50	Moderately limited flooding (moderately limited)	0.60
75408:										
Secesh----------	Slightly limited slope/erodibility (slightly limited)	0.09	Slightly limited slope/erodibility (slightly limited)	0.03	Limited low strength (limited)	0.80	Moderately limited slippage potential (moderately limited) low strength (moderately limited)	0.50 0.50	Not limited	
75409:										
Relfe----------	Slightly limited slope/erodibility (slightly limited)	0.12	Slightly limited slope/erodibility (slightly limited)	0.04	Moderately limited low strength (moderately limited)	0.50	Moderately limited flooding (moderately limited)	0.60	Moderately limited flooding (moderately limited) droughty (moderately limited)	0.60 0.35
75411:										
Tilk----------	Slightly limited slope/erodibility (slightly limited)	0.08	Slightly limited slope/erodibility (slightly limited)	0.04	Not limited		Moderately limited slippage potential (moderately limited)	0.50	Slightly limited droughty (slightly limited)	0.11
75416:										
Gladden--------	Slightly limited slope/erodibility (slightly limited)	0.22	Slightly limited slope/erodibility (slightly limited)	0.04	Limited low strength (limited)	0.80	Moderately limited flooding (moderately limited) slippage potential (moderately limited) low strength (moderately limited)	0.60 0.50 0.50	Moderately limited flooding (moderately limited)	0.60
75417:										
Relfe----------	Slightly limited slope/erodibility (slightly limited)	0.12	Slightly limited slope/erodibility (slightly limited)	0.04	Not limited		Very limited flooding (very limited) very sandy (surface) (moderately limited)	1.00 0.50	Very limited droughty (very limited) flooding (limited)	1.00 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

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) low strength (moderately limited)	0.60 0.50	Moderately limited flooding (moderately limited)	0.60
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) droughty (moderately limited)	0.60 0.31
75426:										
Gabriel--------	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 0.29	Moderately limited low strength (moderately limited) seasonal wetness (slightly limited)	0.50 0.29	Not limited	
75430:										
Wideman--------	Slightly limited slope/erodibility (slightly limited)	0.12	Slightly limited slope/erodibility (slightly limited)	0.04	Moderately limited low strength (moderately limited)	0.50	Moderately limited flooding (moderately limited)	0.60	Moderately limited flooding (moderately limited)	0.60
75433:										
Racket---------	Slightly limited slope/erodibility (slightly limited)	0.06	Slightly limited slope/erodibility (slightly limited)	0.02	Limited low strength (limited)	0.80	Moderately limited flooding (moderately limited) low strength (moderately limited)	0.60 0.50	Moderately limited flooding (moderately limited)	0.60
75451:										
Gladden--------	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) low strength (moderately limited)	0.60 0.50	Moderately limited flooding (moderately limited)	0.60
75462:										
Huzzah---------	Slightly limited slope/erodibility (slightly limited)	0.06	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
75463:										
Huzzah---------	Slightly limited		Slightly limited		Moderately limited		Not limited		Not limited	
	slope/erodibility	0.12	slope/erodibility	0.04	low strength	0.50				
	(slightly limited)		(slightly limited)		(moderately limited)					
75464:										
Cedargap-------	Slightly limited		Slightly limited		Moderately limited		Not limited		Not limited	
	slope/erodibility	0.06	slope/erodibility	0.02	low strength	0.50				
	(slightly limited)		(slightly limited)		(moderately limited)					
75465:										
Raftville------	Slightly limited		Slightly limited		Moderately limited		Not limited		Not limited	
	slope/erodibility	0.22	slope/erodibility	0.04	low strength	0.50				
	(slightly limited)		(slightly limited)		(moderately limited)					
Gabriel--------	Slightly limited		Slightly limited		Limited		Moderately limited		Not limited	
	slope/erodibility	0.11	slope/erodibility	0.02	low strength	0.80	low strength	0.50		
	(slightly limited)		(slightly limited)		(limited)		(moderately limited)			
					seasonal wetness	0.29	seasonal wetness	0.29		
					(slightly limited)		(slightly limited)			
75466:										
Midco----------	Slightly limited		Slightly limited		Not limited		Moderately limited		Moderately limited	
	slope/erodibility	0.22	slope/erodibility	0.04			flooding	0.60	flooding	0.60
	(slightly limited)		(slightly limited)				(moderately limited)		(moderately limited)	
									droughty	0.05
									(slightly limited)	
75470:										
Farewell-------	Slightly limited		Slightly limited		Very limited		Very limited		Very limited	
	slope/erodibility	0.17	slope/erodibility	0.04	seasonal wetness	1.00	seasonal wetness	1.00	seasonal wetness	1.00
	(slightly limited)		(slightly limited)		(very limited)		(very limited)		(very limited)	
					low strength	0.80	low strength	0.50		
					(limited)		(moderately limited)			
77000:										
Killarney------	Very limited		Moderately limited		Slightly limited		Very limited		Not limited	
	slope/erodibility	1.00	slope/erodibility	0.59	seasonal wetness	0.10	large surface stones	1.00		
	(very limited)		(moderately limited)		(slightly limited)		(very limited)			
							slope	1.00		
							(very limited)			
							surface stones	0.77		
							(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
77000:										
Frenchmill-----	Very limited		Moderately limited		Not limited		Very limited		Not limited	
	slope/erodibility	1.00	slope/erodibility	0.59			large surface stones	1.00		
	(very limited)		(moderately limited)				(very limited)			
							slope	1.00		
							(very limited)			
							surface stones	0.77		
							(limited)			
77003:										
Delassus-------	Very limited		Slightly limited		Limited		Limited		Not limited	
	slope/erodibility	1.00	slope/erodibility	0.24	low strength	0.80	slope	0.76		
	(very limited)		(slightly limited)		(limited)		(limited)			
					seasonal wetness	0.16	slippage potential	0.50		
					(slightly limited)		(moderately limited)			
							low strength	0.50		
							(moderately limited)			
77004:										
Irondale-------	Limited		Moderately limited		Limited		Very limited		Not limited	
	slope/erodibility	0.96	slope/erodibility	0.49	low strength	0.80	slope	1.00		
	(limited)		(moderately limited)		(limited)		(very limited)			
							large surface stones	0.60		
							(moderately limited)			
							slippage potential	0.50		
							(moderately limited)			
77007:										
Taumsauk-------	Very limited		Moderately limited		Limited		Very limited		Not limited	
	slope/erodibility	1.00	slope/erodibility	0.49	low strength	0.80	slope	1.00		
	(very limited)		(moderately limited)		(limited)		(very limited)			
							large surface stones	0.60		
							(moderately limited)			
							slippage potential	0.50		
							(moderately limited)			
Irondale-------	Limited		Moderately limited		Not limited		Very limited		Not limited	
	slope/erodibility	0.96	slope/erodibility	0.49			slope	1.00		
	(limited)		(moderately limited)				(very limited)			
							large surface stones	0.60		
							(moderately limited)			
							slippage potential	0.50		
							(moderately 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
77011:										
Taumsauk-------	Moderately limited slope/erodibility (moderately limited)	0.35	Slightly limited slope/erodibility (slightly limited)	0.18	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited) slope (moderately limited)	0.50 0.45	Limited droughty (limited)	0.93
Irondale-------	Moderately limited slope/erodibility (moderately limited)	0.56	Slightly limited slope/erodibility (slightly limited)	0.18	Limited low strength (limited)	0.80	Moderately limited low strength (moderately limited) slope (moderately limited)	0.50 0.45	Not limited	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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	---
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	---
73013. Lowassie					
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	---
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	---
73042:					
Niangua	Common lilac; fragrant sumac	American plum; gray dogwood	Austrian pine; bur oak; common hackberry; eastern redcedar; green ash; honeylocust	Shortleaf pine	---
Bardley	Common lilac; fragrant sumac	American plum; gray dogwood	Austrian pine; bur oak; common hackberry; eastern redcedar; green ash; honeylocust	Shortleaf pine	---
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; 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	---

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
73055:					
Alred	Common ninebark; coralberry; fragrant sumac	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	---
Rueter	Common ninebark; coralberry; fragrant sumac	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Bblack oak; mockernut hickory; northern red oak; white ash	---
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	---
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	---
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; 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; 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.					

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
73139:					
Poynor	Fragrant sumac; ninebark; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; green ash; hackberry; honeylocust; pin oak	---
Clarksville	Common ninebark; coralberry; fragrant sumac	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	---
Scholten	Common ninebark; coralberry; fragrant sumac	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	---
73140:					
Clarksville	Common ninebark; coralberry; fragrant sumac	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	---
Scholten	Common ninebark; coralberry; fragrant sumac	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	---
73143:					
Courtois	American hazelnut; fragrant sumac; southern arrowwood	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple	Northern red oak; tuliptree; white ash; white oak	Eastern white pine
73144:					
Courtois	American hazelnut; fragrant sumac; southern arrowwood	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple	Northern red oak; tuliptree; white ash; white oak	Eastern white pine
73147:					
Fourche	American hazelnut; fragrant sumac; southern arrowwood	American plum; blue spruce; eastern hophornbeam; eastern redbud; eastern redcedar; roughleaf dogwood	Arborvitae; common serviceberry; sugar maple	Northern red oak; tuliptree; white ash; white oak	Eastern white pine
73155:					
Gasconade.					
Rock outcrop.					
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	---

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
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	---
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	---
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	---
73236:					
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	---

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
73236:					
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	---
73242:					
Fanchon	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	---
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	---
73269:					
Brussels	Common ninebark; coralberry; fragrant sumac	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	---
Gasconade.					
Rock outcrop.					
73295:					
Taterhill	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	---
73298:					
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	---
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	---
73301:					
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	---
73308:					
Grandgulf	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

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
73309:					
Clarksville	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	---
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	---
73310:					
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	---
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	---
73311:					
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	---
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	---
73313:					
Fanchon	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	---
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	---

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
73333:					
Taterhill	Amur honeysuckle; common lilac; fragrant sumac	Autumn olive	Austrian pine; bur oak; common hackberry; eastern redcedar; green ash; honeylocust; Russian olive	Siberian elm	---
73334:					
Horneybuck	Common lilac; fragrant sumac	Amur maple; gray dogwood	Austrian pine; common hackberry; eastern redcedar; green ash; jack pine; Manchurian crabapple; Russian olive	Honeylocust	---
73335:					
Hobson	American plum; common lilac; fragrant sumac	Amur maple; gray dogwood; Washington hawthorn	Austrian pine; common hackberry; eastern redcedar; honeylocust; Virginia pine	---	---
Rueter	Common lilac; fragrant sumac	American plum; autumn olive; gray dogwood	Austrian pine; bur oak; common hackberry; eastern redcedar; green ash; honeylocust	Shortleaf pine	---
73336:					
Rueter	Common ninebark; coralberry; fragrant sumac	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	---
Gepp	Fragrant sumac; ninebark; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; green ash; hackberry; honeylocust; pin oak	---
73337:					
Tonti	Coralberry; fragrant sumac; ninebark	---	Common serviceberry; eastern redbud; eastern redcedar; flowering dogwood; gray dogwood; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Portia	Common ninebark; coralberry; fragrant sumac	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	---
73338:					
Portia	Common ninebark; coralberry; fragrant sumac	Eastern redbud; eastern redcedar; flowering dogwood; gray dogwood	Common serviceberry; persimmon; post oak; red pine; shingle oak; shortleaf pine	Bblack 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
73338:					
Hobson	American plum; common lilac; fragrant sumac	Amur maple; gray dogwood; Washington hawthorn	Austrian pine; common hackberry; eastern redcedar; honeylocust; Virginia pine	---	---
73339:					
Arkana	Fragrant sumac; ninebark; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; green ash; hackberry; honeylocust; pin oak	---
Gepp	Fragrant sumac; ninebark; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; green ash; hackberry; honeylocust; pin oak	---
73340:					
Rueter	Common ninebark; coralberry; fragrant sumac	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	---
Gepp	Fragrant sumac; ninebark; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; green ash; hackberry; honeylocust; pin oak	---
73341:					
Gepp	Fragrant sumac; ninebark; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; green ash; hackberry; honeylocust; pin oak	---
Arkana	Fragrant sumac; ninebark; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; green ash; hackberry; honeylocust; pin oak	---
73342:					
Alred	Common ninebark; coralberry; fragrant sumac	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	---
Arkana	Fragrant sumac; ninebark; St. Johnswort	Eastern redcedar; possumhaw; roughleaf dogwood; Washington hawthorn	Arborvitae; bur oak; green hawthorn; post oak	Austrian pine; green ash; hackberry; honeylocust; pin oak	---
73361:					
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	---
Alred	Common ninebark; coralberry; fragrant sumac	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
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	---
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
74642. Cornwall					
74643:					
Lecoma	Common lilac	Amur maple	Common hackberry; eastern redcedar	Eastern white pine; green ash; honeylocust; Norway spruce; pin oak	---
74644:					
Deible	Common buttonbush; common ninebark	Possumhaw; sandbar willow	Black willow; bur oak; green hawthorn	Baldcypress; green ash; pecan; red maple; swamp white oak; sweetgum	Eastern cottonwood; silver maple
74648:					
Aslinger	Common ninebark; coralberry; fragrant sumac	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	---
74651:					
Waben	Common lilac; fragrant sumac	Amur maple; gray dogwood	Austrian pine; bur oak; common hackberry; eastern redcedar; green ash; Russian olive; shortleaf pine	Honeylocust	---
74658:					
Zanoni	Coralberry; flameleaf sumac	Eastern redcedar; gray dogwood; jack pine	Chinkapin oak; persimmon; post oak	Black oak; honeylocust	---
75381:					
Bearthicket	American hazelnut; common 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

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
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
75394:					
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	---
75395:					
Jamesfin	American hazelnut; common 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
75408:					
Secesh	Common ninebark; coralberry; fragrant sumac	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	---
75409:					
Relfe	Common ninebark; coralberry; fragrant sumac	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	---
75411:					
Tilk	Common ninebark; coralberry; fragrant sumac	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	---
75416:					
Gladden	American hazelnut; common 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	---
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	---

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
75420:					
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	---
75426:					
Gabriel	Buttonbush	Possumhaw	Eastern arborvitae; eastern redcedar; nannyberry	Baldcypress; common hackberry; pin oak	Eastern cottonwood
75430:					
Wideman	Coralberry; eastern redcedar; flameleaf sumac	Eastern redcedar; gray dogwood; jack pine	Chinkapin oak; persimmon; post oak	Black oak; honeylocust	---
75433:					
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
75451:					
Gladden	American hazelnut; common 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
75462:					
Huzzah	Fragrant sumac; American plum	Blackhaw; gray dogwood	Nannyberry; Washington hawthorn; eastern redcedar	Sweetgum; green ash; white fir	Pin oak; eastern white pine
75463:					
Huzzah	Fragrant sumac; American plum	Blackhaw; gray dogwood	Nannyberry; Washington hawthorn; eastern redcedar	Sweetgum; green ash; white fir	Pin oak; eastern white pine
75464:					
Cedargap	Common ninebark; coralberry; fragrant sumac	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	---
75465:					
Raftville	Coralberry; fragrant sumac; ninebark	---	Common serviceberry; eastern redbud; eastern redcedar; flowering dogwood; gray dogwood; persimmon; post oak; red pine; shingle oak; shortleaf pine	Black oak; mockernut hickory; northern red oak; white ash	---
Gabriel	Buttonbush	Possumhaw	Eastern arborvitae; eastern redcedar; nannyberry	Baldcypress; common hackberry; pin oak	Eastern cottonwood

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
75466:					
Midco	American plum; fragrant sumac	Blackhaw; gray dogwood	Eastern redcedar; nannyberry; Washington hawthorn	Baldcypress; green ash; sweetgum	Eastern white pine; pin oak
75470:					
Farewell	Buttonbush; ninebark	---	Black willow; bur oak; green hawthorn; possumhaw; sandbar willow	Baldcypress; green ash; pecan; red maple; swamp white oak; sweetgum	Eastern cottonwood; silver maple
77000:					
Killarney	Common ninebark; coralberry; fragrant sumac	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	---
Frenchmill	Common ninebark; coralberry; fragrant sumac	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	---
77003:					
Delassus	Common ninebark; coralberry; fragrant sumac	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	---
77004:					
Irondale	Common ninebark; coralberry; fragrant sumac	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	---
77007:					
Taumsauk.					
Irondale	Common ninebark; coralberry; fragrant sumac	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.					
77011:					
Taumsauk	---	---	---	---	Other trees
Irondale	Common ninebark; coralberry; fragrant sumac	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.					
99001.					
Water					
99013.					
Riverwash					

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		Very limited		Very limited		Slightly limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	wetness	0.28
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	wetness	0.50	wetness	0.28	slope	0.78		
	(moderately limited)		(slightly limited)		(limited)			
					wetness	0.50		
					(moderately limited)			
70026:								
Tonti	Very limited		Very limited		Very limited		Slightly limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	wetness	0.28
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	wetness	0.50	wetness	0.28	wetness	0.50		
	(moderately limited)		(slightly limited)		(moderately limited)			
					small stones	0.30		
					(moderately limited)			
73013:								
Lowassie	Very limited		Very limited		Very limited		Very limited	
	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.39	percs slowly	0.39	percs slowly	0.39		
	(moderately limited)		(moderately limited)		(moderately limited)			
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)	
73042:								
Niangua	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	small stones	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	1.00	small stones	1.00	percs slowly	0.13	small stones	0.30
	(very limited)		(very limited)		(slightly limited)		(slightly limited)	
Bardley	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	depth to bedrock	0.46	slope	1.00
	(very limited)		(very limited)		(moderately limited)		(very 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
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)			
73055:								
Alred	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	large surface stones	0.70
	(very limited)		(very limited)		(very limited)		(limited)	
	large surface stones	0.70	large surface stones	0.70	percs slowly	0.39	small stones	0.12
	(limited)		(limited)		(moderately limited)		(slightly limited)	
Rueter	Very limited		Very limited		Very limited		Limited	
	slope	1.00	slope	1.00	slope	1.00	slope	0.92
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00	small stones	1.00	small stones	1.00	large surface stones	0.70
	(very limited)		(very limited)		(very limited)		(limited)	
	large surface stones	0.70	large surface stones	0.70	large stones	0.80	small stones	0.08
	(limited)		(limited)		(limited)		(slightly limited)	
73068:								
Tick	Very limited		Very limited		Very limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.20
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
	percs slowly	0.26	percs slowly	0.26	percs slowly	0.26		
	(slightly limited)		(slightly limited)		(slightly limited)			
73073:								
Scholten	Very limited		Very limited		Very limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	small stones	1.00	wetness	0.56
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	small stones	1.00	small stones	1.00	slope	1.00	small stones	0.30
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	wetness	0.90	slope	0.63	percs slowly	1.00		
	(limited)		(limited)		(very 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
73073:								
Poynor	Very limited		Very limited		Very limited		Moderately limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.60
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
	too acid	0.12	too acid	0.12	too acid	0.12		
	(slightly limited)		(slightly limited)		(slightly limited)			
73080:								
Alred	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	0.60	large surface stones	0.60	percs slowly	0.39	large surface stones	0.60
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	percs slowly	0.39	percs slowly	0.39	small stones	0.01		
	(moderately limited)		(moderately limited)		(slightly limited)			
Bardley	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	0.60	large surface stones	0.60	large stones >25%	1.00	large surface stones	0.60
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)	
	large stones	0.50	large stones	0.50	small stones	1.00	large stones	0.50
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)	
Rock outcrop	Not rated		Not rated		Not rated		Not rated	
73081:								
Bender	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	large stones >25%	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.44	large stones	0.44	slope	1.00	large stones	0.44
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)	
	large surface stones	0.43	large surface stones	0.43	small stones	1.00	large surface stones	0.43
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)	
Alred	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	large stones >25%	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.61	large stones	0.61	slope	1.00	large stones	0.61
	(limited)		(limited)		(very limited)		(limited)	
	large surface stones	0.43	large surface stones	0.43	small stones	1.00	large surface stones	0.43
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)	
Rock outcrop	Not rated		Not rated		Not rated		Not rated	
73139:								
Poynor	Limited		Limited		Very limited		Slightly limited	
	small stones	0.69	small stones	0.69	slope	1.00	large surface stones	0.17
	(limited)		(limited)		(very limited)		(slightly limited)	
	slope	0.63	slope	0.63	small stones	1.00		
	(limited)		(limited)		(very limited)			
	large surface stones	0.17	large surface stones	0.17	large stones	0.06		
	(slightly limited)		(slightly limited)		(slightly limited)			
Clarksville	Limited		Limited		Very limited		Slightly limited	
	slope	0.63	slope	0.63	slope	1.00	large surface stones	0.17
	(limited)		(limited)		(very limited)		(slightly limited)	
	small stones	0.31	small stones	0.31	small stones	1.00		
	(moderately limited)		(moderately limited)		(very limited)			
	large surface stones	0.17	large surface stones	0.17				
	(slightly 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
73139:								
Scholten----------	Very limited		Very limited		Very limited		Limited	
	wetness	1.00	percs slowly	1.00	wetness	1.00	wetness	0.78
	(very limited)		(very limited)		(very limited)		(limited)	
	percs slowly	1.00	wetness	0.78	slope	1.00	large surface stones	0.17
	(very limited)		(limited)		(very limited)		(slightly limited)	
	slope	0.63	slope	0.63	percs slowly	1.00		
	(limited)		(limited)		(very limited)			
73140:								
Clarksville--------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	0.82	small stones	0.82	small stones	1.00	large surface stones	0.70
	(limited)		(limited)		(very limited)		(limited)	
	large surface stones	0.70	large surface stones	0.70	too acid	0.44		
	(limited)		(limited)		(moderately limited)			
Scholten----------	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)	
	percs slowly	1.00	percs slowly	1.00	slope	1.00	large surface stones	0.70
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00	small stones	1.00	percs slowly	1.00	small stones	0.68
	(very limited)		(very limited)		(very limited)		(limited)	
73143:								
Courtois----------	Not limited		Not limited		Limited		Not limited	
					small stones	0.92		
					(limited)			
					slope	0.78		
					(limited)			
73144:								
Courtois----------	Moderately limited		Moderately limited		Very limited		Not limited	
	slope	0.37	slope	0.37	slope	1.00		
	(moderately limited)		(moderately limited)		(very limited)			
					small stones	0.68		
					(limited)			
73147:								
Fourche----------	Slightly limited		Slightly limited		Limited		Not limited	
	percs slowly	0.13	percs slowly	0.13	slope	0.78		
	(slightly limited)		(slightly limited)		(limited)			
					percs slowly	0.13		
					(slightly limited)			
73155:								
Gasconade----------	Very limited		Very limited		Very limited		Very limited	
	too clayey	1.00	too clayey	1.00	shallow to bedrock	1.00	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00	percs slowly	1.00	too clayey	1.00	slope	0.33
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	slope	1.00	slope	1.00	percs slowly	1.00		
	(very limited)		(very limited)		(very limited)			
Rock outcrop-------	Not rated		Not rated		Not rated		Not rated	

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
73159:								
Yelton	Limited		Moderately limited		Limited		Moderately limited	
	wetness	0.90	wetness	0.56	wetness	0.90	wetness	0.56
	(limited)		(moderately limited)		(limited)		(moderately limited)	
	percs slowly	0.39	percs slowly	0.39	slope	0.78		
	(moderately limited)		(moderately limited)		(limited)			
					percs slowly	0.39		
					(moderately limited)			
73176:								
Bendavis	Very limited		Very limited		Very limited		Moderately limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.60
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	slope	0.63	slope	0.63	slope	1.00	large surface stones	0.13
	(limited)		(limited)		(very limited)		(slightly limited)	
	large surface stones	0.13	large surface stones	0.13	depth to bedrock	0.58		
	(slightly limited)		(slightly limited)		(moderately limited)			
Poynor	Very limited		Very limited		Very limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	1.00	large surface stones	0.13
	(limited)		(limited)		(very limited)		(slightly limited)	
	slope	0.63	slope	0.63	slope	1.00	small stones	0.01
	(limited)		(limited)		(very limited)		(slightly limited)	
	large surface stones	0.13	large surface stones	0.13				
	(slightly limited)		(slightly limited)					
73197:								
Viburnum	Limited		Limited		Limited		Limited	
	wetness	0.96	wetness	0.61	wetness	0.96	wetness	0.61
	(limited)		(limited)		(limited)		(limited)	
	percs slowly	0.13	percs slowly	0.13	slope	0.40		
	(slightly limited)		(slightly limited)		(moderately limited)			
					percs slowly	0.13		
					(slightly limited)			
73220:								
Poynor	Very limited		Very limited		Very limited		Very limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
	too acid	0.12	too acid	0.12	too acid	0.12		
	(slightly limited)		(slightly limited)		(slightly limited)			
73221:								
Poynor	Very limited		Very limited		Very limited		Limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.81
	(very limited)		(very limited)		(very limited)		(limited)	
	slope	1.00	slope	1.00	slope	1.00	large surface stones	0.31
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	large surface stones	0.31	large surface stones	0.31	too acid	0.30	slope	0.08
	(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)	
73222:								
Splitlimb	Very limited		Very limited		Very limited		Very limited	
	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very 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)			

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
73223:								
Coulstone----------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	small stones	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	1.00	small stones	1.00	slope	1.00	slope	0.92
	(very limited)		(very limited)		(very limited)		(limited)	
	large surface stones	1.00	large surface stones	1.00			small stones	0.60
	(very limited)		(very limited)				(moderately limited)	
Bender----------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	large stones >25%	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	0.71	small stones	0.71	slope	1.00	large surface stones	0.43
	(limited)		(limited)		(very limited)		(moderately limited)	
	large surface stones	0.43	large surface stones	0.43	small stones	1.00	large stones	0.40
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)	
73236:								
Scholten----------	Very limited		Very limited		Very limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	wetness	0.56
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	wetness	0.90	small stones	0.73	small stones	1.00		
	(limited)		(limited)		(very limited)			
	small stones	0.73	wetness	0.56	slope	0.98		
	(limited)		(moderately limited)		(limited)			
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)	
	too acid	0.12	too acid	0.12	slope	0.78		
	(slightly limited)		(slightly limited)		(limited)			
					too acid	0.12		
					(slightly limited)			
73242:								
Fanchon----------	Not limited		Not limited		Moderately limited		Not limited	
					slope	0.40		
					(moderately limited)			
Tonti----------	Very limited		Very limited		Very limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	wetness	0.51
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	wetness	0.84	wetness	0.51	wetness	0.84		
	(limited)		(moderately limited)		(limited)			
					slope	0.40		
					(moderately limited)			
73269:								
Brussels----------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	small stones	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	0.57	small stones	0.57	percs slowly	0.13		
	(moderately limited)		(moderately limited)		(slightly limited)			
Gasconade----------	Very limited		Very limited		Very limited		Very limited	
	too clayey	1.00	too clayey	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	shallow to bedrock	1.00	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	too clayey	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very 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
73269:								
Rock outcrop-------	Not rated		Not rated		Not rated		Not rated	
73295:								
Taterhill----------	Not limited		Not limited		Limited		Not limited	
					slope	0.98		
					(limited)			
73298:								
Tonti----------	Very limited		Very limited		Very limited		Slightly limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	wetness	0.28
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	wetness	0.50	wetness	0.28	slope	0.78		
	(moderately limited)		(slightly limited)		(limited)			
					wetness	0.50		
					(moderately limited)			
Hogcreek----------	Very limited		Very limited		Very limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	wetness	0.49
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	wetness	0.81	wetness	0.49	wetness	0.81		
	(limited)		(moderately limited)		(limited)			
					slope	0.40		
					(moderately limited)			
73301:								
Tick----------	Slightly limited		Slightly limited		Limited		Not limited	
	percs slowly	0.26	percs slowly	0.26	slope	0.78		
	(slightly limited)		(slightly limited)		(limited)			
	too acid	0.06	too acid	0.06	small stones	0.31		
	(slightly limited)		(slightly limited)		(moderately limited)			
					percs slowly	0.26		
					(slightly limited)			
73308:								
Grandgulf----------	Very limited		Very limited		Very limited		Very limited	
	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
73309:								
Clarksville--------	Very limited		Very limited		Very limited		Limited	
	slope	1.00	slope	1.00	small stones	1.00	small stones	0.73
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00	small stones	1.00	slope	1.00	slope	0.50
	(very limited)		(very limited)		(very limited)		(moderately limited)	
Bendavis----------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	small stones	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	large surface stones	0.70
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00	small stones	1.00	slope	1.00	small stones	0.67
	(very limited)		(very limited)		(very limited)		(limited)	
73310:								
Scholten----------	Very limited		Very limited		Very limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	small stones	1.00	wetness	0.56
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	small stones	1.00	small stones	1.00	percs slowly	1.00	small stones	0.30
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	wetness	0.90	wetness	0.56	wetness	0.90		
	(limited)		(moderately limited)		(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
73310:								
Bendavis	Moderately limited		Moderately limited		Very limited		Not limited	
	small stones	0.33	small stones	0.33	small stones	1.00		
	(moderately limited)		(moderately limited)		(very limited)			
					slope	0.78		
					(limited)			
					depth to bedrock	0.27		
					(slightly limited)			
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)	
	too acid	0.12	too acid	0.12	slope	0.40		
	(slightly limited)		(slightly limited)		(moderately limited)			
					too acid	0.12		
					(slightly limited)			
73311:								
Scholten	Very limited		Very limited		Very limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	small stones	1.00	wetness	0.56
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	small stones	1.00	small stones	1.00	slope	1.00	small stones	0.24
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	wetness	0.90	slope	0.63	percs slowly	1.00		
	(limited)		(limited)		(very limited)			
Bendavis	Limited		Limited		Very limited		Slightly limited	
	slope	0.63	slope	0.63	slope	1.00	large surface stones	0.13
	(limited)		(limited)		(very limited)		(slightly limited)	
	large surface stones	0.13	large surface stones	0.13	depth to bedrock	0.58		
	(slightly limited)		(slightly limited)		(moderately limited)			
Poynor	Very limited		Very limited		Very limited		Slightly limited	
	small stones	1.00	small stones	1.00	slope	1.00	small stones	0.01
	(limited)		(limited)		(very limited)		(slightly limited)	
	slope	0.63	slope	0.63	small stones	1.00		
	(limited)		(limited)		(very limited)			
	too acid	0.12	too acid	0.12	too acid	0.12		
	(slightly limited)		(slightly limited)		(slightly limited)			
73313:								
Fanchon	Not limited		Not limited		Not limited		Not limited	
Tonti	Very limited		Very limited		Very limited		Slightly limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	wetness	0.28
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	wetness	0.50	wetness	0.28	wetness	0.50		
	(moderately limited)		(slightly limited)		(moderately limited)			
					small stones	0.31		
					(moderately limited)			
73333:								
Taterhill	Not limited		Not limited		Not limited		Not limited	
73334:								
Horneybuck	Limited		Moderately limited		Limited		Moderately limited	
	wetness	0.81	wetness	0.49	small stones	0.92	wetness	0.49
	(limited)		(moderately limited)		(limited)		(moderately limited)	
	percs slowly	0.13	percs slowly	0.13	wetness	0.81		
	(slightly limited)		(slightly limited)		(limited)			
					slope	0.78		
					(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
73335:								
Hobson	Moderately limited		Moderately limited		Limited		Slightly limited	
	wetness	0.50	percs slowly	0.39	slope	0.98	wetness	0.28
	(moderately limited)		(moderately limited)		(limited)		(slightly limited)	
	percs slowly	0.39	wetness	0.28	wetness	0.50		
	(moderately limited)		(slightly limited)		(moderately limited)			
					percs slowly	0.39		
					(moderately limited)			
Rueter	Very limited		Very limited		Very limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.24
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	too acid	0.30	too acid	0.30	slope	0.98		
	(slightly limited)		(slightly limited)		(limited)			
	percs slowly	0.18	percs slowly	0.18	too acid	0.30		
	(slightly limited)		(slightly limited)		(slightly limited)			
73336:								
Rueter	Limited		Limited		Very limited		Not limited	
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
	small stones	0.33	small stones	0.33	small stones	1.00		
	(moderately limited)		(moderately limited)		(very limited)			
	percs slowly	0.18	percs slowly	0.18	percs slowly	0.18		
	(slightly limited)		(slightly limited)		(slightly limited)			
Gepp	Limited		Limited		Very limited		Not limited	
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
	too acid	0.30	too acid	0.30	small stones	1.00		
	(slightly limited)		(slightly limited)		(limited)			
	small stones	0.06	small stones	0.06	too acid	0.30		
	(slightly limited)		(slightly limited)		(slightly limited)			
73337:								
Tonti	Very limited		Very limited		Very limited		Slightly limited	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	wetness	0.28
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	wetness	0.50	wetness	0.28	slope	0.98		
	(moderately limited)		(slightly limited)		(limited)			
					wetness	0.50		
					(moderately limited)			
Portia	Not limited		Not limited		Limited		Not limited	
					slope	0.78		
					(limited)			
73338:								
Portia	Slightly limited		Slightly limited		Very limited		Very limited	
	slope	0.16	slope	0.16	slope	1.00	erodes easily	1.00
	(slightly limited)		(slightly limited)		(very limited)		(very limited)	
					small stones	0.12		
					(slightly limited)			
Hobson	Limited		Limited		Very limited		Very limited	
	slope	0.63	slope	0.63	slope	1.00	erodes easily	1.00
	(limited)		(limited)		(very limited)		(very limited)	
	wetness	0.50	percs slowly	0.39	wetness	0.50	wetness	0.28
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)	
	percs slowly	0.39	wetness	0.28	percs slowly	0.39		
	(moderately limited)		(slightly 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
73339:								
Arkana	Very limited		Very limited		Very limited		Limited	
	percs slowly	1.00	percs slowly	1.00	small stones	1.00	small stones	0.71
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00	small stones	1.00	percs slowly	1.00		
	(very limited)		(very limited)		(very limited)			
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
Gepp	Very limited		Very limited		Very limited		Moderately limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.54
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
73340:								
Rueter	Very limited		Very limited		Very limited		Moderately limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.44
	(very limited)		(very limited)		(very limited)		(moderately limited)	
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
	percs slowly	0.18	percs slowly	0.18	percs slowly	0.18		
	(slightly limited)		(slightly limited)		(slightly limited)			
Gepp	Limited		Limited		Very limited		Not limited	
	small stones	0.75	small stones	0.75	slope	1.00		
	(limited)		(limited)		(very limited)			
	slope	0.63	slope	0.63	small stones	1.00		
	(limited)		(limited)		(very limited)			
73341:								
Gepp	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	small stones	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	1.00	small stones	1.00	slope	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
Arkana	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	small stones	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00	small stones	0.70
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00	small stones	1.00	slope	1.00		
	(very limited)		(very limited)		(very limited)			
73342:								
Alred	Very limited		Very limited		Very limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.01
	(limited)		(limited)		(very limited)		(slightly limited)	
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very limited)			
	percs slowly	0.18	percs slowly	0.18	percs slowly	0.18		
	(slightly limited)		(slightly limited)		(slightly limited)			
Arkana	Very limited		Very limited		Very limited		Slightly limited	
	percs slowly	1.00	percs slowly	1.00	small stones	1.00	small stones	0.12
	(very limited)		(very limited)		(very limited)		(slightly limited)	
	small stones	1.00	small stones	1.00	percs slowly	1.00		
	(very limited)		(very limited)		(very limited)			
	slope	0.63	slope	0.63	slope	1.00		
	(limited)		(limited)		(very 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
73361:								
Coulstone	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	small stones	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	1.00	small stones	1.00	slope	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	large stones	0.12	small stones	0.29
	(very limited)		(very limited)		(slightly limited)		(slightly limited)	
Alred	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	small stones	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	1.00	small stones	1.00	slope	1.00	large surface stones	0.70
	(very limited)		(very limited)		(very limited)		(limited)	
	large surface stones	0.70	large surface stones	0.70	percs slowly	0.18	small stones	0.12
	(limited)		(limited)		(slightly limited)		(slightly limited)	
74627:								
Hartville	Limited		Moderately limited		Moderately limited		Slightly limited	
	flooding (rare)	0.90	percs slowly	0.39	wetness	0.50	wetness	0.28
	(limited)		(moderately limited)		(moderately limited)		(slightly limited)	
	wetness	0.50	wetness	0.28	percs slowly	0.39		
	(moderately limited)		(slightly limited)		(moderately limited)			
	percs slowly	0.39						
	(moderately limited)							
74636:								
Lecoma	Not limited		Not limited		Limited		Not limited	
					slope	0.98		
					(limited)			
74637:								
Lecoma	Slightly limited		Slightly limited		Very limited		Not limited	
	slope	0.16	slope	0.16	slope	1.00		
	(slightly limited)		(slightly limited)		(very limited)			
74642:								
Cornwall	Very limited		Very limited		Very limited		Very limited	
	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	1.00	wetness	0.68	wetness	1.00	wetness	0.68
	(very limited)		(limited)		(very limited)		(limited)	
	percs slowly	0.39	percs slowly	0.39	percs slowly	0.39		
	(moderately limited)		(moderately limited)		(moderately limited)			
74643:								
Lecoma	Not limited		Not limited		Not limited		Not limited	
74644:								
Deible	Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00	percs slowly	1.00	percs slowly	1.00		
	(very limited)		(very limited)		(very limited)			
74648:								
Aslinger	Moderately limited		Slightly limited		Limited		Slightly limited	
	wetness	0.50	wetness	0.28	slope	0.98	wetness	0.28
	(moderately limited)		(slightly limited)		(limited)		(slightly limited)	
	percs slowly	0.13	percs slowly	0.13	wetness	0.50		
	(slightly limited)		(slightly limited)		(moderately limited)			
					percs slowly	0.13		
					(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
74651:								
Waben	Moderately limited		Moderately limited		Very limited		Not limited	
	small stones	0.36	small stones	0.36	small stones	1.00		
	(moderately limited)		(moderately limited)		(very limited)			
					slope	0.98		
					(limited)			
74658:								
Zanoni	Limited		Not limited		Moderately limited		Not limited	
	flooding (rare)	0.90			small stones	0.31		
	(limited)				(moderately limited)			
75381:								
Bearthicket	Limited		Not limited		Not limited		Not limited	
	flooding (rare)	0.90						
	(limited)							
75390:								
Razort	Limited		Not limited		Slightly limited		Not limited	
	flooding (rare)	0.90			small stones	0.15		
	(limited)				(slightly limited)			
75394:								
Relfe	Limited		Moderately limited		Very limited		Not limited	
	flooding (rare)	0.90	small stones	0.55	small stones	1.00		
	(limited)		(moderately limited)		(very limited)			
	small stones	0.55						
	(moderately limited)							
75395:								
Jamesfin	Very limited		Not limited		Moderately limited		Not limited	
	flooding	1.00			flooding	0.60		
	(very limited)				(moderately limited)			
75408:								
Secesh	Limited		Not limited		Limited		Not limited	
	flooding (rare)	0.90			small stones	0.92		
	(limited)				(limited)			
75409:								
Relfe	Very limited		Not limited		Limited		Not limited	
	flooding	1.00			small stones	0.84		
	(very limited)				(limited)			
					flooding	0.60		
					(moderately limited)			
75411:								
Tilk	Very limited		Very limited		Very limited		Limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	0.78
	(very limited)		(very limited)		(very limited)		(limited)	
	flooding (rare)	0.90			large stones	0.30		
	(limited)				(slightly limited)			
75416:								
Gladden	Very limited		Not limited		Moderately limited		Not limited	
	flooding	1.00			flooding	0.60		
	(very 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
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 0.56
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
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
75426:								
Gabriel	Limited wetness (limited) flooding (rare) (limited) percs slowly (slightly limited)	 0.96 0.90 0.13	Limited wetness (limited) percs slowly (slightly limited)	 0.61 0.13	Limited wetness (limited) percs slowly (slightly limited)	 0.96 0.13	Limited wetness (limited)	 0.61
75430:								
Wideman	Very limited flooding (very limited)	 1.00	Not limited		Moderately limited flooding (moderately limited)	 0.60	Not limited	
75433:								
Racket	Very limited flooding (very limited)	 1.00	Not limited		Moderately limited flooding (moderately limited) small stones (slightly limited)	 0.60 0.01	Not limited	
75451:								
Gladden	Very limited flooding (very limited)	 1.00	Not limited		Moderately limited flooding (moderately limited)	 0.60	Not limited	
75462:								
Huzzah	Very limited flooding (very limited)	 1.00	Not limited		Moderately limited flooding (moderately limited)	 0.60	Not limited	
75463:								
Huzzah	Limited flooding (rare) (limited)	 0.90	Not limited		Not limited		Not 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
75464:								
Cedargap----------	Limited		Slightly limited		Very limited		Not limited	
	flooding (rare)	0.90	small stones	0.06	small stones	1.00		
	(limited)		(slightly limited)		(limited)			
	small stones	0.06						
	(slightly limited)							
75465:								
Raftville----------	Limited		Not limited		Limited		Not limited	
	flooding (rare)	0.90			depth to bedrock	0.66		
	(limited)				(limited)			
Gabriel----------	Limited		Limited		Limited		Limited	
	wetness	0.96	wetness	0.61	wetness	0.96	wetness	0.61
	(limited)		(limited)		(limited)		(limited)	
	flooding (rare)	0.90	percs slowly	0.13	percs slowly	0.13		
	(limited)		(slightly limited)		(slightly limited)			
	percs slowly	0.13						
	(slightly limited)							
75466:								
Midco----------	Very limited		Very limited		Very limited		Limited	
	flooding	1.00	small stones	1.00	small stones	1.00	small stones	0.67
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	1.00			flooding	0.60		
	(very limited)				(moderately limited)			
75470:								
Farewell----------	Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	flooding (rare)	0.90	small stones	0.55	small stones	1.00		
	(limited)		(moderately limited)		(very limited)			
	small stones	0.55						
	(moderately limited)							
77000:								
Killarney----------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	large surface stones	1.00	slope	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	slope	1.00	percs slowly	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	1.00	percs slowly	1.00	small stones	1.00		
	(very limited)		(very limited)		(very limited)			
Frenchmill---------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	large surface stones	1.00	slope	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	slope	1.00	small stones	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	small stones	0.46	small stones	0.46	large stones	0.95		
	(moderately limited)		(moderately limited)		(limited)			
77003:								
Delassus----------	Very limited		Very limited		Very limited		Limited	
	percs slowly	1.00	percs slowly	1.00	slope	1.00	large surface stones	0.70
	(very limited)		(very limited)		(very limited)		(limited)	
	large surface stones	0.70	large surface stones	0.70	percs slowly	1.00	large stones	0.38
	(limited)		(limited)		(very limited)		(moderately limited)	
	slope	0.63	slope	0.63	large stones >25%	1.00	wetness	0.19
	(limited)		(limited)		(very 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
77004:								
Irondale----------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	small stones	1.00	slope	0.92
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	0.54	small stones	0.54	large stones >25%	1.00	large stones	0.17
	(moderately limited)		(moderately limited)		(very limited)		(slightly limited)	
77007:								
Taumsauk----------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	shallow to bedrock	1.00	slope	0.92
	(very limited)		(very limited)		(very limited)		(limited)	
	shallow to bedrock	0.90	shallow to bedrock	0.90	small stones	1.00		
	(limited)		(limited)		(very limited)			
Irondale----------	Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	large surface stones	1.00	large stones >25%	1.00	slope	0.92
	(very limited)		(very limited)		(very limited)		(limited)	
	small stones	0.49	small stones	0.49	small stones	1.00	large stones	0.32
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)	
Rock outcrop-------	Not rated		Not rated		Not rated		Not rated	
77011:								
Taumsauk----------	Limited		Limited		Very limited		Not limited	
	shallow to bedrock	0.90	shallow to bedrock	0.90	shallow to bedrock	1.00		
	(limited)		(limited)		(very limited)			
	small stones	0.23	small stones	0.23	slope	1.00		
	(slightly limited)		(slightly limited)		(very limited)			
	slope	0.04	slope	0.04	small stones	1.00		
	(slightly limited)		(slightly limited)		(very limited)			
Irondale----------	Moderately limited		Moderately limited		Very limited		Not limited	
	small stones	0.37	small stones	0.37	small stones	1.00		
	(moderately limited)		(moderately limited)		(very limited)			
	percs slowly	0.17	percs slowly	0.17	slope	1.00		
	(slightly limited)		(slightly limited)		(very limited)			
	slope	0.04	slope	0.04	depth to bedrock	0.42		
	(slightly limited)		(slightly limited)		(moderately limited)			
Rock outcrop-------	Not rated		Not rated		Not rated		Not rated	
99001:								
Water----------	Not rated		Not rated		Not rated		Not rated	
99013:								
Riverwash----------	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		Very limited		Moderately limited		Moderately limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.44	wetness	0.44	wetness	0.59
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	droughty	0.90	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	wetness	0.44						
	(limited)		(moderately limited)							
70026:										
Tonti----------	Very limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.44	wetness	0.44	wetness	0.59
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	droughty	0.90	moderate erodibility	0.50						
	(limited)		(moderately limited)							
	moderate erodibility	0.50	wetness	0.44						
	(moderately limited)		(moderately limited)							
73013:										
Lowassie-------	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)	
	ponded (wetness)	1.00	ponded (wetness)	1.00	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	0.39	percs slowly	0.39						
	(moderately limited)		(moderately limited)							
73019:										
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	0.57
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	small stones	1.00	high erodibility	0.80	droughty	0.57	droughty	0.57		
	(very limited)		(limited)		(moderately limited)		(moderately limited)			
	high erodibility	0.80	droughty	0.57						
	(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
73021:										
Poynor---------	Very limited		Very limited		Limited		Limited		Moderately limited	
	droughty	1.00	small stones	1.00	small stones	0.73	small stones	0.73	droughty	0.57
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	small stones	1.00	high erodibility	0.80	droughty	0.57	droughty	0.57		
	(very limited)		(limited)		(moderately limited)		(moderately limited)			
	high erodibility	0.80	slope	0.60						
	(limited)		(moderately limited)							
73042:										
Niangua--------	Very limited		Very limited		Moderately limited		Slightly limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.42	small stones	0.30		
	(very limited)		(very limited)		(moderately limited)		(slightly limited)			
	droughty	1.00	slope	0.91						
	(very limited)		(limited)							
	slope	0.91	high erodibility	0.80						
	(limited)		(limited)							
Bardley--------	Very limited		Limited		Limited		Limited		Limited	
	droughty	1.00	slope	0.91	droughty	0.66	droughty	0.66	droughty	0.66
	(very limited)		(limited)		(limited)		(limited)		(limited)	
	slope	0.91	high erodibility	0.80			depth to bedrock	0.46	depth to bedrock	0.46
	(limited)		(limited)				(moderately limited)		(moderately limited)	
	high erodibility	0.80	droughty	0.66						
	(limited)		(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)									
73055:										
Alred----------	Very limited		Very limited		Moderately limited		Slightly limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.31	small stones	0.12		
	(very limited)		(very limited)		(moderately limited)		(slightly limited)			
	droughty	0.99	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	slope	0.60						
	(limited)		(moderately limited)							
Rueter---------	Very limited		Very limited		Slightly limited		Slightly limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.28	small stones	0.08		
	(very limited)		(very limited)		(slightly limited)		(slightly limited)			
	droughty	0.86	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	slope	0.60						
	(limited)		(moderately limited)							
73068:										
Tick----------	Very limited		Very limited		Moderately limited		Slightly limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.36	small stones	0.20		
	(very limited)		(very limited)		(moderately limited)		(slightly limited)			
	droughty	0.82	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	percs slowly	0.26						
	(limited)		(slightly 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)			

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
73073:										
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)							
73080:										
Alred----------	Very limited		Limited		Slightly limited		Slightly limited		Slightly limited	
	droughty	1.00	high erodibility	0.80	droughty	0.02	droughty	0.02	droughty	0.02
	(very limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	high erodibility	0.80	slope	0.68						
	(limited)		(limited)							
	slope	0.68	percs slowly	0.39						
	(limited)		(moderately limited)							
Bardley--------	Very limited		Limited		Limited		Limited		Limited	
	droughty	1.00	slope	0.87	droughty	0.72	droughty	0.72	droughty	0.72
	(very limited)		(limited)		(limited)		(limited)		(limited)	
	slope	0.87	large stones	0.86	large stones	0.50	large stones	0.50	large stones	0.50
	(limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	large stones	0.86	high erodibility	0.80	small stones	0.07	depth to bedrock	0.46	depth to bedrock	0.46
	(limited)		(limited)		(slightly limited)		(moderately limited)		(moderately 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	
	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	0.04	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)					

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:										
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73139:										
Poynor---------	Limited		Limited		Slightly limited		Not limited		Not limited	
	droughty	0.96	high erodibility	0.80	small stones	0.14				
	(limited)		(limited)		(slightly limited)					
	high erodibility	0.80	small stones	0.69						
	(limited)		(limited)							
	small stones	0.69								
	(limited)									
Clarksville----	Limited		Limited		Slightly limited		Not limited		Not limited	
	droughty	0.99	high erodibility	0.80	small stones	0.04				
	(very limited)		(limited)		(slightly limited)					
	high erodibility	0.80	small stones	0.31						
	(limited)		(moderately limited)							
	small stones	0.31								
	(moderately limited)									
Scholten-------	Very limited		Very limited		Limited		Limited		Very limited	
	droughty	1.00	percs slowly	1.00	wetness	0.78	wetness	0.78	wetness	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
	percs slowly	1.00	high erodibility	0.80	droughty	0.45	droughty	0.45	droughty	0.45
	(very limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	high erodibility	0.80	wetness	0.78	small stones	0.06				
	(limited)		(limited)		(slightly limited)					
73140:										
Clarksville----	Limited		Limited		Slightly limited		Not limited		Not limited	
	droughty	0.90	small stones	0.82	small stones	0.17				
	(limited)		(limited)		(slightly limited)					
	small stones	0.82	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	slope	0.79						
	(limited)		(limited)							
Scholten-------	Very limited		Very limited		Limited		Limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	small stones	0.68	small stones	0.68	wetness	0.39
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	droughty	1.00	small stones	1.00	wetness	0.17	wetness	0.17	droughty	0.05
	(very limited)		(very limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	small stones	1.00	high erodibility	0.80	droughty	0.05	droughty	0.05		
	(very limited)		(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
73143:										
Courtois-------	Limited		Limited		Not limited		Not limited		Not limited	
	high erodibility (limited)	0.80	high erodibility (limited)	0.80						
	droughty (slightly limited)	0.22								
73144:										
Courtois-------	Limited		Limited		Not limited		Not limited		Not limited	
	high erodibility (limited)	0.80	high erodibility (limited)	0.80						
	droughty (slightly limited)	0.22								
73147:										
Fourche--------	Limited		Limited		Slightly limited		Slightly limited		Moderately limited	
	high erodibility (limited)	0.80	high erodibility (limited)	0.80	wetness (slightly limited)	0.28	wetness (slightly limited)	0.28	wetness (moderately limited)	0.45
	wetness (slightly limited)	0.28	wetness (slightly limited)	0.28						
	percs slowly (slightly limited)	0.13	percs slowly (slightly limited)	0.13						
73155:										
Gasconade------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty (very limited)	1.00	droughty (very limited)	1.00	droughty (very limited)	1.00	droughty (very limited)	1.00	shallow to bedrock (very limited)	1.00
	shallow to bedrock (very limited)	1.00	shallow to bedrock (very limited)	1.00	too clayey (moderately limited)	0.36	shallow to bedrock (very limited)	1.00	droughty (very limited)	1.00
	percs slowly (very limited)	1.00	percs slowly (very limited)	1.00			too clayey (moderately limited)	0.36		
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73159:										
Yelton---------	Limited		Limited		Moderately limited		Moderately limited		Limited	
	droughty (limited)	0.88	high erodibility (limited)	0.80	wetness (moderately limited)	0.58	wetness (moderately limited)	0.58	wetness (limited)	0.93
	high erodibility (limited)	0.80	wetness (moderately limited)	0.58						
	wetness (moderately limited)	0.58	percs slowly (moderately limited)	0.39						

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		Very limited		Moderately limited		Moderately limited		Moderately limited	
	droughty	1.00	small stones	1.00	small stones	0.60	small stones	0.60	depth to bedrock	0.58
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	small stones	1.00	high erodibility	0.80	droughty	0.45	depth to bedrock	0.58	droughty	0.45
	(very limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	high erodibility	0.80	depth to bedrock	0.58	wetness	0.28	droughty	0.45	wetness	0.45
	(limited)		(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)	
Poynor---------	Limited		Limited		Slightly limited		Slightly limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.24	small stones	0.01		
	(limited)		(limited)		(slightly limited)		(slightly limited)			
	droughty	0.99	high erodibility	0.80						
	(very limited)		(limited)							
	high erodibility	0.80								
	(limited)									
73197:										
Viburnum-------	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)	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
	percs slowly	0.13	percs slowly	0.13						
	(slightly limited)		(slightly limited)							
73220:										
Poynor---------	Very limited		Very limited		Very limited		Very limited		Moderately limited	
	small stones	1.00	small stones	1.00	small stones	1.00	small stones	1.00	droughty	0.57
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
	droughty	1.00	high erodibility	0.80	droughty	0.57	droughty	0.57		
	(very limited)		(limited)		(moderately limited)		(moderately limited)			
	high erodibility	0.80	droughty	0.57						
	(limited)		(moderately limited)							
73221:										
Poynor---------	Very limited		Very limited		Limited		Limited		Moderately limited	
	droughty	1.00	small stones	1.00	small stones	0.81	small stones	0.81	droughty	0.57
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	small stones	1.00	high erodibility	0.80	droughty	0.57	droughty	0.57		
	(very limited)		(limited)		(moderately limited)		(moderately limited)			
	high erodibility	0.80	droughty	0.57						
	(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
73222:										
Splitlimb------	Very limited		Very limited		Limited		Limited		Limited	
	ponded (wetness)	1.00	ponded (wetness)	1.00	seasonally ponded	0.80	seasonally ponded	0.80	wetness	0.85
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	wetness	0.55	wetness	0.55	wetness	0.55	wetness	0.55	seasonally ponded	0.80
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
	percs slowly	0.13	percs slowly	0.13						
	(slightly limited)		(slightly limited)							
73223:										
Coulstone------	Very limited		Very limited		Limited		Limited		Limited	
	droughty	1.00	small stones	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	droughty	1.00	small stones	0.60	small stones	0.60		
	(very limited)		(very limited)		(moderately limited)		(moderately limited)			
	high erodibility	0.80	high erodibility	0.80						
	(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	0.40	large stones	0.40	large stones	0.40
	(limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	slope	0.79	slope	0.79	small stones	0.14	depth to bedrock	0.32	depth to bedrock	0.32
	(limited)		(limited)		(slightly limited)		(moderately limited)		(moderately limited)	
73236:										
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	high erodibility	0.80	wetness	0.58	wetness	0.58	droughty	0.70
	(very limited)		(limited)		(moderately limited)		(moderately limited)		(limited)	
	high erodibility	0.80	small stones	0.73	small stones	0.15				
	(limited)		(limited)		(slightly limited)					
Poynor---------	Very limited		Very limited		Limited		Limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.67	small stones	0.67		
	(very limited)		(very limited)		(limited)		(limited)			
	high erodibility	0.80	high erodibility	0.80						
	(limited)		(limited)							
	droughty	0.47								
	(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
73242:										
Fanchon--------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
Tonti----------	Very limited		Very limited		Moderately limited		Moderately limited		Limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.56	wetness	0.56	wetness	0.88
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(limited)	
	droughty	0.91	wetness	0.56						
	(limited)		(moderately limited)							
	wetness	0.56	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
73269:										
Brussels-------	Very limited		Very limited		Slightly limited		Slightly limited		Slightly limited	
	droughty	1.00	slope	1.00	small stones	0.11	droughty	0.08	droughty	0.08
	(very limited)		(very limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	slope	1.00	high erodibility	0.80	droughty	0.08				
	(very limited)		(limited)		(slightly limited)					
	high erodibility	0.80	small stones	0.57						
	(limited)		(moderately limited)							
Gasconade------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00	shallow to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shallow to bedrock	1.00	shallow to bedrock	1.00	too clayey	0.76	shallow to bedrock	1.00	droughty	1.00
	(very limited)		(very limited)		(limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	small stones	0.01	too clayey	0.76		
	(very limited)		(very limited)		(slightly limited)		(limited)			
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73295:										
Taterhill------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(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
73298:										
Tonti----------	Very limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.44	wetness	0.44	wetness	0.59
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	droughty	0.90	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	wetness	0.44						
	(limited)		(moderately limited)							
Hogcreek-------	Very limited		Very limited		Moderately limited		Moderately limited		Limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.55	wetness	0.55	wetness	0.85
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(limited)	
	droughty	0.98	high erodibility	0.80			depth to bedrock	0.18	depth to bedrock	0.18
	(limited)		(limited)				(slightly limited)		(slightly limited)	
	high erodibility	0.80	wetness	0.55						
	(limited)		(moderately limited)							
73301:										
Tick----------	Limited		Limited		Not limited		Not limited		Not limited	
	droughty	0.82	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80	percs slowly	0.26						
	(limited)		(slightly limited)							
	percs slowly	0.26								
	(slightly limited)									
73308:										
Grandgulf------	Very limited		Very limited		Limited		Limited		Limited	
	ponded (wetness)	1.00	ponded (wetness)	1.00	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
73309:										
Clarksville----	Very limited		Very limited		Limited		Limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	0.73	small stones	0.73	droughty	0.01
	(very limited)		(very limited)		(limited)		(limited)		(slightly limited)	
	droughty	1.00	high erodibility	0.80	droughty	0.01	droughty	0.01		
	(very limited)		(limited)		(slightly limited)		(slightly limited)			
	high erodibility	0.80	slope	0.31						
	(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
73309:										
Bendavis-------	Very limited		Very limited		Limited		Limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	small stones	0.67	small stones	0.67	wetness	0.45
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	small stones	1.00	small stones	1.00	wetness	0.28	wetness	0.28	depth to bedrock	0.13
	(very limited)		(very limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	droughty	0.87	high erodibility	0.80			depth to bedrock	0.13		
	(limited)		(limited)				(slightly limited)			
73310:										
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)			
Bendavis-------	Limited		Limited		Slightly limited		Slightly limited		Moderately limited	
	droughty	0.95	high erodibility	0.80	wetness	0.28	wetness	0.28	wetness	0.45
	(limited)		(limited)		(slightly limited)		(slightly limited)		(moderately limited)	
	high erodibility	0.80	small stones	0.33	small stones	0.04	depth to bedrock	0.27	depth to bedrock	0.27
	(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		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.67	small stones	0.67		
	(very limited)		(very limited)		(limited)		(limited)			
	high erodibility	0.80	high erodibility	0.80						
	(limited)		(limited)							
	droughty	0.47								
	(moderately limited)									
73311:										
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	0.38	small stones	0.24		
	(very limited)		(limited)		(moderately 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
73311:										
Bendavis--------	Very limited		Limited		Moderately limited		Moderately limited		Moderately limited	
	droughty	1.00	high erodibility	0.80	droughty	0.45	depth to bedrock	0.58	depth to bedrock	0.58
	(very limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	high erodibility	0.80	depth to bedrock	0.58	wetness	0.28	droughty	0.45	droughty	0.45
	(limited)		(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)	
	depth to bedrock	0.58	droughty	0.45			wetness	0.28	wetness	0.45
	(moderately limited)		(moderately limited)				(slightly limited)		(moderately limited)	
Poynor----------	Very limited		Limited		Moderately limited		Moderately limited		Moderately limited	
	droughty	1.00	small stones	1.00	droughty	0.57	droughty	0.57	droughty	0.57
	(very limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	small stones	1.00	high erodibility	0.80	small stones	0.24	small stones	0.01		
	(limited)		(limited)		(slightly limited)		(slightly limited)			
	high erodibility	0.80	droughty	0.57						
	(limited)		(moderately limited)							
73313:										
Fanchon---------	Not limited		Not limited		Not limited		Not limited		Not limited	
Tonti----------	Very limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.44	wetness	0.44	wetness	0.59
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	droughty	0.90	wetness	0.44						
	(limited)		(moderately limited)							
	wetness	0.44								
	(moderately limited)									
73333:										
Taterhill------	Not limited		Not limited		Not limited		Not limited		Not limited	
73334:										
Horneybuck-----	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)	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
	percs slowly	0.13	percs slowly	0.13						
	(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
73335:										
Hobson---------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
	moderate erodibility	0.50	moderate erodibility	0.50	wetness	0.44	wetness	0.44	wetness	0.59
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	wetness	0.44	wetness	0.44						
	(moderately limited)		(moderately limited)							
	percs slowly	0.39	percs slowly	0.39						
	(moderately limited)		(moderately limited)							
Rueter---------	Very limited		Very limited		Moderately limited		Slightly limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	0.38	small stones	0.24	droughty	0.04
	(very limited)		(very limited)		(moderately limited)		(slightly limited)		(slightly limited)	
	droughty	1.00	moderate erodibility	0.50	droughty	0.04	droughty	0.04		
	(very limited)		(moderately limited)		(slightly limited)		(slightly limited)			
	moderate erodibility	0.50	percs slowly	0.18						
	(moderately limited)		(slightly limited)							
73336:										
Rueter---------	Limited		Limited		Slightly limited		Not limited		Not limited	
	high erodibility	0.80	high erodibility	0.80	small stones	0.04				
	(limited)		(limited)		(slightly limited)					
	small stones	0.33	small stones	0.33						
	(moderately limited)		(moderately limited)							
	droughty	0.19	percs slowly	0.18						
	(slightly limited)		(slightly limited)							
Gepp----------	Limited		Limited		Slightly limited		Not limited		Not limited	
	droughty	0.93	high erodibility	0.80	small stones	0.01				
	(limited)		(limited)		(slightly limited)					
	high erodibility	0.80	small stones	0.06						
	(limited)		(slightly limited)							
	small stones	0.06								
	(slightly limited)									
73337:										
Tonti----------	Very limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.44	wetness	0.44	wetness	0.59
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	high erodibility	0.80	high erodibility	0.80						
	(limited)		(limited)							
	wetness	0.44	wetness	0.44						
	(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
73337:										
Portia---------	Limited		Limited		Not limited		Not limited		Not limited	
	high erodibility	0.80	high erodibility	0.80						
	(limited)		(limited)							
73338:										
Portia---------	Limited		Limited		Not limited		Not limited		Not limited	
	high erodibility	0.80	high erodibility	0.80						
	(limited)		(limited)							
Hobson---------	Limited		Limited		Moderately limited		Moderately limited		Moderately limited	
	high erodibility	0.80	high erodibility	0.80	wetness	0.44	wetness	0.44	wetness	0.59
	(limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	wetness	0.44	wetness	0.44						
	(moderately limited)		(moderately limited)							
	percs slowly	0.39	percs slowly	0.39						
	(moderately limited)		(moderately limited)							
73339:										
Arkana---------	Very limited		Very limited		Limited		Limited		Slightly limited	
	droughty	1.00	percs slowly	1.00	small stones	0.70	small stones	0.71	depth to bedrock	0.29
	(very limited)		(very limited)		(limited)		(limited)		(slightly limited)	
	percs slowly	1.00	small stones	1.00	droughty	0.16	depth to bedrock	0.29	droughty	0.16
	(very limited)		(very limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	small stones	1.00	high erodibility	0.80			droughty	0.16		
	(very limited)		(limited)				(slightly limited)			
Gepp----------	Very limited		Very limited		Moderately limited		Moderately limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.56	small stones	0.54		
	(very limited)		(very limited)		(moderately limited)		(moderately limited)			
	droughty	0.93	high erodibility	0.80						
	(limited)		(limited)							
	high erodibility	0.80								
	(limited)									
73340:										
Rueter---------	Very limited		Very limited		Moderately limited		Moderately limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.50	small stones	0.44		
	(very limited)		(very limited)		(moderately limited)		(moderately limited)			
	high erodibility	0.80	high erodibility	0.80						
	(limited)		(limited)							
	droughty	0.58	percs slowly	0.18						
	(moderately 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
73340:										
Gepp----------	Very limited		Limited		Slightly limited		Slightly limited		Slightly limited	
	droughty	1.00	high erodibility	0.80	small stones	0.15	droughty	0.06	droughty	0.06
	(very limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	high erodibility	0.80	small stones	0.75	droughty	0.06				
	(limited)		(limited)		(slightly limited)					
	small stones	0.75	droughty	0.06						
	(limited)		(slightly limited)							
73341:										
Gepp----------	Very limited		Very limited		Very limited		Very limited		Slightly limited	
	droughty	1.00	small stones	1.00	small stones	1.00	small stones	1.00	droughty	0.09
	(very limited)		(very limited)		(very limited)		(very limited)		(slightly limited)	
	small stones	1.00	slope	0.99	droughty	0.09	droughty	0.09		
	(very limited)		(limited)		(slightly limited)		(slightly limited)			
	slope	0.99	high erodibility	0.80						
	(limited)		(limited)							
Arkana---------	Very limited		Very limited		Limited		Limited		Moderately limited	
	droughty	1.00	percs slowly	1.00	small stones	0.70	small stones	0.70	droughty	0.34
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	percs slowly	1.00	small stones	1.00	droughty	0.34	droughty	0.34	depth to bedrock	0.29
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(slightly limited)	
	small stones	1.00	slope	0.99			depth to bedrock	0.29		
	(very limited)		(limited)				(slightly limited)			
73342:										
Alred----------	Very limited		Limited		Slightly limited		Slightly limited		Slightly limited	
	droughty	1.00	small stones	1.00	small stones	0.24	small stones	0.01	droughty	0.01
	(very limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	small stones	1.00	high erodibility	0.80	droughty	0.01	droughty	0.01		
	(limited)		(limited)		(slightly limited)		(slightly limited)			
	high erodibility	0.80	percs slowly	0.18						
	(limited)		(slightly limited)							
Arkana---------	Very limited		Very limited		Limited		Limited		Limited	
	droughty	1.00	percs slowly	1.00	droughty	0.78	droughty	0.78	droughty	0.78
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	1.00	small stones	1.00	small stones	0.31	depth to bedrock	0.29	depth to bedrock	0.29
	(very limited)		(very limited)		(moderately limited)		(slightly limited)		(slightly limited)	
	small stones	1.00	high erodibility	0.80			small stones	0.12		
	(very limited)		(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
73361:										
Coulstone------	Very limited		Very limited		Limited		Limited		Limited	
	droughty	1.00	small stones	1.00	droughty	0.62	droughty	0.62	droughty	0.62
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	small stones	1.00	slope	0.99	small stones	0.41	small stones	0.29		
	(very limited)		(limited)		(moderately limited)		(slightly limited)			
	slope	0.99	high erodibility	0.80						
	(limited)		(limited)							
Alred----------	Very limited		Very limited		Moderately limited		Slightly limited		Not limited	
	small stones	1.00	small stones	1.00	small stones	0.31	small stones	0.12		
	(very limited)		(very limited)		(moderately limited)		(slightly limited)			
	slope	0.99	slope	0.99						
	(limited)		(limited)							
	droughty	0.99	high erodibility	0.80						
	(limited)		(limited)							
74627:										
Hartville------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
	wetness	0.44	wetness	0.44	wetness	0.44	wetness	0.44	wetness	0.59
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	percs slowly	0.39	percs slowly	0.39						
	(moderately limited)		(moderately 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)							
74642:										
Cornwall-------	Very limited		Very limited		Limited		Limited		Very limited	
	ponded (wetness)	1.00	ponded (wetness)	1.00	seasonally ponded	0.80	seasonally ponded	0.80	wetness	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
	high erodibility	0.80	high erodibility	0.80	wetness	0.68	wetness	0.68	seasonally ponded	0.80
	(limited)		(limited)		(limited)		(limited)		(limited)	
	wetness	0.68	wetness	0.68						
	(limited)		(limited)							
74643:										
Lecoma---------	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
74644:										
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	1.00	percs slowly	1.00						
	(very limited)		(very limited)							
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
74648:										
Aslinger-------	Very limited		Limited		Moderately limited		Moderately limited		Moderately limited	
	droughty	1.00	high erodibility	0.80	wetness	0.44	wetness	0.44	wetness	0.59
	(very limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	high erodibility	0.80	wetness	0.44	droughty	0.01	droughty	0.01	droughty	0.01
	(limited)		(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	wetness	0.44	percs slowly	0.13						
	(moderately limited)		(slightly limited)							
74651:										
Waben----------	Very limited		Moderately limited		Slightly limited		Slightly limited		Slightly limited	
	droughty	1.00	moderate erodibility	0.50	small stones	0.05	droughty	0.02	droughty	0.02
	(very limited)		(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	moderate erodibility	0.50	small stones	0.36	droughty	0.02				
	(moderately limited)		(moderately limited)		(slightly limited)					
	small stones	0.36	droughty	0.02						
	(moderately limited)		(slightly limited)							
74658:										
Zanoni---------	Slightly limited		Not limited		Not limited		Not limited		Not limited	
	droughty	0.26								
	(slightly limited)									
75381:										
Bearthicket----	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately 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
75394:										
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	0.55	small stones	0.55	small stones	0.10				
	(moderately limited)		(moderately limited)		(slightly limited)					
75395:										
Jamesfin-------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	flooding	0.60	flooding	0.60						
	(moderately limited)		(moderately limited)							
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
75408:										
Secesh---------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
75409:										
Relfe----------	Very limited		Limited		Limited		Limited		Limited	
	droughty	1.00	droughty	0.84	droughty	0.84	droughty	0.84	droughty	0.84
	(very limited)		(limited)		(limited)		(limited)		(limited)	
	flooding	0.60	flooding	0.60						
	(moderately limited)		(moderately limited)							
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
75411:										
Tilk----------	Very limited		Very limited		Limited		Limited		Slightly limited	
	small stones	1.00	small stones	1.00	small stones	0.77	small stones	0.78	droughty	0.04
	(very limited)		(very limited)		(limited)		(limited)		(slightly limited)	
	droughty	1.00	moderate erodibility	0.50	droughty	0.04	droughty	0.04		
	(very limited)		(moderately limited)		(slightly limited)		(slightly limited)			
	moderate erodibility	0.50	droughty	0.04						
	(moderately limited)		(slightly limited)							
75416:										
Gladden--------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	flooding	0.60	flooding	0.60						
	(moderately limited)		(moderately limited)							
	moderate erodibility	0.50	moderate erodibility	0.50						
	(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
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	0.58	small stones	0.56		
	(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)									
75420:										
Secesh---------	Limited		Moderately limited		Not limited		Not limited		Not limited	
	droughty	0.70	flooding	0.60						
	(limited)		(moderately limited)							
	flooding	0.60								
	(moderately limited)									
Tilk----------	Very limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	small stones	1.00	small stones	1.00	small stones	0.42	droughty	0.34	droughty	0.34
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	droughty	1.00	flooding	0.60	droughty	0.34	small stones	0.30		
	(very limited)		(moderately limited)		(moderately limited)		(slightly limited)			
	flooding	0.60	droughty	0.34						
	(moderately limited)		(moderately limited)							
75426:										
Gabriel--------	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)	
	percs slowly	0.13	percs slowly	0.13						
	(slightly limited)		(slightly limited)							
75430:										
Wideman--------	Limited		Moderately limited		Not limited		Not limited		Not limited	
	droughty	0.65	flooding	0.60						
	(limited)		(moderately limited)							
	flooding	0.60								
	(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
75433:										
Racket---------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	flooding	0.60	flooding	0.60						
	(moderately limited)		(moderately limited)							
75451:										
Gladden--------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	flooding	0.60	flooding	0.60						
	(moderately limited)		(moderately limited)							
	droughty	0.01								
	(slightly limited)									
75462:										
Huzzah---------	Moderately limited		Moderately limited		Not limited		Not limited		Not limited	
	flooding	0.60	flooding	0.60						
	(moderately limited)		(moderately limited)							
75463:										
Huzzah---------	Not limited		Not limited		Not limited		Not limited		Not limited	
75464:										
Cedargap-------	Moderately limited		Slightly limited		Slightly limited		Not limited		Not limited	
	droughty	0.58	small stones	0.06	small stones	0.01				
	(moderately limited)		(slightly limited)		(slightly limited)					
	small stones	0.06								
	(slightly limited)									
75465:										
Raftville------	Very limited		Limited		Slightly limited		Limited		Limited	
	droughty	1.00	depth to bedrock	0.66	droughty	0.03	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	0.03	droughty	0.03
	(limited)		(moderately limited)				(slightly limited)		(slightly limited)	
	moderate erodibility	0.50	droughty	0.03						
	(moderately limited)		(slightly limited)							
Gabriel--------	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)	
	moderate erodibility	0.50	moderate erodibility	0.50						
	(moderately limited)		(moderately limited)							
	percs slowly	0.13	percs slowly	0.13						
	(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
75466:										
Midco----------	Very limited		Very limited		Limited		Limited		Limited	
	droughty	1.00	small stones	1.00	small stones	0.67	small stones	0.67	droughty	0.61
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	small stones	1.00	droughty	0.61	droughty	0.61	droughty	0.61		
	(very limited)		(limited)		(limited)		(limited)			
	flooding	0.60	flooding	0.60						
	(moderately limited)		(moderately limited)							
75470:										
Farewell-------	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)	
	small stones	0.55	small stones	0.55	small stones	0.10				
	(moderately limited)		(moderately limited)		(slightly limited)					
	droughty	0.14								
	(slightly limited)									
77000:										
Killarney------	Very limited		Very limited		Slightly limited		Slightly limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.28	wetness	0.28	wetness	0.45
	(very limited)		(very limited)		(slightly limited)		(slightly limited)		(moderately limited)	
	droughty	0.88	small stones	0.87	small stones	0.18				
	(limited)		(limited)		(slightly limited)					
	small stones	0.87	high erodibility	0.80						
	(limited)		(limited)							
Frenchmill-----	Limited		Limited		Slightly limited		Not limited		Not limited	
	high erodibility	0.80	high erodibility	0.80	small stones	0.08				
	(limited)		(limited)		(slightly limited)					
	slope	0.79	slope	0.79						
	(limited)		(limited)							
	droughty	0.61	small stones	0.46						
	(limited)		(moderately limited)							
77003:										
Delassus-------	Very limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	percs slowly	1.00	percs slowly	1.00	wetness	0.39	wetness	0.39	wetness	0.54
	(very limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	high erodibility	0.80	high erodibility	0.80	large stones	0.38	large stones	0.38	large stones	0.38
	(limited)		(limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	large stones	0.70	large stones	0.70	small stones	0.09				
	(limited)		(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
77004:										
Irondale-------	Very limited		Limited		Limited		Limited		Limited	
	droughty	1.00	depth to bedrock	0.86	droughty	0.66	depth to bedrock	0.86	depth to bedrock	0.86
	(very limited)		(limited)		(limited)		(limited)		(limited)	
	depth to bedrock	0.86	high erodibility	0.80	large stones	0.17	droughty	0.66	droughty	0.66
	(limited)		(limited)		(slightly limited)		(limited)		(limited)	
	high erodibility	0.80	droughty	0.66	small stones	0.10	large stones	0.17	large stones	0.17
	(limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
77007:										
Taumsauk-------	Very limited		Very limited		Limited		Very limited		Very limited	
	droughty	1.00	shallow to bedrock	1.00	droughty	1.00	shallow to bedrock	1.00	shallow to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shallow to bedrock	1.00	droughty	1.00	small stones	0.02	droughty	1.00	droughty	1.00
	(very limited)		(very limited)		(slightly limited)		(very limited)		(very limited)	
	high erodibility	0.80	high erodibility	0.80						
	(limited)		(limited)							
Irondale-------	Very limited		Limited		Limited		Limited		Limited	
	droughty	1.00	depth to bedrock	0.86	droughty	0.76	depth to bedrock	0.86	depth to bedrock	0.86
	(very limited)		(limited)		(limited)		(limited)		(limited)	
	depth to bedrock	0.86	high erodibility	0.80	large stones	0.32	droughty	0.76	droughty	0.76
	(limited)		(limited)		(moderately limited)		(limited)		(limited)	
	high erodibility	0.80	droughty	0.76	small stones	0.09	large stones	0.32	large stones	0.32
	(limited)		(limited)		(slightly limited)		(moderately limited)		(moderately limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
77011:										
Taumsauk-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	droughty	1.00	droughty	1.00	droughty	1.00	shallow to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shallow to bedrock	1.00	shallow to bedrock	1.00	small stones	0.02	shallow to bedrock	1.00	droughty	1.00
	(very limited)		(very limited)		(slightly limited)		(very limited)		(very limited)	
	high erodibility	0.80	high erodibility	0.80						
	(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
77011:										
Irondale-------	Very limited		Limited		Slightly limited		Moderately limited		Moderately limited	
	droughty (very limited)	1.00	high erodibility (limited)	0.80	small stones (slightly limited)	0.05	depth to bedrock (moderately limited)	0.42	depth to bedrock (moderately limited)	0.42
	high erodibility (limited)	0.80	depth to bedrock (moderately limited)	0.42	droughty (slightly limited)	0.02	droughty (slightly limited)	0.02	droughty (slightly limited)	0.02
	depth to bedrock (moderately limited)	0.42	small stones (moderately limited)	0.37						
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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		Limited		Not limited		Moderately limited		Limited	
	wetness	0.59	infrequent flooding	0.80			deep to water	0.45	slope	0.66
	(moderately limited)		(limited)				(moderately limited)		(limited)	
			deep to water	0.45						
			(moderately limited)							
70026:										
Tonti----------	Moderately limited		Limited		Not limited		Moderately limited		Not limited	
	wetness	0.59	infrequent flooding	0.80			deep to water	0.45		
	(moderately limited)		(limited)				(moderately limited)			
			deep to water	0.45						
			(moderately limited)							
73013:										
Lowassie-------	Very limited		Limited		Limited		Limited		Limited	
	wetness	1.00	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80
	(very limited)		(limited)		(limited)		(limited)		(limited)	
	seasonally ponded	0.80	infrequent flooding	0.80						
	(limited)		(limited)							
73019:										
Poynor---------	Moderately limited		Very limited		Limited		Very limited		Limited	
	droughty	0.57	deep to water	1.00	small stones	0.67	deep to water	1.00	slope	0.91
	(moderately limited)		(very limited)		(limited)		(very limited)		(limited)	
			infrequent flooding	0.80	droughty	0.57			seepage	0.45
			(limited)		(moderately limited)				(moderately limited)	
			small stones	0.67						
			(limited)							
73021:										
Poynor---------	Moderately limited		Very limited		Limited		Very limited		Very limited	
	droughty	0.57	deep to water	1.00	small stones	0.73	deep to water	1.00	slope	1.00
	(moderately limited)		(very limited)		(limited)		(very limited)		(very limited)	
			infrequent flooding	0.80	droughty	0.57			seepage	0.45
			(limited)		(moderately limited)				(moderately limited)	
			small stones	0.73						
			(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
73042:										
Niangua--------	Not limited		Very limited		Slightly limited		Very limited		Very limited	
			deep to water	1.00	small stones	0.30	deep to water	1.00	slope	1.00
			(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.18
			(limited)						(slightly limited)	
			small stones	0.30						
			(slightly limited)							
Bardley--------	Limited		Very limited		Limited		Very limited		Very limited	
	droughty	0.66	deep to water	1.00	droughty	0.66	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
	depth to bedrock	0.46	infrequent flooding	0.80					seepage	0.45
	(moderately limited)		(limited)						(moderately limited)	
73053:										
Lily----------	Limited		Very limited		Moderately limited		Very limited		Very limited	
	depth to bedrock	0.76	deep to water	1.00	droughty	0.48	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(moderately limited)		(very limited)		(very limited)	
	droughty	0.48	infrequent flooding	0.80						
	(moderately limited)		(limited)							
Bender---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.76	infrequent flooding	0.80	large stones	0.17			seepage	0.79
	(limited)		(limited)		(slightly limited)				(limited)	
	large stones	0.17	large stones	0.17						
	(slightly limited)		(slightly limited)							
73054:										
Viburnum-------	Limited		Limited		Not limited		Moderately limited		Slightly limited	
	wetness	0.85	infrequent flooding	0.80			deep to water	0.35	seepage	0.18
	(limited)		(limited)				(moderately limited)		(slightly limited)	
			deep to water	0.35						
			(moderately limited)							
73055:										
Alred----------	Not limited		Very limited		Slightly limited		Very limited		Very limited	
			deep to water	1.00	small stones	0.12	deep to water	1.00	slope	1.00
			(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80						
			(limited)							
			small stones	0.12						
			(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
73055:										
Rueter---------	Not limited		Very limited		Slightly limited		Very limited		Very limited	
			deep to water	1.00	small stones	0.08	deep to water	1.00	slope	1.00
			(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately limited)	
			small stones	0.08						
			(slightly limited)							
73068:										
Tick----------	Not limited		Very limited		Slightly limited		Very limited		Very limited	
			deep to water	1.00	small stones	0.20	deep to water	1.00	slope	1.00
			(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.07
			(limited)						(slightly limited)	
			small stones	0.20						
			(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		Very limited		Limited		Very limited		Very limited	
	droughty	0.75	deep to water	1.00	droughty	0.75	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
			infrequent flooding	0.80	small stones	0.60			seepage	0.45
			(limited)		(moderately limited)				(moderately limited)	
			small stones	0.60						
			(moderately limited)							
73080:										
Alred----------	Slightly limited		Very limited		Slightly limited		Very limited		Very limited	
	droughty	0.02	deep to water	1.00	droughty	0.02	deep to water	1.00	slope	1.00
	(slightly limited)		(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80						
			(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
73080:										
Bardley--------	Limited		Very limited		Limited		Very limited		Very limited	
	droughty	0.72	deep to water	1.00	droughty	0.72	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
	large stones	0.50	infrequent flooding	0.80	large stones	0.50			seepage	0.33
	(moderately limited)		(limited)		(moderately limited)				(moderately limited)	
	depth to bedrock	0.46	large stones	0.50						
	(moderately limited)		(moderately 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	
	droughty	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.44	infrequent flooding	0.80	large stones	0.44			seepage	0.89
	(moderately limited)		(limited)		(moderately limited)				(limited)	
	depth to bedrock	0.32	large stones	0.44						
	(moderately limited)		(moderately limited)							
Alred----------	Limited		Very limited		Limited		Very limited		Very limited	
	large stones	0.61	deep to water	1.00	large stones	0.61	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
	droughty	0.02	infrequent flooding	0.80	droughty	0.02				
	(slightly limited)		(limited)		(slightly limited)					
			large stones	0.61						
			(limited)							
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73139:										
Poynor---------	Not limited		Very limited		Not limited		Very limited		Very limited	
			deep to water	1.00			deep to water	1.00	slope	1.00
			(very limited)				(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately limited)	
Clarksville----	Not limited		Very limited		Not limited		Very limited		Very limited	
			deep to water	1.00			deep to water	1.00	slope	1.00
			(very limited)				(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately 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
73139:										
Scholten-------	Very limited		Limited		Moderately limited		Slightly limited		Very limited	
	wetness	1.00	infrequent flooding	0.80	droughty	0.45	deep to water	0.17	slope	1.00
	(very limited)		(limited)		(moderately limited)		(slightly limited)		(very limited)	
	droughty	0.45	deep to water	0.17			soil reaction	0.12	soil reaction	0.12
	(moderately limited)		(slightly limited)				(slightly limited)		(slightly limited)	
73140:										
Clarksville----	Not limited		Very limited		Not limited		Very limited		Very limited	
			deep to water	1.00			deep to water	1.00	slope	1.00
			(very limited)				(very limited)		(very limited)	
			infrequent flooding	0.80			soil reaction	0.06	seepage	0.45
			(limited)				(slightly limited)		(moderately limited)	
									soil reaction	0.06
									(slightly limited)	
Scholten-------	Moderately limited		Limited		Limited		Limited		Very limited	
	wetness	0.39	infrequent flooding	0.80	small stones	0.68	deep to water	0.77	slope	1.00
	(moderately limited)		(limited)		(limited)		(limited)		(very limited)	
	droughty	0.05	deep to water	0.77	droughty	0.05				
	(slightly limited)		(limited)		(slightly limited)					
			small stones	0.68						
			(limited)							
73143:										
Courtois-------	Not limited		Very limited		Not limited		Very limited		Limited	
			deep to water	1.00			deep to water	1.00	slope	0.66
			(very limited)				(very limited)		(limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately limited)	
73144:										
Courtois-------	Not limited		Very limited		Not limited		Very limited		Very limited	
			deep to water	1.00			deep to water	1.00	slope	1.00
			(very limited)				(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately limited)	
73147:										
Fourche--------	Moderately limited		Limited		Not limited		Limited		Limited	
	wetness	0.45	infrequent flooding	0.80			deep to water	0.61	slope	0.66
	(moderately limited)		(limited)				(limited)		(limited)	
			deep to water	0.61					seepage	0.18
			(limited)						(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
73155:										
Gasconade------	Very limited		Very limited		Very limited		Very limited		Very limited	
	shallow to bedrock	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	infrequent flooding	0.80						
	(very limited)		(limited)							
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73159:										
Yelton---------	Limited		Limited		Not limited		Moderately limited		Limited	
	wetness	0.93	infrequent flooding	0.80			deep to water	0.32	slope	0.66
	(limited)		(limited)				(moderately limited)		(limited)	
			deep to water	0.32						
			(moderately limited)							
73176:										
Bendavis-------	Moderately limited		Limited		Moderately limited		Limited		Very limited	
	depth to bedrock	0.58	infrequent flooding	0.80	small stones	0.60	deep to water	0.61	slope	1.00
	(moderately limited)		(limited)		(moderately limited)		(limited)		(very limited)	
	droughty	0.45	deep to water	0.61	droughty	0.45			seepage	0.45
	(moderately limited)		(limited)		(moderately limited)				(moderately limited)	
	wetness	0.45	small stones	0.60						
	(moderately limited)		(moderately limited)							
Poynor---------	Not limited		Very limited		Slightly limited		Very limited		Very limited	
			deep to water	1.00	small stones	0.01	deep to water	1.00	slope	1.00
			(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately limited)	
			small stones	0.01						
			(slightly limited)							
73197:										
Viburnum-------	Limited		Limited		Not limited		Slightly limited		Moderately limited	
	wetness	0.99	infrequent flooding	0.80			deep to water	0.30	slope	0.31
	(limited)		(limited)				(slightly limited)		(moderately limited)	
			deep to water	0.30					seepage	0.18
			(slightly limited)						(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
73220:										
Poynor---------	Moderately limited		Very limited		Very limited		Very limited		Very limited	
	droughty	0.57	deep to water	1.00	small stones	1.00	deep to water	1.00	slope	1.00
	(moderately limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			small stones	1.00	droughty	0.57			seepage	0.36
			(very limited)		(moderately limited)				(moderately limited)	
			infrequent flooding	0.80						
			(limited)							
73221:										
Poynor---------	Moderately limited		Very limited		Limited		Very limited		Very limited	
	droughty	0.57	deep to water	1.00	small stones	0.81	deep to water	1.00	slope	1.00
	(moderately limited)		(very limited)		(limited)		(very limited)		(very limited)	
			small stones	0.81	droughty	0.57			seepage	0.33
			(limited)		(moderately limited)				(moderately limited)	
			infrequent flooding	0.80						
			(limited)							
73222:										
Splitlimb------	Limited		Limited		Limited		Limited		Limited	
	wetness	0.85	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80
	(limited)		(limited)		(limited)		(limited)		(limited)	
	seasonally ponded	0.80	infrequent flooding	0.80			deep to water	0.35	seepage	0.18
	(limited)		(limited)				(moderately limited)		(slightly limited)	
			deep to water	0.35						
			(moderately limited)							
73223:										
Coulstone------	Limited		Very limited		Limited		Very limited		Very limited	
	droughty	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			infrequent flooding	0.80	small stones	0.60			seepage	0.68
			(limited)		(moderately limited)				(limited)	
			small stones	0.60						
			(moderately limited)							
Bender---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	droughty	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.40	infrequent flooding	0.80	large stones	0.40			seepage	0.89
	(moderately limited)		(limited)		(moderately limited)				(limited)	
	depth to bedrock	0.32	large stones	0.40						
	(moderately limited)		(moderately 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
73236:										
Scholten-------	Limited		Limited		Limited		Moderately limited		Limited	
	wetness	0.93	infrequent flooding	0.80	droughty	0.70	deep to water	0.32	slope	0.91
	(limited)		(limited)		(limited)		(moderately limited)		(limited)	
	droughty	0.70	deep to water	0.32						
	(limited)		(moderately limited)							
Poynor---------	Not limited		Very limited		Limited		Very limited		Limited	
			deep to water	1.00	small stones	0.67	deep to water	1.00	slope	0.66
			(very limited)		(limited)		(very limited)		(limited)	
			infrequent flooding	0.80					seepage	0.36
			(limited)						(moderately limited)	
			small stones	0.67						
			(limited)							
73242:										
Fanchon--------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
			infrequent flooding	0.80					slope	0.31
			(limited)						(moderately limited)	
Tonti----------	Limited		Limited		Not limited		Moderately limited		Moderately limited	
	wetness	0.88	infrequent flooding	0.80			deep to water	0.34	slope	0.31
	(limited)		(limited)				(moderately limited)		(moderately limited)	
			deep to water	0.34						
			(moderately limited)							
73269:										
Brussels-------	Slightly limited		Very limited		Slightly limited		Very limited		Very limited	
	droughty	0.08	deep to water	1.00	droughty	0.08	deep to water	1.00	slope	1.00
	(slightly limited)		(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80			soil reaction	0.01	seepage	0.18
			(limited)				(slightly limited)		(slightly limited)	
									soil reaction	0.01
									(slightly limited)	
Gasconade------	Very limited		Very limited		Very limited		Very limited		Very limited	
	shallow to bedrock	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	infrequent flooding	0.80			soil reaction	0.01	seepage	0.18
	(very limited)		(limited)				(slightly limited)		(slightly limited)	
									soil reaction	0.01
									(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	

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
73295:										
Taterhill------	Not limited		Very limited		Not limited		Very limited		Limited	
			deep to water (very limited)	1.00			deep to water (very limited)	1.00	slope (limited)	0.91
			infrequent flooding (limited)	0.80					seepage (moderately limited)	0.48
73298:										
Tonti----------	Moderately limited		Limited		Not limited		Moderately limited		Limited	
	wetness (moderately limited)	0.59	infrequent flooding (limited)	0.80			deep to water (moderately limited)	0.45	slope (limited)	0.66
			deep to water (moderately limited)	0.45						
Hogcreek-------	Limited		Limited		Not limited		Moderately limited		Moderately limited	
	wetness (limited)	0.85	infrequent flooding (limited)	0.80			deep to water (moderately limited)	0.35	slope (moderately limited)	0.31
	depth to bedrock (slightly limited)	0.18	deep to water (moderately limited)	0.35						
73301:										
Tick----------	Not limited		Very limited		Not limited		Very limited		Limited	
			deep to water (very limited)	1.00			deep to water (very limited)	1.00	slope (limited)	0.66
			infrequent flooding (limited)	0.80					seepage (slightly limited)	0.07
73308:										
Grandgulf------	Limited		Very limited		Limited		Very limited		Limited	
	seasonally ponded (limited)	0.80	deep to water (very limited)	1.00	seasonally ponded (limited)	0.80	deep to water (very limited)	1.00	seasonally ponded (limited)	0.80
			seasonally ponded (limited)	0.80			seasonally ponded (limited)	0.80	seepage (moderately limited)	0.45
73309:										
Clarksville----	Slightly limited		Very limited		Limited		Very limited		Very limited	
	droughty (slightly limited)	0.01	deep to water (very limited)	1.00	small stones (limited)	0.73	deep to water (very limited)	1.00	slope (very limited)	1.00
			infrequent flooding (limited)	0.80	droughty (slightly limited)	0.01			seepage (moderately limited)	0.42
			small stones (limited)	0.73						

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
73309:										
Bendavis-------	Moderately limited		Limited		Limited		Limited		Very limited	
	wetness	0.45	infrequent flooding	0.80	small stones	0.67	deep to water	0.61	slope	1.00
	(moderately limited)		(limited)		(limited)		(limited)		(very limited)	
	depth to bedrock	0.13	small stones	0.67						
	(slightly limited)		(limited)							
			deep to water	0.61						
			(limited)							
73310:										
Scholten-------	Limited		Limited		Limited		Moderately limited		Limited	
	wetness	0.93	infrequent flooding	0.80	droughty	0.70	deep to water	0.32	slope	0.66
	(limited)		(limited)		(limited)		(moderately limited)		(limited)	
	droughty	0.70	deep to water	0.32	small stones	0.30				
	(limited)		(moderately limited)		(slightly limited)					
			small stones	0.30						
			(slightly limited)							
Bendavis-------	Moderately limited		Limited		Not limited		Limited		Limited	
	wetness	0.45	infrequent flooding	0.80			deep to water	0.61	slope	0.66
	(moderately limited)		(limited)				(limited)		(limited)	
	depth to bedrock	0.27	deep to water	0.61					seepage	0.54
	(slightly limited)		(limited)						(moderately limited)	
Poynor---------	Not limited		Very limited		Limited		Very limited		Moderately limited	
			deep to water	1.00	small stones	0.67	deep to water	1.00	seepage	0.36
			(very limited)		(limited)		(very limited)		(moderately limited)	
			infrequent flooding	0.80					slope	0.31
			(limited)						(moderately limited)	
			small stones	0.67						
			(limited)							
73311:										
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	0.24				
	(limited)		(moderately limited)		(slightly limited)					
			small stones	0.24						
			(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
73311:										
Bendavis-------	Moderately limited		Limited		Moderately limited		Limited		Very limited	
	depth to bedrock	0.58	infrequent flooding	0.80	droughty	0.45	deep to water	0.61	slope	1.00
	(moderately limited)		(limited)		(moderately limited)		(limited)		(very limited)	
	droughty	0.45	deep to water	0.61					seepage	0.45
	(moderately limited)		(limited)						(moderately limited)	
	wetness	0.45								
	(moderately limited)									
Poynor---------	Moderately limited		Very limited		Moderately limited		Very limited		Very limited	
	droughty	0.57	deep to water	1.00	droughty	0.57	deep to water	1.00	slope	1.00
	(moderately limited)		(very limited)		(moderately limited)		(very limited)		(very limited)	
			infrequent flooding	0.80	small stones	0.01			seepage	0.36
			(limited)		(slightly limited)				(moderately limited)	
			small stones	0.01						
			(slightly limited)							
73313:										
Fanchon--------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
			infrequent flooding	0.80						
			(limited)							
Tonti----------	Moderately limited		Limited		Not limited		Moderately limited		Not limited	
	wetness	0.59	infrequent flooding	0.80			deep to water	0.45		
	(moderately limited)		(limited)				(moderately limited)			
			deep to water	0.45						
			(moderately limited)							
73333:										
Taterhill------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
			infrequent flooding	0.80						
			(limited)							
73334:										
Horneybuck-----	Limited		Limited		Not limited		Moderately limited		Limited	
	wetness	0.85	infrequent flooding	0.80			deep to water	0.35	slope	0.66
	(limited)		(limited)				(moderately limited)		(limited)	
			deep to water	0.35					seepage	0.18
			(moderately limited)						(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
73335:										
Hobson---------	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
Rueter---------	Slightly limited droughty (slightly limited)	0.04	Very limited deep to water (very limited) infrequent flooding (limited) small stones (slightly limited)	1.00 0.80 0.24	Slightly limited small stones (slightly limited) droughty (slightly limited)	0.24 0.04	Very limited deep to water (very limited)	1.00	Limited slope (limited) seepage (slightly limited)	0.91 0.14
73336:										
Rueter---------	Not limited		Very limited deep to water (very limited) infrequent flooding (limited)	1.00 0.80	Not limited		Very limited deep to water (very limited)	1.00	Very limited slope (very limited) seepage (slightly limited)	1.00 0.14
Gepp----------	Not limited		Very limited deep to water (very limited) infrequent flooding (limited)	1.00 0.80	Not limited		Very limited deep to water (very limited)	1.00	Very limited slope (very limited) seepage (moderately limited)	1.00 0.45
73337:										
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
Portia---------	Not limited		Very limited deep to water (very limited) infrequent flooding (limited)	1.00 0.80	Not limited		Very limited deep to water (very limited)	1.00	Limited slope (limited) seepage (moderately limited)	0.66 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
73338:										
Portia---------	Not limited		Very limited		Not limited		Very limited		Very limited	
			deep to water (very limited)	1.00			deep to water (very limited)	1.00	slope (very limited)	1.00
			infrequent flooding (limited)	0.80					seepage (moderately limited)	0.45
Hobson---------	Moderately limited		Limited		Not limited		Moderately limited		Very limited	
	wetness (moderately limited)	0.59	infrequent flooding (limited)	0.80			deep to water (moderately limited)	0.45	slope (very limited)	1.00
			deep to water (moderately limited)	0.45						
73339:										
Arkana---------	Slightly limited		Very limited		Limited		Very limited		Very limited	
	depth to bedrock (slightly limited)	0.29	deep to water (very limited)	1.00	small stones (limited)	0.71	deep to water (very limited)	1.00	slope (very limited)	1.00
	droughty (slightly limited)	0.16	infrequent flooding (limited)	0.80	droughty (slightly limited)	0.16				
			small stones (limited)	0.71						
Gepp----------	Not limited		Very limited		Moderately limited		Very limited		Very limited	
			deep to water (very limited)	1.00	small stones (moderately limited)	0.54	deep to water (very limited)	1.00	slope (very limited)	1.00
			infrequent flooding (limited)	0.80					seepage (moderately limited)	0.45
			small stones (moderately limited)	0.54						
73340:										
Rueter---------	Not limited		Very limited		Moderately limited		Very limited		Very limited	
			deep to water (very limited)	1.00	small stones (moderately limited)	0.44	deep to water (very limited)	1.00	slope (very limited)	1.00
			infrequent flooding (limited)	0.80					seepage (slightly limited)	0.14
			small stones (moderately limited)	0.44						
Gepp----------	Slightly limited		Very limited		Slightly limited		Very limited		Very limited	
	droughty (slightly limited)	0.06	deep to water (very limited)	1.00	droughty (slightly limited)	0.06	deep to water (very limited)	1.00	slope (very limited)	1.00
			infrequent flooding (limited)	0.80					seepage (moderately limited)	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
73341:										
Gepp----------	Slightly limited		Very limited		Very limited		Very limited		Very limited	
	droughty	0.09	deep to water	1.00	small stones	1.00	deep to water	1.00	slope	1.00
	(slightly limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			small stones	1.00	droughty	0.09			seepage	0.45
			(very limited)		(slightly limited)				(moderately limited)	
			infrequent flooding	0.80						
			(limited)							
Arkana---------	Moderately limited		Very limited		Limited		Very limited		Very limited	
	droughty	0.34	deep to water	1.00	small stones	0.70	deep to water	1.00	slope	1.00
	(moderately limited)		(very limited)		(limited)		(very limited)		(very limited)	
	depth to bedrock	0.29	infrequent flooding	0.80	droughty	0.34				
	(slightly limited)		(limited)		(moderately limited)					
			small stones	0.70						
			(limited)							
73342:										
Alred----------	Slightly limited		Very limited		Slightly limited		Very limited		Very limited	
	droughty	0.01	deep to water	1.00	small stones	0.01	deep to water	1.00	slope	1.00
	(slightly limited)		(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80	droughty	0.01			seepage	0.14
			(limited)		(slightly limited)				(slightly limited)	
			small stones	0.01						
			(slightly limited)							
Arkana---------	Limited		Very limited		Limited		Very limited		Very limited	
	droughty	0.78	deep to water	1.00	droughty	0.78	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
	depth to bedrock	0.29	infrequent flooding	0.80	small stones	0.12				
	(slightly limited)		(limited)		(slightly limited)					
			small stones	0.12						
			(slightly limited)							
73361:										
Coulstone------	Limited		Very limited		Limited		Very limited		Very limited	
	droughty	0.62	deep to water	1.00	droughty	0.62	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
			infrequent flooding	0.80	small stones	0.29			seepage	0.75
			(limited)		(slightly limited)				(limited)	
			small stones	0.29						
			(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
73361:										
Alred----------	Not limited		Very limited		Slightly limited		Very limited		Very limited	
			deep to water	1.00	small stones	0.12	deep to water	1.00	slope	1.00
			(very limited)		(slightly limited)		(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.14
			(limited)						(slightly limited)	
			small stones	0.12						
			(slightly 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)			
74636:										
Lecoma---------	Not limited		Very limited		Not limited		Very limited		Limited	
			deep to water	1.00			deep to water	1.00	slope	0.91
			(very limited)				(very limited)		(limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately limited)	
74637:										
Lecoma---------	Not limited		Very limited		Not limited		Very limited		Very limited	
			deep to water	1.00			deep to water	1.00	slope	1.00
			(very limited)				(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately limited)	
74642:										
Cornwall-------	Very limited		Limited		Limited		Limited		Limited	
	wetness	1.00	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80	seasonally ponded	0.80
	(very limited)		(limited)		(limited)		(limited)		(limited)	
	seasonally ponded	0.80	infrequent flooding	0.80			deep to water	0.24		
	(limited)		(limited)				(slightly limited)			
			deep to water	0.24						
			(slightly limited)							
74643:										
Lecoma---------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
			infrequent flooding	0.80						
			(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
74644:										
Deible---------	Very limited		Not limited		Not limited		Not limited		Not limited	
	wetness	1.00								
	(very limited)									
74648:										
Aslinger-------	Moderately limited		Limited		Slightly limited		Moderately limited		Limited	
	wetness	0.59	infrequent flooding	0.80	droughty	0.01	deep to water	0.45	slope	0.91
	(moderately limited)		(limited)		(slightly limited)		(moderately limited)		(limited)	
	droughty	0.01	deep to water	0.45					seepage	0.18
	(slightly limited)		(moderately limited)						(slightly limited)	
74651:										
Waben----------	Slightly limited		Very limited		Slightly limited		Very limited		Limited	
	droughty	0.02	deep to water	1.00	droughty	0.02	deep to water	1.00	slope	0.91
	(slightly limited)		(very limited)		(slightly limited)		(very limited)		(limited)	
			infrequent flooding	0.80					seepage	0.79
			(limited)						(limited)	
74658:										
Zanoni---------	Not limited		Very limited		Not limited		Very limited		Limited	
			deep to water	1.00			deep to water	1.00	seepage	0.82
			(very limited)				(very limited)		(limited)	
75381:										
Bearthicket----	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
75390:										
Razort---------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
75394:										
Relfe----------	Very limited		Very limited		Very limited		Very limited		Limited	
	droughty	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	seepage	0.75
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
75395:										
Jamesfin-------	Not limited		Very limited		Very limited		Very limited		Very limited	
			deep to water	1.00	deep to water	1.00	deep to water	1.00	deep to water	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
			infrequent flooding	0.50					seepage	0.45
			(moderately limited)						(moderately 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
75408:										
Secesh---------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
75409:										
Relfe----------	Limited		Very limited		Limited		Very limited		Very limited	
	droughty	0.84	deep to water	1.00	droughty	0.84	deep to water	1.00	seepage	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
			infrequent flooding	0.50						
			(moderately limited)							
75411:										
Tilk----------	Slightly limited		Very limited		Limited		Very limited		Limited	
	droughty	0.04	deep to water	1.00	small stones	0.78	deep to water	1.00	seepage	0.79
	(slightly limited)		(very limited)		(limited)		(very limited)		(limited)	
			small stones	0.78	droughty	0.04				
			(limited)		(slightly limited)					
75416:										
Gladden--------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
			infrequent flooding	0.50						
			(moderately limited)							
75417:										
Relfe----------	Very limited		Very limited		Very limited		Very limited		Limited	
	droughty	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	seepage	0.75
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
			small stones	0.56	small stones	0.56				
			(moderately limited)		(moderately limited)					
Sandbur--------	Not limited		Very limited		Not limited		Very limited		Limited	
			deep to water	1.00			deep to water	1.00	seepage	0.79
			(very limited)				(very limited)		(limited)	
75420:										
Secesh---------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
			infrequent flooding	0.50						
			(moderately 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
75420:										
Tilk----------	Moderately limited		Very limited		Moderately limited		Very limited		Limited	
	droughty	0.34	deep to water	1.00	droughty	0.34	deep to water	1.00	seepage	0.79
	(moderately limited)		(very limited)		(moderately limited)		(very limited)		(limited)	
			infrequent flooding	0.50	small stones	0.30				
			(moderately limited)		(slightly limited)					
			small stones	0.30						
			(slightly limited)							
75426:										
Gabriel--------	Limited		Slightly limited		Not limited		Slightly limited		Slightly limited	
	wetness	0.99	deep to water	0.30			deep to water	0.30	seepage	0.18
	(limited)		(slightly limited)				(slightly limited)		(slightly limited)	
75430:										
Wideman--------	Not limited		Very limited		Not limited		Very limited		Limited	
			deep to water	1.00			deep to water	1.00	seepage	0.79
			(very limited)				(very limited)		(limited)	
			infrequent flooding	0.50						
			(moderately limited)							
75433:										
Racket---------	Not limited		Very limited		Limited		Very limited		Limited	
			deep to water	1.00	deep to water	0.85	deep to water	1.00	deep to water	0.85
			(very limited)		(limited)		(very limited)		(limited)	
			infrequent flooding	0.50					seepage	0.45
			(moderately limited)						(moderately limited)	
75451:										
Gladden--------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
			infrequent flooding	0.50						
			(moderately limited)							
75462:										
Huzzah---------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately limited)	
			infrequent flooding	0.50						
			(moderately limited)							
75463:										
Huzzah---------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.45
			(very limited)				(very limited)		(moderately 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
75464:										
Cedargap-------	Not limited		Very limited		Not limited		Very limited		Moderately limited	
			deep to water	1.00			deep to water	1.00	seepage	0.54
			(very limited)				(very limited)		(moderately limited)	
75465:										
Raftville------	Limited		Very limited		Slightly limited		Very limited		Limited	
	depth to bedrock	0.66	deep to water	1.00	droughty	0.03	deep to water	1.00	seepage	0.73
	(limited)		(very limited)		(slightly limited)		(very limited)		(limited)	
	droughty	0.03								
	(slightly limited)									
Gabriel--------	Limited		Slightly limited		Not limited		Slightly limited		Slightly limited	
	wetness	0.99	deep to water	0.30			deep to water	0.30	seepage	0.18
	(limited)		(slightly limited)				(slightly limited)		(slightly limited)	
75466:										
Midco----------	Limited		Very limited		Limited		Very limited		Limited	
	droughty	0.61	deep to water	1.00	small stones	0.67	deep to water	1.00	seepage	0.79
	(limited)		(very limited)		(limited)		(very limited)		(limited)	
			small stones	0.67	droughty	0.61				
			(limited)		(limited)					
			infrequent flooding	0.50						
			(moderately limited)							
75470:										
Farewell-------	Very limited		Not limited		Not limited		Not limited		Moderately limited	
	wetness	1.00							seepage	0.42
	(very limited)								(moderately limited)	
77000:										
Killarney------	Moderately limited		Limited		Not limited		Limited		Very limited	
	wetness	0.45	infrequent flooding	0.80			deep to water	0.61	slope	1.00
	(moderately limited)		(limited)				(limited)		(very limited)	
			deep to water	0.61						
			(limited)							
Frenchmill-----	Not limited		Very limited		Not limited		Very limited		Very limited	
			deep to water	1.00			deep to water	1.00	slope	1.00
			(very limited)				(very limited)		(very limited)	
			infrequent flooding	0.80					seepage	0.45
			(limited)						(moderately 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
77003:										
Delassus-------	Moderately limited		Limited		Moderately limited		Moderately limited		Very limited	
	wetness	0.54	infrequent flooding	0.80	large stones	0.38	deep to water	0.50	slope	1.00
	(moderately limited)		(limited)		(moderately limited)		(moderately limited)		(very limited)	
	large stones	0.38	deep to water	0.50						
	(moderately limited)		(moderately limited)							
			large stones	0.38						
			(moderately limited)							
77004:										
Irondale-------	Limited		Very limited		Limited		Very limited		Very limited	
	depth to bedrock	0.86	deep to water	1.00	droughty	0.66	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
	droughty	0.66	infrequent flooding	0.80	large stones	0.17			seepage	0.45
	(limited)		(limited)		(slightly limited)				(moderately limited)	
	large stones	0.17	large stones	0.17						
	(slightly limited)		(slightly limited)							
77007:										
Taumsauk-------	Very limited		Very limited		Limited		Very limited		Very limited	
	shallow to bedrock	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	infrequent flooding	0.80					seepage	0.45
	(very limited)		(limited)						(moderately limited)	
Irondale-------	Limited		Very limited		Limited		Very limited		Very limited	
	depth to bedrock	0.86	deep to water	1.00	droughty	0.76	deep to water	1.00	slope	1.00
	(limited)		(very limited)		(limited)		(very limited)		(very limited)	
	droughty	0.76	infrequent flooding	0.80	large stones	0.32			seepage	0.15
	(limited)		(limited)		(moderately limited)				(slightly limited)	
	large stones	0.32	large stones	0.32						
	(moderately limited)		(moderately limited)							
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
77011:										
Taumsauk-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	shallow to bedrock	1.00	deep to water	1.00	droughty	1.00	deep to water	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	infrequent flooding	0.80					seepage	0.45
	(very limited)		(limited)						(moderately 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
77011:										
Irondale-------	Moderately limited		Very limited		Slightly limited		Very limited		Very limited	
	depth to bedrock (moderately limited)	0.42	deep to water (very limited)	1.00	droughty (slightly limited)	0.02	deep to water (very limited)	1.00	slope (very limited)	1.00
	droughty (slightly limited)	0.02	infrequent flooding (limited)	0.80					seepage (slightly limited)	0.15
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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		Very limited		Moderately limited		Slightly limited		Slightly limited	
	wetness	0.59	wetness	1.00	slope	0.45	wetness	0.28	too acid	0.30
	(moderately limited)		(very limited)		(moderately limited)		(slightly limited)		(slightly limited)	
			shrink-swell	0.04	wetness	0.28			wetness	0.28
			(slightly limited)		(slightly limited)				(slightly limited)	
70026:										
Tonti----------	Moderately limited		Very limited		Slightly limited		Slightly limited		Slightly limited	
	wetness	0.59	wetness	1.00	wetness	0.28	wetness	0.28	too acid	0.30
	(moderately limited)		(very limited)		(slightly limited)		(slightly limited)		(slightly limited)	
			shrink-swell	0.04					wetness	0.28
			(slightly limited)						(slightly limited)	
73013:										
Lowassie-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	ponded	1.00	ponded (wetness)	1.00	low strength	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	ponded	1.00	wetness	1.00	wetness	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	1.00	shrink-swell	0.35	shrink-swell	1.00	wetness	1.00		
	(very limited)		(moderately limited)		(very limited)		(very limited)			
73019:										
Poynor---------	Not limited		Slightly limited		Limited		Not limited		Very limited	
			shrink-swell	0.14	slope	0.68			small stones	1.00
			(slightly limited)		(limited)				(very limited)	
									droughty	0.57
									(moderately limited)	
									too acid	0.30
									(slightly 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)	
			shrink-swell	0.14					small stones	1.00
			(slightly limited)						(very limited)	
									too acid	0.61
									(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
73042:										
Niangua--------	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	depth to bedrock	0.54	shrink-swell	0.45	slope	1.00	small stones	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(very limited)		(very limited)	
			shrink-swell	0.36			shrink-swell	0.45		
			(moderately limited)				(moderately 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	droughty	0.66
	(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	depth to bedrock	0.46
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
73053:										
Lily----------	Limited		Very limited		Limited		Limited		Limited	
	depth to bedrock	0.76	hard bedrock <40"	1.00	slope	0.99	depth to bedrock	0.76	depth to bedrock	0.76
	(limited)		(very limited)		(limited)		(limited)		(limited)	
	slope	0.31	slope	0.31	depth to bedrock	0.76			droughty	0.48
	(moderately limited)		(moderately limited)		(limited)				(moderately limited)	
									too acid	0.06
									(slightly limited)	
Bender---------	Limited		Very limited		Limited		Limited		Very limited	
	depth to bedrock	0.76	hard bedrock <40"	1.00	slope	0.99	depth to bedrock	0.76	droughty	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	large stones	0.35	large stones	0.35	depth to bedrock	0.76	large stones	0.35	large stones	0.99
	(moderately limited)		(moderately limited)		(limited)		(moderately limited)		(limited)	
	slope	0.31	slope	0.31	large stones	0.35			depth to bedrock	0.76
	(moderately limited)		(moderately limited)		(moderately limited)				(limited)	
73054:										
Viburnum-------	Limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	wetness	0.85	wetness	1.00	wetness	0.49	wetness	0.49	wetness	0.49
	(limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45		
	(moderately limited)		(moderately limited)		(moderately 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
73055:										
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)	
			shrink-swell	0.10					small stones	1.00
			(slightly limited)						(very limited)	
Rueter---------	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)	
									large stones	0.60
									(moderately limited)	
73068:										
Tick----------	Limited		Limited		Very limited		Very limited		Very limited	
	slope	0.76	slope	0.76	slope	1.00	low strength	1.00	small stones	1.00
	(limited)		(limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	shrink-swell	0.30	shrink-swell	0.45	slope	0.63	slope	0.63
	(moderately limited)		(slightly limited)		(moderately limited)		(limited)		(limited)	
							shrink-swell	0.45	too acid	0.36
							(moderately limited)		(moderately 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)	

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
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	0.04	large stones	0.04	large stones	0.04	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 >30%	1.00
	(moderately limited)		(very limited)		(moderately limited)		(very limited)		(very 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	0.02	large stones	0.02	large stones	0.02	shrink-swell	0.45	small stones	0.33
	(slightly limited)		(slightly limited)		(slightly limited)		(moderately limited)		(moderately 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
73139:										
Poynor---------	Limited		Limited		Very limited		Very limited		Limited	
	slope	0.76	slope	0.76	slope	1.00	low strength	1.00	small stones	0.69
	(limited)		(limited)		(very limited)		(very limited)		(limited)	
	shrink-swell	0.45	shrink-swell	0.21	shrink-swell	0.45	slope	0.63	slope	0.63
	(moderately limited)		(slightly limited)		(moderately limited)		(limited)		(limited)	
							shrink-swell	0.45	large stones	0.07
							(moderately limited)		(slightly limited)	
Clarksville----	Limited		Limited		Very limited		Limited		Limited	
	slope	0.76	slope	0.76	slope	1.00	slope	0.63	slope	0.63
	(limited)		(limited)		(very limited)		(limited)		(limited)	
									small stones	0.31
									(moderately limited)	
									too acid	0.30
									(slightly limited)	
Scholten-------	Very limited		Very limited		Very limited		Limited		Limited	
	wetness	1.00	wetness	1.00	slope	1.00	wetness	0.78	wetness	0.78
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	slope	0.76	slope	0.76	wetness	0.78	slope	0.63	too acid	0.76
	(limited)		(limited)		(limited)		(limited)		(limited)	
									slope	0.63
									(limited)	
73140:										
Clarksville----	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	0.82
									(limited)	
									too acid	0.68
									(limited)	
Scholten-------	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	0.39	wetness	0.99					small stones	1.00
	(moderately limited)		(limited)						(very limited)	
									too acid	0.42
									(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
73143:										
Courtois	Moderately limited		Moderately limited		Moderately limited		Very limited		Not limited	
	shrink-swell	0.45	shrink-swell	0.36	slope	0.45	low strength	1.00		
	(moderately limited)		(moderately limited)		(moderately limited)		(very limited)			
					shrink-swell	0.45	shrink-swell	0.45		
					(moderately limited)		(moderately limited)			
73144:										
Courtois	Limited		Limited		Very limited		Very limited		Moderately limited	
	slope	0.68	slope	0.68	slope	1.00	low strength	1.00	slope	0.37
	(limited)		(limited)		(very limited)		(very limited)		(moderately limited)	
	shrink-swell	0.45	shrink-swell	0.36	shrink-swell	0.45	shrink-swell	0.45		
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)			
							slope	0.37		
							(moderately limited)			
73147:										
Fourche	Moderately limited		Very limited		Moderately limited		Very limited		Not limited	
	wetness	0.45	wetness	1.00	slope	0.45	low strength	1.00		
	(moderately limited)		(very limited)		(moderately limited)		(very limited)			
73155:										
Gasconade	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	shallow to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	shrink-swell	0.10	shrink-swell	0.45	shrink-swell	0.45	droughty	1.00
	(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)		(very limited)	
Rock outcrop	Not rated		Not rated		Not rated		Not rated		Not rated	
73159:										
Yelton	Limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	wetness	0.93	wetness	1.00	wetness	0.56	wetness	0.56	wetness	0.56
	(limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
			shrink-swell	0.12	slope	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
73176:										
Bendavis-------	Limited		Very limited		Very limited		Limited		Very limited	
	slope	0.76	hard bedrock <40"	1.00	slope	1.00	slope	0.63	small stones	1.00
	(limited)		(very limited)		(very limited)		(limited)		(very limited)	
	depth to bedrock	0.59	wetness	1.00	depth to bedrock	0.59	depth to bedrock	0.59	slope	0.63
	(moderately limited)		(very limited)		(moderately limited)		(moderately limited)		(limited)	
	wetness	0.45	slope	0.76					depth to bedrock	0.58
	(moderately limited)		(limited)						(moderately limited)	
Poynor---------	Limited		Limited		Very limited		Very limited		Very limited	
	slope	0.76	slope	0.76	slope	1.00	low strength	1.00	small stones	1.00
	(limited)		(limited)		(very limited)		(very limited)		(limited)	
	shrink-swell	0.45	shrink-swell	0.32	shrink-swell	0.45	slope	0.63	slope	0.63
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
							shrink-swell	0.45	too acid	0.30
							(moderately limited)		(slightly limited)	
73197:										
Viburnum-------	Limited		Very limited		Limited		Limited		Limited	
	wetness	0.99	wetness	1.00	wetness	0.61	wetness	0.61	wetness	0.61
	(limited)		(very limited)		(limited)		(limited)		(limited)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45		
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)			
					slope	0.15				
					(slightly limited)					
73220:										
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					slope	0.63
			(slightly limited)						(limited)	
									droughty	0.57
									(moderately limited)	
73221:										
Poynor---------	Limited		Limited		Very limited		Very limited		Very limited	
	slope	0.99	slope	0.99	slope	1.00	slope	1.00	small stones	1.00
	(limited)		(limited)		(very limited)		(very limited)		(very limited)	
			shrink-swell	0.14					slope	1.00
			(slightly limited)						(very limited)	
									too acid	0.61
									(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
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)	
73236:										
Scholten-------	Limited		Very limited		Limited		Moderately limited		Limited	
	wetness	0.93	wetness	1.00	slope	0.68	wetness	0.56	small stones	0.73
	(limited)		(very limited)		(limited)		(moderately limited)		(limited)	
			shrink-swell	0.04	wetness	0.56			droughty	0.70
			(slightly limited)		(moderately limited)				(limited)	
									wetness	0.56
									(moderately 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)	
									too acid	0.42
									(moderately limited)	
73242:										
Fanchon--------	Not limited		Not limited		Slightly limited		Very limited		Slightly limited	
					slope	0.15	low strength	1.00	too acid	0.24
					(slightly limited)		(very 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
73242:										
Tonti----------	Limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	wetness	0.88	wetness	1.00	wetness	0.51	wetness	0.51	wetness	0.51
	(limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
			shrink-swell	0.01	slope	0.15			too acid	0.12
			(slightly limited)		(slightly limited)				(slightly limited)	
73269:										
Brussels-------	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)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	small stones	0.57
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
									droughty	0.08
									(slightly limited)	
Gasconade------	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)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	too clayey	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73295:										
Taterhill------	Not limited		Not limited		Limited		Very limited		Not limited	
					slope	0.68	low strength	1.00		
					(limited)		(very limited)			
73298:										
Tonti----------	Moderately limited		Very limited		Moderately limited		Slightly limited		Slightly limited	
	wetness	0.59	wetness	1.00	slope	0.45	wetness	0.28	too acid	0.30
	(moderately limited)		(very limited)		(moderately limited)		(slightly limited)		(slightly limited)	
			shrink-swell	0.04	wetness	0.28			wetness	0.28
			(slightly limited)		(slightly limited)				(slightly limited)	
Hogcreek-------	Not rated		Very limited		Moderately limited		Moderately limited		Moderately limited	
			hard bedrock <40"	1.00	wetness	0.49	wetness	0.49	wetness	0.49
			(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
			wetness	1.00	depth to bedrock	0.33	depth to bedrock	0.33	depth to bedrock	0.18
			(very limited)		(moderately limited)		(moderately limited)		(slightly limited)	
					slope	0.15			too acid	0.18
					(slightly 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
73301:										
Tick----------	Moderately limited		Slightly limited		Moderately limited		Very limited		Moderately limited	
	shrink-swell	0.45	shrink-swell	0.30	slope	0.45	low strength	1.00	too acid	0.36
	(moderately limited)		(slightly limited)		(moderately limited)		(very limited)		(moderately limited)	
					shrink-swell	0.45	shrink-swell	0.45		
					(moderately limited)		(moderately limited)			
73308:										
Grandgulf------	Very limited		Very limited		Very limited		Very limited		Very limited	
	ponded	1.00	ponded	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
							low strength	1.00		
							(very limited)			
73309:										
Clarksville----	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)	
									too acid	0.18
									(slightly limited)	
Bendavis-------	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)	
	wetness	0.45	slope	1.00	depth to bedrock	0.25	depth to bedrock	0.25	small stones	1.00
	(moderately limited)		(very limited)		(slightly limited)		(slightly limited)		(very limited)	
	depth to bedrock	0.25	wetness	1.00					too acid	0.18
	(slightly limited)		(very limited)						(slightly limited)	
73310:										
Scholten-------	Limited		Very limited		Moderately limited		Moderately limited		Very limited	
	wetness	0.93	wetness	1.00	wetness	0.56	wetness	0.56	small stones	1.00
	(limited)		(very limited)		(moderately limited)		(moderately limited)		(very limited)	
			shrink-swell	0.04	slope	0.45			droughty	0.70
			(slightly limited)		(moderately limited)				(limited)	
									wetness	0.56
									(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
73310:										
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		Slightly limited		Not limited		Very limited	
			shrink-swell	0.14	slope	0.15			small stones	1.00
			(slightly limited)		(slightly limited)				(very limited)	
									too acid	0.42
									(moderately limited)	
73311:										
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	0.04					slope	0.63
			(slightly limited)						(limited)	
Bendavis-------	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.76	hard bedrock <40"	1.00	slope	1.00	slope	0.63	slope	0.63
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	depth to bedrock	0.59	wetness	1.00	depth to bedrock	0.59	depth to bedrock	0.59	depth to bedrock	0.58
	(moderately limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
	wetness	0.45	slope	0.76					droughty	0.45
	(moderately limited)		(limited)						(moderately 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)		(limited)	
			shrink-swell	0.14					slope	0.63
			(slightly limited)						(limited)	
									droughty	0.57
									(moderately limited)	
73313:										
Fanchon--------	Not limited		Not limited		Not limited		Very limited		Slightly limited	
							low strength	1.00	too acid	0.24
							(very 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
73313:										
Tonti----------	Moderately limited		Very limited		Slightly limited		Slightly limited		Slightly limited	
	wetness	0.59	wetness	1.00	wetness	0.28	wetness	0.28	too acid	0.30
	(moderately limited)		(very limited)		(slightly limited)		(slightly limited)		(slightly limited)	
			shrink-swell	0.04					wetness	0.28
			(slightly limited)						(slightly limited)	
73333:										
Taterhill------	Not limited		Not limited		Not limited		Not limited		Not limited	
73334:										
Horneybuck-----	Limited		Very limited		Moderately limited		Moderately limited		Moderately limited	
	wetness	0.85	wetness	1.00	wetness	0.49	wetness	0.49	wetness	0.49
	(limited)		(very limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					slope	0.45	low strength	0.22		
					(moderately limited)		(slightly limited)			
73335:										
Hobson---------	Moderately limited		Very limited		Limited		Slightly limited		Slightly limited	
	wetness	0.59	wetness	1.00	slope	0.68	wetness	0.28	wetness	0.28
	(moderately limited)		(very limited)		(limited)		(slightly limited)		(slightly limited)	
			shrink-swell	0.18	wetness	0.28				
			(slightly limited)		(slightly limited)					
Rueter---------	Not limited		Not limited		Limited		Not limited		Very limited	
					slope	0.68			small stones	1.00
					(limited)				(very limited)	
									too acid	0.61
									(limited)	
									droughty	0.04
									(slightly limited)	
73336:										
Rueter---------	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)	
							slope	0.63	too acid	0.42
							(limited)		(moderately limited)	
									small stones	0.33
									(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
73336:										
Gepp----------	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	0.45	shrink-swell	0.45	slope	0.63	too acid	0.61
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
							shrink-swell	0.45	small stones	0.06
							(moderately limited)		(slightly limited)	
73337:										
Tonti----------	Moderately limited		Very limited		Limited		Very limited		Slightly limited	
	wetness	0.59	wetness	1.00	slope	0.68	low strength	1.00	too acid	0.30
	(moderately limited)		(very limited)		(limited)		(very limited)		(slightly limited)	
			shrink-swell	0.01	wetness	0.28	wetness	0.28	wetness	0.28
			(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
Portia---------	Moderately limited		Slightly limited		Moderately limited		Very limited		Slightly limited	
	shrink-swell	0.45	shrink-swell	0.25	slope	0.45	low strength	1.00	too acid	0.24
	(moderately limited)		(slightly limited)		(moderately limited)		(very limited)		(slightly limited)	
					shrink-swell	0.45	shrink-swell	0.45		
					(moderately limited)		(moderately limited)			
73338:										
Portia---------	Moderately limited		Moderately limited		Very limited		Very limited		Slightly limited	
	slope	0.60	slope	0.60	slope	1.00	low strength	1.00	slope	0.16
	(moderately limited)		(moderately limited)		(very limited)		(very limited)		(slightly limited)	
	shrink-swell	0.45	shrink-swell	0.25	shrink-swell	0.45	shrink-swell	0.45		
	(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)			
							slope	0.16		
							(slightly limited)			
Hobson---------	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.76	wetness	1.00	slope	1.00	slope	0.63	slope	0.63
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	wetness	0.59	slope	0.76	wetness	0.28	wetness	0.28	wetness	0.28
	(moderately limited)		(limited)		(slightly limited)		(slightly limited)		(slightly limited)	
			shrink-swell	0.40						
			(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
73339:										
Arkana---------	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	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.76	shrink-swell	1.00	shrink-swell	1.00	shrink-swell	1.00	slope	0.63
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	depth to bedrock	0.44	slope	0.76	depth to bedrock	0.44	slope	0.63	depth to bedrock	0.29
	(moderately limited)		(limited)		(moderately limited)		(limited)		(slightly limited)	
Gepp----------	Limited		Limited		Very limited		Very limited		Very limited	
	slope	0.76	slope	0.76	slope	1.00	low strength	1.00	small stones	1.00
	(limited)		(limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	slope	0.63	slope	0.63
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
							shrink-swell	0.45		
							(moderately limited)			
73340:										
Rueter---------	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)	
									slope	0.63
									(limited)	
									too acid	0.30
									(slightly limited)	
Gepp----------	Limited		Limited		Very limited		Very limited		Limited	
	slope	0.76	slope	0.76	slope	1.00	low strength	1.00	small stones	0.75
	(limited)		(limited)		(very limited)		(very limited)		(limited)	
	shrink-swell	0.45	shrink-swell	0.45	shrink-swell	0.45	slope	0.63	slope	0.63
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
							shrink-swell	0.45	droughty	0.06
							(moderately limited)		(slightly limited)	
73341:										
Gepp----------	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	0.45	shrink-swell	0.45	slope	1.00	small stones	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(very limited)		(very limited)	
							shrink-swell	0.45	too acid	0.30
							(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
73341:										
Arkana---------	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	slope	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	0.44	shrink-swell	1.00	depth to bedrock	0.44	shrink-swell	1.00	droughty	0.34
	(moderately limited)		(very limited)		(moderately limited)		(very limited)		(moderately limited)	
73342:										
Alred----------	Limited		Limited		Very limited		Very limited		Very limited	
	slope	0.76	slope	0.76	slope	1.00	low strength	1.00	small stones	1.00
	(limited)		(limited)		(very limited)		(very limited)		(limited)	
	shrink-swell	0.45	shrink-swell	0.20	shrink-swell	0.45	slope	0.63	slope	0.63
	(moderately limited)		(slightly limited)		(moderately limited)		(limited)		(limited)	
							shrink-swell	0.45	too acid	0.12
							(moderately limited)		(slightly limited)	
Arkana---------	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	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	droughty	0.78
	(limited)		(limited)		(very limited)		(very limited)		(limited)	
	depth to bedrock	0.44	shrink-swell	0.43	depth to bedrock	0.44	slope	0.63	slope	0.63
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
73361:										
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	0.62
									(limited)	
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)	
			shrink-swell	0.10					small stones	1.00
			(slightly 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
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)			
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)			
74642:										
Cornwall-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	ponded	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	ponded	1.00	wetness	1.00	wetness	0.68	low strength	1.00	wetness	0.68
	(very limited)		(very limited)		(limited)		(very limited)		(limited)	
							wetness	0.68	too acid	0.42
							(limited)		(moderately limited)	
74643:										
Lecoma---------	Moderately limited		Slightly limited		Moderately limited		Moderately limited		Not limited	
	shrink-swell	0.45	shrink-swell	0.20	shrink-swell	0.45	shrink-swell	0.45		
	(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)			
							low strength	0.22		
							(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
74644:										
Deible---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	1.00	low strength	1.00	wetness	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	shrink-swell	1.00	shrink-swell	0.83	shrink-swell	1.00	wetness	1.00		
	(very limited)		(limited)		(very limited)		(very limited)			
							shrink-swell	1.00		
							(very limited)			
74648:										
Aslinger-------	Moderately limited		Very limited		Limited		Very limited		Slightly limited	
	wetness	0.59	wetness	1.00	slope	0.68	low strength	1.00	wetness	0.28
	(moderately limited)		(very limited)		(limited)		(very limited)		(slightly limited)	
					wetness	0.28	wetness	0.28	droughty	0.01
					(slightly limited)		(slightly limited)		(slightly limited)	
74651:										
Waben----------	Not limited		Not limited		Limited		Not limited		Moderately limited	
					slope	0.68			small stones	0.36
					(limited)				(moderately limited)	
									too acid	0.18
									(slightly limited)	
									droughty	0.02
									(slightly limited)	
74658:										
Zanoni---------	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)			
75381:										
Bearthicket----	Very limited		Very limited		Very limited		Very limited		Not limited	
	flooding	1.00	flooding	1.00	flooding	1.00	low strength	1.00		
	(very limited)		(very limited)		(very limited)		(very limited)			
							flooding (rare)	0.90		
							(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)			

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
75394:										
Relfe----------	Very limited		Very limited		Very limited		Limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding (rare)	0.90	droughty	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
									small stones	0.55
									(moderately limited)	
75395:										
Jamesfin-------	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)	
			wetness	0.16			low strength	0.22		
			(slightly limited)				(slightly limited)			
75408:										
Secesh---------	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)			
75409:										
Relfe----------	Very limited		Very limited		Very limited		Very limited		Limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	droughty	0.84
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
									flooding	0.60
									(moderately limited)	
75411:										
Tilk----------	Very limited		Very limited		Very limited		Limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding (rare)	0.90	small stones	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
									large stones	0.30
									(moderately limited)	
									too acid	0.18
									(slightly limited)	
75416:										
Gladden--------	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)	

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		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)	
									droughty	1.00
									(very limited)	
									small stones	1.00
									(very limited)	
Sandbur--------	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)	
75420:										
Secesh---------	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)	
Tilk----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
									flooding	0.60
									(moderately limited)	
									droughty	0.34
									(moderately limited)	
75426:										
Gabriel--------	Very limited		Very limited		Very limited		Very limited		Limited	
	flooding	1.00	flooding	1.00	flooding	1.00	low strength	1.00	wetness	0.61
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	wetness	0.99	wetness	1.00	wetness	0.61	flooding (rare)	0.90		
	(limited)		(very limited)		(limited)		(limited)			
	shrink-swell	0.45	shrink-swell	0.37	shrink-swell	0.45	wetness	0.61		
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)			
75430:										
Wideman--------	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)	

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
75433:										
Racket---------	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)	
	shrink-swell	0.45	wetness	0.24	shrink-swell	0.45	shrink-swell	0.45		
	(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)			
			shrink-swell	0.15						
			(slightly limited)							
75451:										
Gladden--------	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)	
75462:										
Huzzah---------	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)	
							low strength	0.22		
							(slightly limited)			
75463:										
Huzzah---------	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)			
							low strength	0.22		
							(slightly limited)			
75464:										
Cedargap-------	Very limited		Very limited		Very limited		Limited		Slightly limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding (rare)	0.90	small stones	0.06
	(very limited)		(very limited)		(very limited)		(limited)		(slightly limited)	
75465:										
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	too acid	0.24
	(limited)		(very limited)		(limited)		(limited)		(slightly limited)	
									droughty	0.03
									(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
75465:										
Gabriel--------	Very limited		Very limited		Very limited		Very limited		Limited	
	flooding	1.00	flooding	1.00	flooding	1.00	low strength	1.00	wetness	0.61
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	wetness	0.99	wetness	1.00	wetness	0.61	flooding (rare)	0.90		
	(limited)		(very limited)		(limited)		(limited)			
	shrink-swell	0.45	shrink-swell	0.29	shrink-swell	0.45	wetness	0.61		
	(moderately limited)		(slightly limited)		(moderately limited)		(limited)			
75466:										
Midco----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	small stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
									droughty	0.61
									(limited)	
									flooding	0.60
									(moderately limited)	
75470:										
Farewell-------	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 (rare)	0.90	small stones	0.55
	(very limited)		(very limited)		(very limited)		(limited)		(moderately limited)	
	shrink-swell	0.31	shrink-swell	0.39	shrink-swell	0.31	shrink-swell	0.31		
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)			
77000:										
Killarney------	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	large stones	0.01	large stones	0.01	small stones	0.87
	(moderately limited)		(very limited)		(slightly limited)		(slightly limited)		(limited)	
	large stones	0.01	large stones	0.01					large stones	0.60
	(slightly limited)		(slightly limited)						(moderately limited)	
Frenchmill-----	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)	
	large stones	0.13	large stones	0.13	large stones	0.13	large stones	0.13	large stones	0.76
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(limited)	
									small stones	0.46
									(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
77003:										
Delassus-------	Limited		Very limited		Very limited		Limited		Very limited	
	slope	0.76	wetness	1.00	slope	1.00	slope	0.63	large stones >30%	1.00
	(limited)		(very limited)		(very limited)		(limited)		(very limited)	
	wetness	0.54	slope	0.76	wetness	0.19	wetness	0.19	slope	0.63
	(moderately limited)		(limited)		(slightly limited)		(slightly limited)		(limited)	
			depth to bedrock	0.27					small stones	0.51
			(slightly limited)						(moderately limited)	
77004:										
Irondale-------	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	0.86	slope	1.00	depth to bedrock	0.86	depth to bedrock	0.86	large stones	0.99
	(limited)		(very limited)		(limited)		(limited)		(limited)	
	large stones	0.01	large stones	0.01	large stones	0.01	large stones	0.01	depth to bedrock	0.86
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(limited)	
77007:										
Taumsauk-------	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	0.12	large stones	0.12	large stones	0.12	large stones	0.12	droughty	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
Irondale-------	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	0.86	slope	1.00	depth to bedrock	0.86	depth to bedrock	0.86	large stones >30%	1.00
	(limited)		(very limited)		(limited)		(limited)		(very limited)	
	large stones	0.52	large stones	0.52	large stones	0.52	large stones	0.52	depth to bedrock	0.86
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(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
77011:										
Taumsauk-------	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	shallow to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.45	large stones	0.45	slope	1.00	large stones	0.45	droughty	1.00
	(moderately limited)		(moderately limited)		(very limited)		(moderately limited)		(very limited)	
	slope	0.45	slope	0.45	large stones	0.45	slope	0.04	large stones	0.31
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(moderately limited)	
Irondale-------	Moderately limited		Very limited		Very limited		Moderately limited		Moderately limited	
	depth to bedrock	0.51	hard bedrock <40"	1.00	slope	1.00	depth to bedrock	0.51	depth to bedrock	0.42
	(moderately limited)		(very limited)		(very limited)		(moderately limited)		(moderately limited)	
	slope	0.45	slope	0.45	depth to bedrock	0.51	slope	0.04	small stones	0.37
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(moderately limited)	
									slope	0.04
									(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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		Very limited		Limited		Limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.80	small stones >35%	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
	percs slowly	1.00	slope	0.66	too clayey	0.90			too clayey	0.79
	(very limited)		(limited)		(limited)				(limited)	
			seepage	0.50	too acid	0.54			too acid	0.54
			(moderately limited)		(moderately limited)				(moderately limited)	
70026:										
Tonti----------	Very limited		Very limited		Limited		Limited		Limited	
	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.80	small stones	1.00
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	1.00	seepage	0.50	too clayey	0.96			too clayey	0.91
	(very limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.54			too acid	0.54
					(moderately limited)				(moderately limited)	
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)	
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)	

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
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)	
73042:										
Niangua--------	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	0.71	depth to bedrock	0.54	depth to bedrock	1.00	depth to bedrock	0.39	too clayey	1.00
	(limited)		(moderately limited)		(very limited)		(moderately limited)		(very limited)	
	depth to bedrock	0.54			too clayey	1.00			hard to pack	0.70
	(moderately limited)				(very limited)				(limited)	
Bardley--------	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	depth to bedrock	1.00	depth to bedrock	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)	
73053:										
Lily----------	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)	
			seepage	1.00	seepage	0.79	seepage	0.75	seepage	0.50
			(very limited)		(limited)		(limited)		(moderately limited)	
			slope	1.00	too acid	0.12			too acid	0.12
			(very limited)		(slightly limited)				(slightly limited)	
Bender---------	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	0.35	seepage	1.00	seepage	0.79	seepage	0.75	seepage	0.50
	(moderately limited)		(very limited)		(limited)		(limited)		(moderately limited)	
			slope	1.00	too acid	0.24			small stones	0.46
			(very 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
73054:										
Viburnum-------	Very limited		Very limited		Very limited		Limited		Limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.93	small stones	0.82
	(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)	
73055:										
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	seepage	0.50	too clayey	1.00			too clayey	1.00
	(limited)		(moderately limited)		(very limited)				(very limited)	
					too acid	0.18			hard to pack	0.70
					(slightly limited)				(limited)	
Rueter---------	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	1.00	too clayey	1.00	seepage	0.75	too clayey	1.00
	(slightly limited)		(very limited)		(very limited)		(limited)		(very limited)	
					too acid	0.18			small stones	0.99
					(slightly limited)				(limited)	
73068:										
Tick----------	Limited		Very limited		Very limited		Limited		Very limited	
	percs slowly	0.99	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			slope	0.63			hard to pack	0.70
	(limited)				(limited)				(limited)	
					too acid	0.48			slope	0.63
					(moderately 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	seepage	1.00	too clayey	0.88	seepage	0.68	too clayey	0.76
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	slope	0.63	wetness	0.74	seepage	0.73	slope	0.63	slope	0.63
	(limited)		(limited)		(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
73073:										
Poynor---------	Limited		Very limited		Very limited		Limited		Very limited	
	slope	0.63	slope	1.00	too clayey	1.00	seepage	0.75	too clayey	1.00
	(limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.25	seepage	1.00	slope	0.63	slope	0.63	hard to pack	0.70
	(slightly limited)		(very limited)		(limited)		(limited)		(limited)	
					too acid	0.42			slope	0.63
					(moderately limited)				(limited)	
73080:										
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	0.31	too clayey	1.00			too clayey	1.00
	(limited)		(moderately limited)		(very limited)				(very limited)	
	large stones	0.04	seepage	0.08					hard to pack	0.70
	(slightly limited)		(slightly limited)						(limited)	
Bardley--------	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	depth to bedrock	1.00	depth to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.52	seepage	0.02	too clayey	1.00			too clayey	1.00
	(moderately limited)		(slightly limited)		(very limited)				(very 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	
	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	depth to bedrock	1.00	depth to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.81	seepage	1.00	seepage	0.96	seepage	0.97	seepage	0.99
	(limited)		(very limited)		(limited)		(limited)		(limited)	
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	0.26	too clayey	1.00			too clayey	1.00
	(limited)		(slightly limited)		(very limited)				(very limited)	
	large stones	0.02							hard to pack	0.70
	(slightly limited)								(limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	

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
73139:										
Poynor---------	Limited		Very limited		Very limited		Limited		Very limited	
	slope	0.63	slope	1.00	too clayey	1.00	seepage	0.75	too clayey	1.00
	(limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.25	seepage	1.00	slope	0.63	slope	0.63	hard to pack	0.70
	(slightly limited)		(very limited)		(limited)		(limited)		(limited)	
					too acid	0.36			slope	0.63
					(moderately limited)				(limited)	
Clarksville----	Limited		Very limited		Limited		Limited		Limited	
	slope	0.63	slope	1.00	too clayey	0.74	slope	0.63	slope	0.63
	(limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	0.25	seepage	0.50	slope	0.63			small stones	0.59
	(slightly limited)		(moderately limited)		(limited)				(moderately limited)	
									too clayey	0.51
									(moderately limited)	
Scholten-------	Very limited		Very limited		Very limited		Very limited		Limited	
	wetness	1.00	slope	1.00	wetness	1.00	wetness	1.00	too clayey	0.78
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	percs slowly	1.00	seepage	1.00	too clayey	0.89	slope	0.63	wetness	0.78
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	slope	0.63	wetness	0.50	seepage	0.79			hard to pack	0.70
	(limited)		(moderately limited)		(limited)				(limited)	
73140:										
Clarksville----	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	1.00	too clayey	0.84	seepage	0.75	small stones >35%	1.00
	(slightly limited)		(very limited)		(limited)		(limited)		(very limited)	
					too acid	0.24			too clayey	0.68
					(slightly limited)				(limited)	
Scholten-------	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	seepage	0.79	wetness	0.48	small stones >35%	1.00
	(very limited)		(very limited)		(limited)		(moderately limited)		(very limited)	
	percs slowly	1.00	seepage	1.00	wetness	0.72			wetness	0.36
	(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
73143:										
Courtois-------	Slightly limited		Limited		Very limited		Not limited		Very limited	
	percs slowly	0.25	slope	0.66	too clayey	1.00			too clayey	1.00
	(slightly limited)		(limited)		(very limited)				(very limited)	
			seepage	0.50	too acid	0.24			hard to pack	0.70
			(moderately limited)		(slightly limited)				(limited)	
									too acid	0.24
									(slightly limited)	
73144:										
Courtois-------	Moderately limited		Very limited		Very limited		Moderately limited		Very limited	
	slope	0.37	slope	1.00	too clayey	1.00	slope	0.37	too clayey	1.00
	(moderately limited)		(very limited)		(very limited)		(moderately limited)		(very limited)	
	percs slowly	0.25	seepage	0.50	slope	0.37			hard to pack	0.70
	(slightly limited)		(moderately limited)		(moderately limited)				(limited)	
					too acid	0.24			slope	0.37
					(slightly limited)				(moderately limited)	
73147:										
Fourche--------	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	wetness	1.00	too clayey	1.00	wetness	0.60	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.71	slope	0.66	wetness	0.79			too acid	0.61
	(limited)		(limited)		(limited)				(limited)	
					too acid	0.61			wetness	0.40
					(limited)				(moderately limited)	
73155:										
Gasconade------	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)	
	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 clayey	0.62			small stones	0.16
					(limited)				(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
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)					

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
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)	
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)	
73220:										
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	0.45	seepage	0.50	slope	0.63			hard to pack	0.70
	(moderately limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.42			slope	0.63
					(moderately limited)				(limited)	
73221:										
Poynor---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	too clayey	1.00	slope	1.00	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.52	seepage	0.50	slope	1.00			slope	1.00
	(moderately 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
73222:										
Splitlimb------	Very limited		Very limited		Very limited		Very limited		Very limited	
	ponded (wetness)	1.00	wetness	1.00	ponded (wetness)	1.00	ponded (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	wetness	0.93	wetness	0.57
	(very limited)		(very limited)		(very limited)		(limited)		(moderately limited)	
	percs slowly	0.71	seepage	0.32	too acid	0.48			too acid	0.48
	(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)	
			seepage	1.00	seepage	0.67	seepage	0.75	small stones	0.83
			(very limited)		(limited)		(limited)		(limited)	
					too clayey	0.19			seepage	0.09
					(slightly limited)				(slightly limited)	
Bender---------	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	depth to bedrock	1.00	depth to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.76	seepage	1.00	seepage	0.96	seepage	0.97	seepage	0.99
	(limited)		(very limited)		(limited)		(limited)		(limited)	
73236:										
Scholten-------	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	wetness	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	slope	0.91	too clayey	0.88			too clayey	0.76
	(very limited)		(limited)		(limited)				(limited)	
			seepage	0.68	too acid	0.48			wetness	0.59
			(limited)		(moderately limited)				(moderately limited)	
Poynor---------	Moderately limited		Limited		Very limited		Not limited		Very limited	
	percs slowly	0.45	seepage	0.82	too clayey	1.00			too clayey	1.00
	(moderately limited)		(limited)		(very limited)				(very limited)	
			slope	0.66	too acid	0.42			hard to pack	0.70
			(limited)		(moderately limited)				(limited)	
									small stones	0.65
									(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
73242:										
Fanchon--------	Slightly limited		Moderately limited		Very limited		Not 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)	
			slope	0.31	too acid	0.30			too acid	0.30
			(moderately limited)		(slightly limited)				(slightly limited)	
Tonti----------	Very limited		Very limited		Very limited		Limited		Limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.94	too clayey	0.99
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	percs slowly	1.00	seepage	0.68	too clayey	1.00			hard to pack	0.70
	(very limited)		(limited)		(limited)				(limited)	
			slope	0.31	too acid	0.42			wetness	0.57
			(moderately limited)		(moderately limited)				(moderately limited)	
73269:										
Brussels-------	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	0.71			too clayey	0.36			small stones	0.76
	(limited)				(moderately limited)				(limited)	
									too clayey	0.18
									(slightly limited)	
Gasconade------	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	depth to bedrock	1.00	depth to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
					too clayey	0.86			small stones	0.26
					(limited)				(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73295:										
Taterhill------	Slightly limited		Limited		Slightly limited		Not limited		Slightly limited	
	percs slowly	0.20	seepage	0.92	too acid	0.30			too acid	0.30
	(slightly limited)		(limited)		(slightly limited)				(slightly limited)	
			slope	0.91	too clayey	0.04			small stones	0.07
			(limited)		(slightly limited)				(slightly 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
73298:										
Tonti----------	Very limited		Very limited		Limited		Limited		Limited	
	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.80	small stones	0.98
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	1.00	slope	0.66	too clayey	0.96			too clayey	0.91
	(very limited)		(limited)		(limited)				(limited)	
			seepage	0.50	too acid	0.54			too acid	0.54
			(moderately limited)		(moderately limited)				(moderately limited)	
Hogcreek-------	Very limited		Very limited		Not rated		Very limited		Not rated	
	percs slowly	1.00	wetness	1.00	Not Rated		depth to bedrock	1.00	Not Rated	
	(very limited)		(very limited)				(very limited)			
	depth to bedrock	1.00	depth to bedrock	1.00	wetness	1.00	wetness	0.93	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	wetness	1.00	seepage	0.68	depth to bedrock	1.00			wetness	0.57
	(very limited)		(limited)		(very limited)				(moderately limited)	
73301:										
Tick----------	Limited		Limited		Very limited		Not limited		Very limited	
	percs slowly	0.99	slope	0.66	too clayey	1.00			too clayey	1.00
	(limited)		(limited)		(very limited)				(very limited)	
					too acid	0.48			hard to pack	0.70
					(moderately limited)				(limited)	
									too acid	0.48
									(moderately limited)	
73308:										
Grandgulf------	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	ponded (wetness)	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.25	seepage	0.50						
	(slightly limited)		(moderately limited)							
73309:										
Clarksville----	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	0.52	seepage	0.32	too clayey	0.90			small stones >35%	1.00
	(moderately limited)		(moderately limited)		(limited)				(very limited)	
					too acid	0.42			too clayey	0.79
					(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
73309:										
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)	
73310:										
Scholten-------	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	wetness	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	seepage	0.68	too clayey	0.88			too clayey	0.76
	(very limited)		(limited)		(limited)				(limited)	
			slope	0.66	too acid	0.48			wetness	0.59
			(limited)		(moderately limited)				(moderately limited)	
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	0.60	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)	
Poynor---------	Moderately limited		Limited		Very limited		Not limited		Very limited	
	percs slowly	0.45	seepage	0.82	too clayey	1.00			too clayey	1.00
	(moderately limited)		(limited)		(very limited)				(very limited)	
			slope	0.31	too acid	0.42			small stones	0.96
			(moderately limited)		(moderately limited)				(limited)	
									hard to pack	0.70
									(limited)	
73311:										
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			slope	0.63
	(limited)		(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
73311:										
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	0.60	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	0.45	seepage	0.50	slope	0.63			hard to pack	0.70
	(moderately limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.42			slope	0.63
					(moderately limited)				(limited)	
73313:										
Fanchon--------	Slightly limited		Moderately limited		Very limited		Not 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	0.30			too acid	0.30
					(slightly limited)				(slightly limited)	
Tonti----------	Very limited		Very limited		Limited		Limited		Very limited	
	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.80	small stones >35%	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
	percs slowly	1.00	seepage	0.50	too clayey	0.96			too clayey	0.91
	(very limited)		(moderately limited)		(limited)				(limited)	
					too acid	0.54			too acid	0.54
					(moderately limited)				(moderately limited)	
73333:										
Taterhill------	Slightly limited		Moderately limited		Moderately limited		Not limited		Moderately limited	
	percs slowly	0.25	seepage	0.50	too acid	0.42			too acid	0.42
	(slightly limited)		(moderately limited)		(moderately limited)				(moderately limited)	
					too clayey	0.15			too clayey	0.03
					(slightly limited)				(slightly 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
73334:										
Horneybuck-----	Very limited		Very limited		Very limited		Limited		Moderately limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.93	wetness	0.57
	(very limited)		(very limited)		(very limited)		(limited)		(moderately limited)	
	percs slowly	0.71	slope	0.66	too clayey	0.62			too acid	0.48
	(limited)		(limited)		(limited)				(moderately limited)	
			seepage	0.50	too acid	0.48			too clayey	0.33
			(moderately limited)		(moderately limited)				(moderately limited)	
73335:										
Hobson---------	Very limited		Very limited		Limited		Limited		Moderately limited	
	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.80	wetness	0.50
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	percs slowly	0.93	slope	0.91	too clayey	0.72			too clayey	0.48
	(limited)		(limited)		(limited)				(moderately limited)	
			seepage	0.50	too acid	0.24			small stones	0.31
			(moderately limited)		(slightly limited)				(moderately limited)	
Rueter---------	Limited		Limited		Very limited		Not limited		Very limited	
	percs slowly	0.75	slope	0.91	too clayey	1.00			too clayey	1.00
	(limited)		(limited)		(very limited)				(very limited)	
			seepage	0.50	too acid	0.24			small stones	1.00
			(moderately limited)		(slightly limited)				(limited)	
					large stones	0.02			too acid	0.24
					(slightly limited)				(slightly limited)	
73336:										
Rueter---------	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)	
					large stones	0.11			slope	0.63
					(slightly limited)				(limited)	
Gepp----------	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	0.24			slope	0.63
					(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
73337:										
Tonti----------	Very limited		Very limited		Limited		Limited		Limited	
	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.80	too clayey	0.94
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	1.00	slope	0.91	too clayey	0.98			too acid	0.83
	(very limited)		(limited)		(limited)				(limited)	
			seepage	0.50	too acid	0.83			wetness	0.50
			(moderately limited)		(limited)				(moderately limited)	
Portia---------	Slightly limited		Limited		Very limited		Not limited		Very limited	
	percs slowly	0.25	slope	0.66	too clayey	1.00			too clayey	1.00
	(slightly limited)		(limited)		(very limited)				(very limited)	
			seepage	0.50	too acid	0.60			hard to pack	0.70
			(moderately limited)		(limited)				(limited)	
									too acid	0.60
									(limited)	
73338:										
Portia---------	Slightly limited		Very limited		Very limited		Slightly limited		Very limited	
	percs slowly	0.25	slope	1.00	too clayey	1.00	slope	0.16	too clayey	1.00
	(slightly limited)		(very limited)		(very limited)		(slightly limited)		(very limited)	
	slope	0.16	seepage	0.50	too acid	0.42			hard to pack	0.70
	(slightly limited)		(moderately limited)		(moderately limited)				(limited)	
					slope	0.16			too acid	0.42
					(slightly limited)				(moderately limited)	
Hobson---------	Very limited		Very limited		Very limited		Limited		Very limited	
	wetness	1.00	slope	1.00	too clayey	1.00	wetness	0.80	too clayey	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	percs slowly	0.93	wetness	1.00	wetness	0.99	slope	0.63	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)	
73339:										
Arkana---------	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)	
	slope	0.63	depth to bedrock	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)	

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
Gepp----------	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)	
									slope	0.63
									(limited)	
73340:										
Rueter---------	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	0.24			slope	0.63
					(slightly limited)				(limited)	
Gepp----------	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	0.24			slope	0.63
					(slightly limited)				(limited)	
73341:										
Gepp----------	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	0.24			hard to pack	0.70
					(slightly limited)				(limited)	
Arkana---------	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	depth to bedrock	1.00	depth to bedrock	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)	

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
73342:										
Alred----------	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)	
									slope	0.63
									(limited)	
Arkana---------	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)	
	slope	0.63	depth to bedrock	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)	
73361:										
Coulstone------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	slope	1.00	slope	1.00	slope	1.00	seepage	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			seepage	1.00	seepage	0.67	seepage	1.00	slope	1.00
			(very limited)		(limited)		(very limited)		(very limited)	
					too acid	0.24			small stones	0.91
					(slightly limited)				(limited)	
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	0.75	seepage	0.50	too clayey	1.00			too clayey	1.00
	(limited)		(moderately limited)		(very limited)				(very limited)	
					too acid	0.18			hard to pack	0.70
					(slightly limited)				(limited)	
74627:										
Hartville------	Very limited		Very limited		Limited		Limited		Moderately limited	
	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.80	wetness	0.50
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	percs slowly	0.93			too clayey	0.62	flooding (rare)	0.60	too clayey	0.33
	(limited)				(limited)		(moderately limited)		(moderately limited)	
	flooding (rare)	0.60			flooding (rare)	0.60				
	(moderately 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
74636:										
Lecoma---------	Slightly limited		Limited		Slightly limited		Not limited		Slightly limited	
	percs slowly	0.25	slope	0.91	too acid	0.12			too acid	0.12
	(slightly limited)		(limited)		(slightly limited)				(slightly limited)	
			seepage	0.50	too clayey	0.02				
			(moderately limited)		(slightly limited)					
74637:										
Lecoma---------	Slightly limited		Very limited		Slightly limited		Slightly limited		Slightly limited	
	percs slowly	0.25	slope	1.00	slope	0.16	slope	0.16	slope	0.16
	(slightly limited)		(very limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	slope	0.16	seepage	0.50	too acid	0.12			too acid	0.12
	(slightly limited)		(moderately limited)		(slightly limited)				(slightly limited)	
					too clayey	0.02				
					(slightly limited)					
74642:										
Cornwall-------	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	0.68
	(very limited)		(very limited)		(very limited)		(very limited)		(limited)	
	percs slowly	0.93	seepage	0.50	too acid	0.61			too acid	0.61
	(limited)		(moderately limited)		(limited)				(limited)	
74643:										
Lecoma---------	Slightly limited		Moderately limited		Slightly limited		Not limited		Slightly limited	
	percs slowly	0.25	seepage	0.50	too acid	0.24			too acid	0.24
	(slightly limited)		(moderately limited)		(slightly limited)				(slightly limited)	
					too clayey	0.07				
					(slightly limited)					
74644:										
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	1.00			too clayey	0.40			too clayey	0.20
	(very limited)				(moderately limited)				(slightly 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
74648:										
Aslinger-------	Very limited		Very limited		Limited		Limited		Limited	
	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.80	small stones	0.64
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	0.71	slope	0.91	too clayey	0.68			wetness	0.50
	(limited)		(limited)		(limited)				(moderately limited)	
			seepage	0.50	too acid	0.48			too acid	0.48
			(moderately limited)		(moderately limited)				(moderately limited)	
74651:										
Waben----------	Not limited		Very limited		Limited		Limited		Very limited	
			seepage	1.00	seepage	0.79	seepage	0.75	small stones >35%	1.00
			(very limited)		(limited)		(limited)		(very limited)	
			slope	0.91	too acid	0.30			seepage	0.50
			(limited)		(slightly limited)				(moderately limited)	
					too clayey	0.24			too acid	0.30
					(slightly limited)				(slightly limited)	
74658:										
Zanoni---------	Moderately limited		Very limited		Very limited		Limited		Very limited	
	flooding (rare)	0.60	seepage	1.00	seepage	1.00	seepage	0.88	seepage	1.00
	(moderately limited)		(very limited)		(very limited)		(limited)		(very limited)	
					flooding (rare)	0.60	flooding (rare)	0.60	small stones	0.33
					(moderately limited)		(moderately limited)		(moderately limited)	
75381:										
Bearthicket----	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Not limited	
	flooding (rare)	0.60	seepage	0.50	flooding (rare)	0.60	flooding (rare)	0.60		
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)			
	percs slowly	0.25								
	(slightly limited)									
75390:										
Razort---------	Moderately limited		Very limited		Limited		Limited		Moderately limited	
	flooding (rare)	0.60	seepage	1.00	seepage	0.79	seepage	0.75	seepage	0.50
	(moderately limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	percs slowly	0.25			flooding (rare)	0.60	flooding (rare)	0.60	small stones	0.04
	(slightly limited)				(moderately limited)		(moderately limited)		(slightly 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
75394:										
Relfe----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	poor filter	1.00	seepage	1.00	too sandy	1.00	seepage	1.00	seepage	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding (rare)	0.60			seepage	1.00	flooding (rare)	0.60	too sandy	1.00
	(moderately limited)				(very limited)		(moderately limited)		(very limited)	
					flooding (rare)	0.60			small stones >35%	1.00
					(moderately limited)				(very limited)	
75395:										
Jamesfin-------	Very limited		Very limited		Very limited		Very limited		Not limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00		
	(very limited)		(very limited)		(very limited)		(very limited)			
	wetness	0.31	seepage	0.50	wetness	0.15				
	(moderately limited)		(moderately limited)		(slightly limited)					
	percs slowly	0.25								
	(slightly limited)									
75408:										
Secesh---------	Moderately limited		Very limited		Limited		Limited		Limited	
	flooding (rare)	0.60	seepage	1.00	seepage	0.79	seepage	0.75	small stones	0.95
	(moderately limited)		(very limited)		(limited)		(limited)		(limited)	
	percs slowly	0.25			flooding (rare)	0.60	flooding (rare)	0.60	seepage	0.50
	(slightly limited)				(moderately limited)		(moderately limited)		(moderately limited)	
					too acid	0.06			too acid	0.06
					(slightly limited)				(slightly limited)	
75409:										
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)	
	poor filter	1.00	seepage	1.00	too sandy	1.00	seepage	1.00	too sandy	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
					seepage	1.00			small stones >35%	1.00
					(very limited)				(very limited)	
75411:										
Tilk----------	Moderately limited		Very limited		Very limited		Limited		Very limited	
	flooding (rare)	0.60	seepage	1.00	seepage	1.00	seepage	0.75	small stones >35%	1.00
	(moderately limited)		(very limited)		(very limited)		(limited)		(very limited)	
					flooding (rare)	0.60	flooding (rare)	0.60	seepage	0.50
					(moderately limited)		(moderately limited)		(moderately limited)	
					too acid	0.36			too acid	0.36
					(moderately 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
75416:										
Gladden--------	Very limited		Very limited		Very limited		Very limited		Not limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00		
	(very limited)		(very limited)		(very limited)		(very limited)			
	percs slowly	0.25	seepage	1.00	seepage	1.00				
	(slightly limited)		(very limited)		(very 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)	
	poor filter	1.00	seepage	1.00	seepage	1.00	seepage	1.00	small stones >35%	1.00
	(very limited)		(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)	
			seepage	1.00	too sandy	1.00	seepage	0.75	seepage	0.50
			(very limited)		(very limited)		(limited)		(moderately limited)	
					seepage	0.67				
					(limited)					
75420:										
Secesh---------	Very limited		Very limited		Very limited		Very limited		Slightly limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	small stones	0.11
	(very limited)		(very limited)		(very limited)		(very limited)		(slightly limited)	
	percs slowly	0.25	seepage	0.50	too clayey	0.04				
	(slightly limited)		(moderately limited)		(slightly limited)					
Tilk----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	small stones >35%	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			seepage	1.00	seepage	1.00	seepage	0.75	seepage	0.50
			(very limited)		(very limited)		(limited)		(moderately limited)	
					too acid	0.36			too acid	0.36
					(moderately 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
75426:										
Gabriel	Very limited		Very limited		Very limited		Limited		Moderately limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.60
	(very limited)		(very limited)		(very limited)		(limited)		(moderately limited)	
	percs slowly	0.71			flooding (rare)	0.60	flooding (rare)	0.60	too acid	0.12
	(limited)				(moderately limited)		(moderately limited)		(slightly limited)	
	flooding (rare)	0.60			too acid	0.12				
	(moderately limited)				(slightly limited)					
75430:										
Wideman	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	too sandy	1.00	seepage	1.00	too sandy	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
					seepage	0.79				
					(limited)					
75433:										
Racket	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)	
	wetness	0.37	seepage	1.00	seepage	1.00			small stones	0.02
	(moderately limited)		(very limited)		(very limited)				(slightly limited)	
	percs slowly	0.25			wetness	0.19				
	(slightly limited)				(slightly limited)					
75451:										
Gladden	Very limited		Very limited		Very limited		Very limited		Moderately limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	small stones	0.47
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
	percs slowly	0.25	seepage	1.00	seepage	1.00				
	(slightly limited)		(very limited)		(very limited)					
75462:										
Huzzah	Very limited		Very limited		Very limited		Very limited		Not limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00		
	(very limited)		(very limited)		(very limited)		(very limited)			
	percs slowly	0.25	seepage	1.00	seepage	1.00				
	(slightly limited)		(very limited)		(very 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
75463:										
Huzzah---------	Moderately limited		Very limited		Very limited		Very limited		Very limited	
	flooding (rare)	0.60	seepage	1.00	seepage	1.00	seepage	1.00	seepage	1.00
	(moderately limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	percs slowly	0.25			flooding (rare)	0.60	flooding (rare)	0.60	too sandy	0.60
	(slightly limited)				(moderately limited)		(moderately limited)		(moderately limited)	
					too sandy	0.60				
					(moderately limited)					
75464:										
Cedargap-------	Moderately limited		Very limited		Moderately limited		Limited		Very limited	
	flooding (rare)	0.60	seepage	1.00	flooding (rare)	0.60	seepage	0.88	small stones >35%	1.00
	(moderately limited)		(very limited)		(moderately limited)		(limited)		(very limited)	
	percs slowly	0.10			too clayey	0.10	flooding (rare)	0.60		
	(slightly limited)				(slightly limited)		(moderately limited)			
75465:										
Raftville------	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)	
	flooding (rare)	0.60	seepage	1.00	seepage	0.79	seepage	0.75	seepage	0.50
	(moderately limited)		(very limited)		(limited)		(limited)		(moderately limited)	
					flooding (rare)	0.60	flooding (rare)	0.60	too acid	0.36
					(moderately limited)		(moderately limited)		(moderately limited)	
Gabriel--------	Very limited		Very limited		Very limited		Limited		Moderately limited	
	wetness	1.00	wetness	1.00	wetness	1.00	wetness	0.99	wetness	0.60
	(very limited)		(very limited)		(very limited)		(limited)		(moderately limited)	
	percs slowly	0.71			flooding (rare)	0.60	flooding (rare)	0.60	too clayey	0.07
	(limited)				(moderately limited)		(moderately limited)		(slightly limited)	
	flooding (rare)	0.60			too clayey	0.20				
	(moderately limited)				(slightly limited)					
75466:										
Midco----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	flooding	1.00	flooding	1.00	flooding	1.00	flooding	1.00	small stones >35%	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			seepage	1.00	seepage	0.79	seepage	0.75	seepage	0.50
			(very limited)		(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
75470:										
Farewell-------	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)	
	flooding (rare)	0.60	seepage	0.32	flooding (rare)	0.60	flooding (rare)	0.60	small stones	0.78
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
	percs slowly	0.45								
	(moderately limited)									
77000:										
Killarney------	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	wetness	0.79	wetness	0.61	small stones >35%	1.00
	(very limited)		(very limited)		(limited)		(limited)		(very limited)	
	percs slowly	1.00	seepage	0.50	too acid	0.48			too acid	0.48
	(very limited)		(moderately limited)		(moderately limited)				(moderately limited)	
Frenchmill-----	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	large stones	0.67	too acid	0.48			too acid	0.48
	(slightly limited)		(limited)		(moderately limited)				(moderately limited)	
	large stones	0.13	seepage	0.50	too clayey	0.04				
	(slightly limited)		(moderately limited)		(slightly limited)					
77003:										
Delassus-------	Very limited		Very limited		Very limited		Limited		Limited	
	wetness	1.00	slope	1.00	depth to bedrock	1.00	wetness	0.73	slope	0.63
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	percs slowly	1.00	wetness	1.00	wetness	0.92	slope	0.63	small stones	0.55
	(very limited)		(very limited)		(limited)		(limited)		(moderately limited)	
	slope	0.63	seepage	0.50	slope	0.63			too acid	0.48
	(limited)		(moderately limited)		(limited)				(moderately limited)	
77004:										
Irondale-------	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	depth to bedrock	1.00	depth to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.00	seepage	0.50	too acid	0.42			too acid	0.42
	(slightly limited)		(moderately limited)		(moderately 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
77007:										
Taumsauk-------	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	depth to bedrock	1.00	depth to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.12	large stones	0.16	too acid	0.48			small stones	0.63
	(slightly limited)		(slightly limited)		(moderately limited)				(limited)	
Irondale-------	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	depth to bedrock	1.00	depth to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large stones	0.52	large stones	0.98	too acid	0.24			too acid	0.24
	(moderately limited)		(limited)		(slightly limited)				(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
77011:										
Taumsauk-------	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	0.45	slope	1.00	large stones	0.48	slope	0.04	small stones	0.65
	(moderately limited)		(very limited)		(moderately limited)		(slightly limited)		(limited)	
	slope	0.04	large stones	0.96	too acid	0.42			too acid	0.42
	(slightly limited)		(limited)		(moderately limited)				(moderately limited)	
Irondale-------	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)	
	percs slowly	0.74	slope	1.00	too acid	0.54	slope	0.04	too acid	0.54
	(limited)		(very limited)		(moderately limited)		(slightly limited)		(moderately limited)	
	slope	0.04			too clayey	0.20			small stones	0.31
	(slightly limited)				(slightly limited)				(moderately limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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		Improbable		Probable		Very limited		Very limited	
	wetness	0.48	excess fines	1.00	excess fines	0.75	small stones	1.00	dense layer <20"	1.00
	(moderately limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.04	excess fines	1.00	probable source	0.45	dense layer <20"	1.00	wetness	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							area reclaim	1.00	cutbanks cave	1.00
							(very limited)		(very limited)	
70026:										
Tonti----------	Moderately limited		Improbable		Possible		Very limited		Very limited	
	wetness	0.48	excess fines	1.00	excess fines	0.75	small stones	1.00	dense layer <20"	1.00
	(moderately limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.04	excess fines	1.00	excess fines	0.65	dense layer <20"	1.00	wetness	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							area reclaim	1.00	cutbanks cave	1.00
							(very limited)		(very limited)	
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	0.35					too acid	0.54	too clayey	0.60
	(moderately limited)						(moderately limited)		(moderately limited)	
73019:										
Poynor---------	Very limited		Improbable		Improbable		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	0.60	too acid	0.42	too clayey	0.99
	(slightly limited)		(bottom layer)		(thickest layer)		(moderately limited)		(limited)	
							too clayey	0.33		
							(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
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)	
73042:										
Niangua--------	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	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	cutbanks cave	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	depth to bedrock	0.39					large surface stones	1.00	too clayey	1.00
	(moderately limited)						(very limited)		(very limited)	
Bardley--------	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)		(bottom 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)		(thickest layer)		(very limited)		(very limited)	
	slope	1.00					too clayey	1.00	too clayey	1.00
	(very limited)						(very limited)		(very 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	0.35	excess fines	1.00	probable source	0.42	small stones	1.00	cutbanks cave	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
			small stones	0.30	small stones	0.30	large stones >25%	1.00	large stones	0.35
			(thickest layer)		(thickest layer)		(very 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
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)	
							wetness	0.76	too clayey	0.79
							(limited)		(limited)	
73055:										
Alred----------	Very limited		Improbable		Possible		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	0.79	small stones	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.10					large surface stones	0.70	too clayey	1.00
	(slightly limited)						(limited)		(very limited)	
Rueter---------	Limited		Improbable		Probable		Very limited		Very limited	
	slope	0.92	excess fines	1.00	excess fines	0.89	slope	1.00	slope	1.00
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	low strength	0.22	excess fines	1.00	probable source	0.45	small stones	1.00	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
			small stones	0.30	small stones	0.30	area reclaim	1.00	too clayey	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
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)	
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)	

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
73073:										
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)	
73080:										
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 surface stones	0.60	cutbanks cave	0.29
	(slightly limited)						(moderately limited)		(slightly limited)	
Bardley--------	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)		(bottom 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)		(thickest layer)		(very limited)		(very limited)	
	slope	1.00					too clayey	1.00	too clayey	1.00
	(very limited)						(very limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73081:										
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	0.81	small stones	0.66	small stones	0.66	small stones	1.00	large stones	0.81
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(limited)	
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)	

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:										
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73139:										
Poynor---------	Very limited		Improbable		Probable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.21	excess fines	1.00	probable source	0.37	slope	0.63	too clayey	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
							too acid	0.36	slope	0.63
							(moderately limited)		(limited)	
Clarksville----	Not limited		Improbable		Possible		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
			(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	excess fines	0.99	slope	0.63	slope	0.63
			(bottom layer)		(thickest layer)		(limited)		(limited)	
							too sandy	0.30	too clayey	0.51
							(slightly limited)		(moderately limited)	
Scholten-------	Limited		Improbable		Possible		Very limited		Very limited	
	wetness	0.96	excess fines	1.00	excess fines	1.00	small stones	1.00	wetness	1.00
	(limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	excess fines	0.99	wetness	0.96	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(limited)		(very limited)	
							slope	0.63	too clayey	0.78
							(limited)		(limited)	
73140:										
Clarksville----	Very limited		Improbable		Probable		Very limited		Very limited	
	slope	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)	
			excess fines	1.00	probable source	0.50	small stones	1.00	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							area reclaim	1.00	too clayey	0.68
							(very limited)		(limited)	
Scholten-------	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)		(bottom layer)		(very limited)		(very limited)	
	wetness	0.04	excess fines	1.00	excess fines	0.99	small stones	1.00	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							area reclaim	1.00	wetness	0.99
							(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
73143:										
Courtois-------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.36	excess fines	1.00	excess fines	1.00	too acid	0.24	too clayey	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(slightly limited)		(very limited)	
							area reclaim	0.08		
							(slightly limited)			
73144:										
Courtois-------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.36	excess fines	1.00	excess fines	1.00	slope	0.37	too clayey	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(moderately limited)		(very limited)	
							too acid	0.24	slope	0.37
							(slightly limited)		(moderately limited)	
73147:										
Fourche--------	Very limited		Improbable		Improbable		Moderately limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	0.43	too clayey	1.00
	(very limited)		(thickest layer)		(bottom layer)		(moderately limited)		(very limited)	
	wetness	0.12	excess fines	1.00	excess fines	1.00	wetness	0.12	wetness	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(slightly limited)		(very limited)	
							too acid	0.06	cutbanks cave	0.29
							(slightly limited)		(slightly limited)	
73155:										
Gasconade------	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	0.33	excess fines	1.00	excess fines	1.00	small stones	1.00	slope	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.10					too clayey	1.00	cutbanks cave	0.29
	(slightly limited)						(very limited)		(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
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)	

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
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)	
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)	
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)	
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)	

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
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------	Very limited		Improbable		Possible		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	0.75	small stones	1.00	cutbanks cave	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
			small stones	0.50	small stones	0.50	large surface stones	1.00	too clayey	0.06
			(thickest layer)		(thickest layer)		(very limited)		(slightly 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)	
73236:										
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	0.04	excess fines	1.00	excess fines	0.62	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		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	0.36	too clayey	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(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
73242:										
Fanchon--------	Not limited		Improbable		Possible		Slightly limited		Very limited	
			excess fines	1.00	excess fines	1.00	too acid	0.24	cutbanks cave	1.00
			(thickest layer)		(bottom layer)		(slightly limited)		(very limited)	
			excess fines	1.00	excess fines	0.99			too clayey	1.00
			(bottom layer)		(thickest layer)				(very limited)	
Tonti----------	Limited		Improbable		Improbable		Very limited		Very limited	
	wetness	0.78	excess fines	1.00	excess fines	1.00	dense layer <20"	1.00	dense layer <20"	1.00
	(limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.01	excess fines	1.00	excess fines	1.00	wetness	0.78	wetness	1.00
	(slightly limited)		(bottom layer)		(bottom layer)		(limited)		(very limited)	
							small stones	0.50	cutbanks cave	1.00
							(moderately limited)		(very limited)	
73269:										
Brussels-------	Very limited		Improbable		Improbable		Very limited		Very limited	
	slope	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)	
	shrink-swell	0.45	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							large surface stones	1.00	too clayey	0.18
							(very limited)		(slightly limited)	
Gasconade------	Very limited		Improbable		Improbable		Very limited		Very limited	
	slope	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	0.45					too clayey	1.00	cutbanks cave	0.29
	(moderately limited)						(very limited)		(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73295:										
Taterhill------	Not limited		Improbable		Improbable		Limited		Very limited	
			excess fines	1.00	excess fines	1.00	area reclaim	0.92	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(limited)		(very limited)	
			excess fines	1.00	excess fines	1.00	too acid	0.12		
			(bottom layer)		(bottom layer)		(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
73298:										
Tonti----------	Moderately limited		Improbable		Possible		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)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.04	excess fines	1.00	excess fines	0.75	dense layer <20"	1.00	wetness	1.00
	(slightly limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
							area reclaim	1.00	cutbanks cave	1.00
							(very limited)		(very limited)	
Hogcreek-------	Very limited		Improbable		Possible		Not rated		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	1.00			dense layer <20"	1.00
	(very limited)		(thickest layer)		(thickest layer)				(very limited)	
	wetness	0.76	excess fines	1.00	excess fines	0.75			hard bedrock <40"	1.00
	(limited)		(bottom layer)		(bottom layer)				(very limited)	
									wetness	1.00
									(very limited)	
73301:										
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)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.30	excess fines	1.00	excess fines	1.00	too acid	0.42	cutbanks cave	0.29
	(slightly limited)		(bottom layer)		(bottom layer)		(moderately limited)		(slightly limited)	
							small stones	0.12		
							(slightly limited)			
73308:										
Grandgulf------	Very limited		Improbable		Improbable		Not limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00			ponded (wetness)	1.00
	(very limited)		(thickest layer)		(bottom layer)				(very limited)	
			excess fines	1.00	excess fines	1.00			cutbanks cave	0.29
			(bottom layer)		(thickest layer)				(slightly limited)	
73309:										
Clarksville----	Moderately limited		Improbable		Probable		Very limited		Very limited	
	slope	0.50	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(moderately limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	probable source	0.50	small stones	1.00	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							area reclaim	1.00	too clayey	0.79
							(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
73309:										
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)	
73310:										
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	0.04	excess fines	1.00	excess fines	0.62	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)	
Bendavis-------	Very limited		Improbable		Improbable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	excess fines	1.00	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	1.00	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)	
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	0.36	too clayey	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(moderately limited)		(very limited)	
							area reclaim	0.32		
							(moderately limited)			
73311:										
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	0.04	excess fines	1.00	excess fines	0.62	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)	

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
73311:										
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		Improbable		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	1.00	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)	
73313:										
Fanchon--------	Not limited		Improbable		Possible		Slightly limited		Very limited	
			excess fines	1.00	excess fines	1.00	too acid	0.24	cutbanks cave	1.00
			(thickest layer)		(bottom layer)		(slightly limited)		(very limited)	
			excess fines	1.00	excess fines	0.99			too clayey	1.00
			(bottom layer)		(thickest layer)				(very limited)	
Tonti----------	Moderately limited		Improbable		Probable		Very limited		Very limited	
	wetness	0.48	excess fines	1.00	excess fines	0.75	small stones	1.00	dense layer <20"	1.00
	(moderately limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.04	excess fines	1.00	probable source	0.50	dense layer <20"	1.00	wetness	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							area reclaim	1.00	cutbanks cave	1.00
							(very limited)		(very limited)	
73333:										
Taterhill------	Not limited		Improbable		Improbable		Not limited		Very limited	
			excess fines	1.00	excess fines	1.00			cutbanks cave	1.00
			(thickest layer)		(bottom layer)				(very limited)	
			excess fines	1.00	excess fines	1.00			too clayey	0.03
			(bottom layer)		(thickest layer)				(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
73334:										
Horneybuck-----	Limited		Improbable		Improbable		Limited		Very limited	
	wetness	0.76	excess fines	1.00	excess fines	1.00	small stones	0.82	wetness	1.00
	(limited)		(thickest layer)		(thickest layer)		(limited)		(very limited)	
	low strength	0.22	excess fines	1.00	excess fines	1.00	wetness	0.76	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(bottom layer)		(limited)		(very limited)	
							area reclaim	0.32	too clayey	0.33
							(moderately limited)		(moderately limited)	
73335:										
Hobson---------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	area reclaim	1.00	wetness	1.00
	(very limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	wetness	0.48	excess fines	1.00	excess fines	1.00	wetness	0.48	cutbanks cave	1.00
	(moderately limited)		(bottom layer)		(bottom layer)		(moderately limited)		(very limited)	
	shrink-swell	0.18					too acid	0.30	too clayey	0.48
	(slightly limited)						(slightly limited)		(moderately limited)	
Rueter---------	Not limited		Improbable		Possible		Very limited		Very limited	
			excess fines	1.00	excess fines	0.75	small stones	1.00	cutbanks cave	1.00
			(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	small stones	0.66	area reclaim	1.00	too clayey	1.00
			(bottom layer)		(thickest layer)		(very limited)		(very limited)	
			small stones	0.66	small stones	0.66	too acid	0.48		
			(thickest layer)		(bottom layer)		(moderately limited)			
73336:										
Rueter---------	Very limited		Improbable		Improbable		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)	
			excess fines	1.00	excess fines	1.00	too clayey	0.95	too clayey	1.00
			(bottom layer)		(thickest layer)		(limited)		(very limited)	
			small stones	0.50	small stones	0.50	slope	0.63	slope	0.63
			(thickest layer)		(thickest layer)		(limited)		(limited)	
Gepp----------	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	0.45	excess fines	1.00	excess fines	1.00	slope	0.63	slope	0.63
	(moderately limited)		(bottom layer)		(thickest layer)		(limited)		(limited)	
							too acid	0.24	cutbanks cave	0.29
							(slightly 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
73337:										
Tonti----------	Moderately limited		Improbable		Improbable		Very limited		Very limited	
	wetness	0.48	excess fines	1.00	excess fines	1.00	dense layer <20"	1.00	dense layer <20"	1.00
	(moderately limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.01	excess fines	1.00	excess fines	1.00	area reclaim	1.00	wetness	1.00
	(slightly limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
							wetness	0.48	cutbanks cave	1.00
							(moderately limited)		(very limited)	
Portia---------	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	0.25	excess fines	1.00	excess fines	1.00	too acid	0.61	cutbanks cave	0.29
	(slightly limited)		(bottom layer)		(thickest layer)		(limited)		(slightly limited)	
							too sandy	0.15		
							(slightly limited)			
73338:										
Portia---------	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	0.25	excess fines	1.00	excess fines	1.00	too acid	0.36	cutbanks cave	0.29
	(slightly limited)		(bottom layer)		(thickest layer)		(moderately limited)		(slightly limited)	
							slope	0.16	slope	0.16
							(slightly limited)		(slightly limited)	
Hobson---------	Very limited		Improbable		Improbable		Limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	slope	0.63	wetness	1.00
	(very limited)		(thickest layer)		(thickest layer)		(limited)		(very limited)	
	wetness	0.48	excess fines	1.00	excess fines	1.00	wetness	0.48	cutbanks cave	1.00
	(moderately limited)		(bottom layer)		(bottom layer)		(moderately limited)		(very limited)	
	shrink-swell	0.40					too acid	0.30	too clayey	1.00
	(moderately limited)						(slightly limited)		(very limited)	
73339:										
Arkana---------	Very limited		Improbable		Possible		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	depth to bedrock	1.00	excess fines	1.00	excess fines	0.99	depth to bedrock	0.97	too clayey	1.00
	(very limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
	shrink-swell	1.00					slope	0.63	slope	0.63
	(very limited)						(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
73339:										
Gepp----------	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	0.45	excess fines	1.00	excess fines	0.94	slope	0.63	slope	0.63
	(moderately limited)		(bottom layer)		(thickest layer)		(limited)		(limited)	
									cutbanks cave	0.29
									(slightly limited)	
73340:										
Rueter---------	Not limited		Improbable		Improbable		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
			(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	excess fines	1.00	slope	0.63	too clayey	1.00
			(bottom layer)		(thickest layer)		(limited)		(very limited)	
							too acid	0.24	slope	0.63
							(slightly limited)		(limited)	
Gepp----------	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	0.45	excess fines	1.00	excess fines	1.00	slope	0.63	slope	0.63
	(moderately limited)		(bottom layer)		(thickest layer)		(limited)		(limited)	
							too acid	0.24	cutbanks cave	0.29
							(slightly limited)		(slightly limited)	
73341:										
Gepp----------	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	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	too clayey	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.45					too acid	0.24	cutbanks cave	0.29
	(moderately limited)						(slightly limited)		(slightly limited)	
Arkana---------	Very limited		Improbable		Possible		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	slope	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	depth to bedrock	1.00	excess fines	1.00	excess fines	0.65	too clayey	1.00	slope	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	1.00					depth to bedrock	0.97	too clayey	1.00
	(very limited)						(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
73342:										
Alred----------	Very limited		Improbable		Possible		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	cutbanks cave	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	0.20	excess fines	1.00	excess fines	0.55	slope	0.63	too clayey	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
									slope	0.63
									(limited)	
Arkana---------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	too clayey	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	depth to bedrock	1.00	excess fines	1.00	excess fines	1.00	depth to bedrock	0.97	too clayey	1.00
	(very limited)		(bottom layer)		(thickest layer)		(limited)		(very limited)	
	shrink-swell	0.43					small stones	0.95	slope	0.63
	(moderately limited)						(limited)		(limited)	
73361:										
Coulstone------	Very limited		Improbable		Possible		Very limited		Very limited	
	slope	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)	
			excess fines	1.00	excess fines	0.89	small stones	1.00	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							large surface stones	1.00		
							(very limited)			
Alred----------	Very limited		Improbable		Possible		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	excess fines	0.79	small stones	1.00	cutbanks cave	1.00
	(very limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	shrink-swell	0.10					large surface stones	0.70	too clayey	1.00
	(slightly limited)						(limited)		(very limited)	
74627:										
Hartville------	Very limited		Improbable		Improbable		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)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	shrink-swell	1.00	excess fines	1.00	excess fines	1.00	wetness	0.48	too clayey	0.33
	(very limited)		(bottom layer)		(thickest layer)		(moderately limited)		(moderately limited)	
	wetness	0.48							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
74636:										
Lecoma---------	Moderately limited		Improbable		Improbable		Not limited		Slightly limited	
	shrink-swell	0.45	excess fines	1.00	excess fines	1.00			cutbanks cave	0.29
	(moderately limited)		(thickest layer)		(bottom layer)				(slightly limited)	
			excess fines	1.00	excess fines	1.00				
			(bottom layer)		(thickest layer)					
74637:										
Lecoma---------	Moderately limited		Improbable		Improbable		Slightly limited		Slightly limited	
	shrink-swell	0.45	excess fines	1.00	excess fines	1.00	slope	0.16	cutbanks cave	0.29
	(moderately limited)		(thickest layer)		(bottom layer)		(slightly limited)		(slightly limited)	
			excess fines	1.00	excess fines	1.00			slope	0.16
			(bottom layer)		(thickest layer)				(slightly limited)	
74642:										
Cornwall-------	Very limited		Improbable		Improbable		Limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	wetness	0.91	ponded (wetness)	1.00
	(very limited)		(thickest layer)		(thickest layer)		(limited)		(very limited)	
	wetness	0.91	excess fines	1.00	excess fines	1.00	too acid	0.48	wetness	1.00
	(limited)		(bottom layer)		(bottom layer)		(moderately limited)		(very limited)	
									cutbanks cave	0.29
									(slightly limited)	
74643:										
Lecoma---------	Slightly limited		Improbable		Improbable		Moderately limited		Slightly limited	
	low strength	0.22	excess fines	1.00	excess fines	1.00	too clayey	0.40	cutbanks cave	0.29
	(slightly limited)		(thickest layer)		(bottom layer)		(moderately limited)		(slightly limited)	
	shrink-swell	0.20	excess fines	1.00	excess fines	1.00	too acid	0.24		
	(slightly limited)		(bottom layer)		(thickest layer)		(slightly limited)			
74644:										
Deible---------	Very limited		Improbable		Improbable		Very limited		Very limited	
	low strength	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)	
	wetness	1.00	excess fines	1.00	excess fines	1.00	too clayey	0.86	cutbanks cave	0.29
	(very limited)		(bottom layer)		(thickest layer)		(limited)		(slightly limited)	
	shrink-swell	0.83					too acid	0.30	too clayey	0.20
	(limited)						(slightly 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
74648:										
Aslinger-------	Moderately limited		Improbable		Possible		Very limited		Very limited	
	wetness	0.48	excess fines	1.00	excess fines	0.75	area reclaim	1.00	wetness	1.00
	(moderately limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	small stones	0.66	wetness	0.48	cutbanks cave	1.00
			(bottom layer)		(bottom layer)		(moderately limited)		(very limited)	
			small stones	0.66	excess fines	0.60	too clayey	0.17	too clayey	0.41
			(bottom layer)		(thickest layer)		(slightly limited)		(moderately limited)	
74651:										
Waben----------	Not limited		Improbable		Possible		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			excess fines	1.00	excess fines	0.94	area reclaim	1.00	too clayey	0.10
			(bottom layer)		(bottom layer)		(very limited)		(slightly limited)	
							too acid	0.24		
							(slightly limited)			
74658:										
Zanoni---------	Not limited		Improbable		Probable		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	1.00	probable source	0.25	too sandy	0.63		
			(bottom layer)		(bottom layer)		(limited)			
75381:										
Bearthicket----	Very limited		Improbable		Improbable		Not limited		Slightly limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00			cutbanks cave	0.29
	(very limited)		(thickest layer)		(bottom layer)				(slightly limited)	
			excess fines	0.99	excess fines	1.00				
			(bottom layer)		(thickest layer)					
75390:										
Razort---------	Not limited		Improbable		Improbable		Limited		Very limited	
			excess fines	1.00	excess fines	1.00	area reclaim	0.92	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(limited)		(very limited)	
			excess fines	1.00	excess fines	1.00				
			(bottom layer)		(bottom layer)					

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
75394:										
Relfe----------	Not limited		Probable		Improbable		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	too sandy	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			probable source	0.26	excess fines	1.00	small stones	1.00		
			(bottom layer)		(bottom layer)		(very limited)			
							area reclaim	1.00		
							(very limited)			
75395:										
Jamesfin-------	Slightly limited		Improbable		Improbable		Not limited		Moderately limited	
	low strength	0.22	excess fines	1.00	excess fines	1.00			flooding	0.60
	(slightly limited)		(thickest layer)		(bottom layer)				(moderately limited)	
			excess fines	1.00	excess fines	1.00			cutbanks cave	0.29
			(bottom layer)		(thickest layer)				(slightly limited)	
									wetness	0.16
									(slightly limited)	
75408:										
Secesh---------	Not limited		Improbable		Improbable		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	1.00	excess fines	1.00	small stones	0.92		
			(bottom layer)		(bottom layer)		(limited)			
75409:										
Relfe----------	Not limited		Probable		Probable		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	too sandy	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			probable source	0.25	probable source	0.40	small stones	1.00	flooding	0.60
			(bottom layer)		(bottom layer)		(very limited)		(moderately limited)	
							area reclaim	1.00		
							(very limited)			
75411:										
Tilk----------	Not limited		Improbable		Probable		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			excess fines	0.99	probable source	0.42	area reclaim	1.00		
			(bottom layer)		(bottom layer)		(very limited)			
							too sandy	0.38		
							(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
75416:										
Gladden--------	Not limited		Possible		Improbable		Not limited		Very limited	
			excess fines	1.00	excess fines	1.00			cutbanks cave	1.00
			(thickest layer)		(bottom layer)				(very limited)	
					excess fines	1.00			flooding	0.60
					(thickest layer)				(moderately 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)	
75420:										
Secesh---------	Not limited		Improbable		Improbable		Limited		Very limited	
			excess fines	1.00	excess fines	1.00	area reclaim	0.92	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(limited)		(very limited)	
			excess fines	1.00	excess fines	1.00	small stones	0.50	flooding	0.60
			(bottom layer)		(bottom layer)		(moderately limited)		(moderately limited)	
							too clayey	0.12		
							(slightly limited)			
Tilk----------	Not limited		Improbable		Probable		Very limited		Very limited	
			excess fines	1.00	excess fines	0.99	small stones	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			excess fines	0.99	probable source	0.17	area reclaim	1.00	flooding	0.60
			(bottom layer)		(bottom layer)		(very limited)		(moderately limited)	
							too sandy	0.61		
							(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
75426:										
Gabriel--------	Very limited		Improbable		Improbable		Limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	wetness	0.86	wetness	1.00
	(very limited)		(thickest layer)		(bottom layer)		(limited)		(very limited)	
	wetness	0.86	excess fines	1.00	excess fines	1.00	too clayey	0.33	cutbanks cave	0.29
	(limited)		(bottom layer)		(thickest layer)		(moderately limited)		(slightly limited)	
	shrink-swell	0.37								
	(moderately limited)									
75430:										
Wideman--------	Not limited		Probable		Improbable		Very limited		Very limited	
			excess fines	1.00	excess fines	1.00	too sandy	1.00	cutbanks cave	1.00
			(bottom layer)		(bottom layer)		(very limited)		(very limited)	
			probable source	0.29	excess fines	1.00	area reclaim	0.08	flooding	0.60
			(thickest layer)		(thickest layer)		(slightly limited)		(moderately limited)	
75433:										
Racket---------	Slightly limited		Probable		Improbable		Very limited		Very limited	
	shrink-swell	0.15	excess fines	1.00	excess fines	1.00	area reclaim	1.00	cutbanks cave	1.00
	(slightly limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			probable source	0.45	excess fines	1.00	too clayey	0.21	flooding	0.60
			(bottom layer)		(bottom layer)		(slightly limited)		(moderately limited)	
									wetness	0.24
									(slightly limited)	
75451:										
Gladden--------	Not limited		Possible		Probable		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	0.73	probable source	0.42	small stones	1.00	flooding	0.60
			(bottom layer)		(bottom layer)		(very limited)		(moderately limited)	
75462:										
Huzzah---------	Slightly limited		Probable		Improbable		Limited		Very limited	
	low strength	0.22	excess fines	1.00	excess fines	1.00	too sandy	0.94	cutbanks cave	1.00
	(slightly limited)		(thickest layer)		(thickest layer)		(limited)		(very limited)	
			probable source	0.28	excess fines	1.00			flooding	0.60
			(bottom layer)		(bottom layer)				(moderately limited)	
75463:										
Huzzah---------	Not limited		Probable		Improbable		Limited		Very limited	
			excess fines	1.00	excess fines	1.00	too sandy	0.64	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(limited)		(very limited)	
			probable source	0.38	excess fines	1.00				
			(bottom layer)		(bottom layer)					

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
75464:										
Cedargap-------	Not limited		Possible		Probable		Very limited		Very limited	
			excess fines	1.00	excess fines	0.65	small stones	1.00	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(very limited)		(very limited)	
			excess fines	0.83	probable source	0.48	area reclaim	1.00		
			(thickest layer)		(bottom layer)		(very limited)			
							too sandy	0.93		
							(limited)			
75465:										
Raftville------	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	0.36	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(moderately limited)		(very limited)	
									too clayey	0.10
									(slightly limited)	
Gabriel--------	Very limited		Improbable		Improbable		Limited		Very limited	
	low strength	1.00	excess fines	1.00	excess fines	1.00	wetness	0.86	wetness	1.00
	(very limited)		(thickest layer)		(bottom layer)		(limited)		(very limited)	
	wetness	0.86	excess fines	1.00	excess fines	1.00	too clayey	0.63	cutbanks cave	0.29
	(limited)		(bottom layer)		(thickest layer)		(limited)		(slightly limited)	
	shrink-swell	0.29							too clayey	0.07
	(slightly limited)								(slightly limited)	
75466:										
Midco----------	Not limited		Improbable		Probable		Very limited		Very limited	
			excess fines	1.00	excess fines	0.99	small stones	1.00	cutbanks cave	1.00
			(thickest layer)		(thickest layer)		(very limited)		(very limited)	
			excess fines	1.00	probable source	0.15	area reclaim	1.00	flooding	0.60
			(bottom layer)		(bottom layer)		(very limited)		(moderately limited)	
							too sandy	0.61		
							(limited)			
75470:										
Farewell-------	Very limited		Improbable		Improbable		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)	
	shrink-swell	0.39	excess fines	1.00	excess fines	1.00	small stones	1.00	cutbanks cave	1.00
	(moderately limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							area reclaim	1.00		
							(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
77000:										
Killarney------	Very limited		Improbable		Probable		Very limited		Very limited	
	slope	1.00	excess fines	1.00	excess fines	0.84	slope	1.00	slope	1.00
	(very limited)		(thickest layer)		(thickest layer)		(very limited)		(very limited)	
	wetness	0.12	excess fines	1.00	probable source	0.50	small stones	1.00	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(bottom layer)		(very limited)		(very limited)	
	large stones	0.01					large surface stones	1.00	wetness	1.00
	(slightly limited)						(very limited)		(very limited)	
Frenchmill-----	Very limited		Improbable		Improbable		Very limited		Very limited	
	slope	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)	
	large stones	0.13	excess fines	1.00	excess fines	1.00	large surface stones	1.00	cutbanks cave	1.00
	(slightly limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							large stones	0.95	large stones	0.13
							(limited)		(slightly limited)	
77003:										
Delassus-------	Moderately limited		Improbable		Improbable		Very limited		Very limited	
	wetness	0.33	excess fines	1.00	excess fines	1.00	small stones	1.00	wetness	1.00
	(moderately limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
			excess fines	1.00	excess fines	1.00	large stones >25%	1.00	cutbanks cave	1.00
			(bottom layer)		(thickest layer)		(very limited)		(very limited)	
							area reclaim	0.84	slope	0.63
							(limited)		(limited)	
77004:										
Irondale-------	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	0.92	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	large stones	0.01					small stones	1.00	cutbanks cave	1.00
	(slightly limited)						(very limited)		(very limited)	
77007:										
Taumsauk-------	Very limited		Improbable		Probable		Very limited		Very limited	
	depth to bedrock	1.00	excess fines	1.00	probable source	0.50	depth to bedrock	1.00	hard bedrock <40"	1.00
	(very limited)		(thickest layer)		(bottom layer)		(very limited)		(very limited)	
	slope	0.92	excess fines	1.00	probable source	0.50	slope	1.00	slope	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	large stones	0.12	small stones	0.30	small stones	0.30	small stones	1.00	cutbanks cave	0.29
	(slightly limited)		(thickest layer)		(thickest layer)		(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
77007:										
Irondale-------	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	0.92	excess fines	1.00	excess fines	1.00	slope	1.00	slope	1.00
	(limited)		(bottom layer)		(thickest layer)		(very limited)		(very limited)	
	large stones	0.52	small stones	0.57	small stones	0.57	small stones	1.00	large stones	0.52
	(moderately limited)		(thickest layer)		(thickest layer)		(very limited)		(moderately limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
77011:										
Taumsauk-------	Very limited		Improbable		Possible		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)		(thickest layer)		(very limited)		(very limited)	
	large stones	0.45	excess fines	1.00	small stones	0.66	small stones	1.00	large stones	0.45
	(moderately limited)		(bottom layer)		(thickest layer)		(very limited)		(moderately limited)	
			small stones	0.66	small stones	0.66	too clayey	0.77	cutbanks cave	0.29
			(thickest layer)		(bottom layer)		(limited)		(slightly limited)	
Irondale-------	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 clayey	0.62	too clayey	0.07
							(limited)		(slightly limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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		Very limited		Very limited		Moderately limited		Limited	
	seepage	0.50	percs slowly	1.00	percs slowly	1.00	erodes easily	0.60	rooting depth	0.80
	(moderately limited)		(very limited)		(very limited)		(moderately limited)		(limited)	
	slope	0.20	slope	0.78	slope	0.78	wetness	0.44	erodes easily	0.60
	(slightly limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
					erodes easily	0.60	slope	0.20	wetness	0.44
					(moderately limited)		(slightly limited)		(moderately limited)	
70026:										
Tonti----------	Moderately limited		Very limited		Very limited		Moderately limited		Limited	
	seepage	0.50	percs slowly	1.00	percs slowly	1.00	erodes easily	0.60	rooting depth	0.80
	(moderately limited)		(very limited)		(very limited)		(moderately limited)		(limited)	
					erodes easily	0.60	wetness	0.44	erodes easily	0.60
					(moderately limited)		(moderately limited)		(moderately limited)	
									wetness	0.44
									(moderately limited)	
73013:										
Lowassie-------	Not limited		Very limited		Very limited		Very limited		Very limited	
			ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	wetness	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
			percs slowly	0.39	erodes easily	0.60	wetness	1.00	erodes easily	0.60
			(moderately limited)		(moderately limited)		(very limited)		(moderately limited)	
					percs slowly	0.39	erodes easily	0.60		
					(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)	

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
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)	
73042:										
Niangua--------	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	0.50	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00
	(moderately limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			percs slowly	0.13	percs slowly	0.13	depth to bedrock	0.39	depth to bedrock	0.50
			(slightly limited)		(slightly limited)		(moderately limited)		(moderately limited)	
Bardley--------	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	large surface stones	1.00	large surface stones	1.00	depth to bedrock	1.00	large surface stones	1.00
	(limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	seepage	0.50	depth to bedrock	0.46	droughty	0.66	large surface stones	1.00	depth to bedrock	0.89
	(moderately limited)		(moderately limited)		(limited)		(very limited)		(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	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	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	depth to bedrock	0.76	depth to bedrock	0.76	slope	0.60	depth to bedrock	0.95
	(moderately limited)		(limited)		(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
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)	
73055:										
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)	
	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)	
			percs slowly	0.39	percs slowly	0.39				
			(moderately limited)		(moderately limited)					
Rueter---------	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	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70
	(very limited)		(very limited)		(limited)		(limited)		(limited)	
			large surface stones	0.70						
			(limited)							
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	0.26	percs slowly	0.26				
			(slightly limited)		(slightly limited)					
73073:										
Scholten-------	Very limited		Very limited		Very limited		Limited		Limited	
	seepage	1.00	slope	1.00	slope	1.00	slope	0.99	slope	0.99
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	slope	0.99	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---------	Very limited		Very limited		Very limited		Limited		Limited	
	seepage	1.00	slope	1.00	slope	1.00	slope	0.99	slope	0.99
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	slope	0.99			droughty	0.75			droughty	0.75
	(limited)				(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
73080:										
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)	
	seepage	0.08	large surface stones	0.60	large surface stones	0.60	large stones	1.00	large stones	1.00
	(slightly limited)		(moderately limited)		(moderately limited)		(very limited)		(very limited)	
			percs slowly	0.39	percs slowly	0.39	large surface stones	0.60	large surface stones	0.60
			(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
Bardley--------	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	large surface stones	0.60	droughty	0.72	depth to bedrock	1.00	depth to bedrock	0.89
	(limited)		(moderately limited)		(limited)		(very limited)		(limited)	
	seepage	0.02	depth to bedrock	0.46	large surface stones	0.60	large surface stones	0.60	droughty	0.72
	(slightly 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	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	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.86	cutbanks cave	0.90	large stones	0.81	large stones	1.00	large stones	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
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)	
			large surface stones	0.43	large surface stones	0.43	large stones	1.00	large stones	1.00
			(moderately limited)		(moderately limited)		(very limited)		(very limited)	
			percs slowly	0.39	percs slowly	0.39	large surface stones	0.43	large surface stones	0.43
			(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
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
73139:										
Poynor---------	Very limited		Very limited		Very limited		Limited		Limited	
	seepage	1.00	slope	1.00	slope	1.00	slope	0.99	slope	0.99
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	slope	0.99	large surface stones	0.17	large surface stones	0.17	large surface stones	0.17	large surface stones	0.17
	(limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
Clarksville----	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	large surface stones	0.17	large surface stones	0.17	large surface stones	0.17	large surface stones	0.17
	(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
			large stones	0.12						
			(slightly limited)							
Scholten-------	Very limited		Very limited		Very limited		Limited		Limited	
	seepage	1.00	slope	1.00	slope	1.00	slope	0.99	slope	0.99
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
	slope	0.99	percs slowly	1.00	percs slowly	1.00	wetness	0.78	rooting depth	0.80
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
			large surface stones	0.17	droughty	0.45	large surface stones	0.17	wetness	0.78
			(slightly limited)		(moderately limited)		(slightly limited)		(limited)	
73140:										
Clarksville----	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 surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70
	(very limited)		(limited)		(limited)		(limited)		(limited)	
Scholten-------	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	percs slowly	1.00	percs slowly	1.00	large surface stones	0.70	rooting depth	0.80
	(very limited)		(very limited)		(very limited)		(limited)		(limited)	
			large surface stones	0.70	large surface stones	0.70	wetness	0.17	large surface stones	0.70
			(limited)		(limited)		(slightly limited)		(limited)	
73143:										
Courtois-------	Moderately limited		Limited		Limited		Slightly limited		Slightly limited	
	seepage	0.50	slope	0.78	slope	0.78	slope	0.20	slope	0.20
	(moderately limited)		(limited)		(limited)		(slightly limited)		(slightly limited)	
	slope	0.20								
	(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
73144:										
Courtois-------	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.89	slope	1.00	slope	1.00	slope	0.89	slope	0.89
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	seepage	0.50								
	(moderately limited)									
73147:										
Fourche--------	Slightly limited		Limited		Limited		Moderately limited		Moderately limited	
	slope	0.20	slope	0.78	slope	0.78	erodes easily	0.60	erodes easily	0.60
	(slightly limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
			percs slowly	0.13	erodes easily	0.60	wetness	0.28	wetness	0.28
			(slightly limited)		(moderately limited)		(slightly limited)		(slightly limited)	
					percs slowly	0.13	slope	0.20	slope	0.20
					(slightly limited)		(slightly limited)		(slightly limited)	
73155:										
Gasconade------	Very limited		Very limited		Very limited		Very limited		Very limited	
	bedrock <20 in.	1.00	shallow to bedrock	1.00	shallow to bedrock	1.00	depth to bedrock	1.00	bedrock <20 in.	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	percs slowly	1.00	droughty	1.00	slope	1.00	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			slope	1.00	percs slowly	1.00	large stones	0.35	slope	1.00
			(very limited)		(very limited)		(moderately limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73159:										
Yelton---------	Slightly limited		Limited		Limited		Moderately limited		Limited	
	slope	0.20	slope	0.78	slope	0.78	erodes easily	0.60	rooting depth	0.80
	(slightly limited)		(limited)		(limited)		(moderately limited)		(limited)	
			percs slowly	0.39	erodes easily	0.60	wetness	0.58	erodes easily	0.60
			(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.39	slope	0.20	wetness	0.58
					(moderately limited)		(slightly limited)		(moderately limited)	
73176:										
Bendavis-------	Limited		Very limited		Very limited		Very limited		Limited	
	slope	0.99	slope	1.00	slope	1.00	depth to bedrock	1.00	slope	0.99
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	depth to bedrock	0.92	depth to bedrock	0.58	depth to bedrock	0.58	slope	0.99	depth to bedrock	0.92
	(limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
	seepage	0.50	large surface stones	0.13	droughty	0.45	wetness	0.28	droughty	0.45
	(moderately limited)		(slightly limited)		(moderately limited)		(slightly 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
73176:										
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	large surface stones	0.13	large surface stones	0.13	large surface stones	0.13	large surface stones	0.13
	(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
73197:										
Viburnum-------	Slightly limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
	slope	0.10	slope	0.40	slope	0.40	wetness	0.60	wetness	0.60
	(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
			percs slowly	0.13	percs slowly	0.13	slope	0.10	slope	0.10
			(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
73220:										
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			droughty	0.57			droughty	0.57
	(moderately limited)				(moderately limited)				(moderately limited)	
73221:										
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)	
73222:										
Splitlimb------	Moderately limited		Very limited		Very limited		Very limited		Moderately limited	
	seepage	0.32	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	erodes easily	0.60
	(moderately limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
			percs slowly	0.13	erodes easily	0.60	erodes easily	0.60	wetness	0.55
			(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.13	wetness	0.55		
					(slightly 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
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)	
	seepage	1.00	large stones	1.00	large surface stones	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	droughty	1.00			droughty	1.00
			(very limited)		(very limited)				(very limited)	
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	droughty	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	depth to bedrock	0.86	large surface stones	0.43	large stones	0.76	large stones	1.00	large stones	1.00
	(limited)		(moderately limited)		(limited)		(very limited)		(very limited)	
73236:										
Scholten-------	Limited		Very limited		Very limited		Moderately 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)	
	slope	0.31	slope	0.98	slope	0.98	slope	0.31	droughty	0.70
	(moderately limited)		(limited)		(limited)		(moderately limited)		(limited)	
					droughty	0.70			wetness	0.58
					(limited)				(moderately limited)	
Poynor---------	Limited		Limited		Limited		Slightly limited		Slightly limited	
	seepage	0.82	slope	0.78	slope	0.78	slope	0.20	slope	0.20
	(limited)		(limited)		(limited)		(slightly limited)		(slightly limited)	
	slope	0.20								
	(slightly limited)									
73242:										
Fanchon--------	Moderately limited		Moderately limited		Moderately limited		Slightly limited		Slightly limited	
	seepage	0.50	slope	0.40	slope	0.40	slope	0.10	slope	0.10
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)	
	slope	0.10								
	(slightly limited)									
Tonti----------	Limited		Very limited		Very limited		Moderately limited		Limited	
	seepage	0.68	percs slowly	1.00	percs slowly	1.00	erodes easily	0.60	rooting depth	0.80
	(limited)		(very limited)		(very limited)		(moderately limited)		(limited)	
	slope	0.10	slope	0.40	erodes easily	0.60	wetness	0.56	erodes easily	0.60
	(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
			large stones	0.18	slope	0.40	slope	0.10	wetness	0.56
			(slightly limited)		(moderately limited)		(slightly 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
73269:										
Brussels-------	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)	
			large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
			percs slowly	0.13	percs slowly	0.13			droughty	0.08
			(slightly limited)		(slightly limited)				(slightly limited)	
Gasconade------	Very limited		Very limited		Very limited		Very limited		Very limited	
	bedrock <20 in.	1.00	slope	1.00	shallow to bedrock	1.00	slope	1.00	bedrock <20 in.	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	shallow to bedrock	1.00	droughty	1.00	depth to bedrock	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			large surface stones	1.00	slope	1.00	large surface stones	1.00	droughty	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73295:										
Taterhill------	Limited		Limited		Limited		Moderately limited		Moderately limited	
	seepage	0.92	slope	0.98	slope	0.98	erodes easily	0.60	erodes easily	0.60
	(limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.31			erodes easily	0.60	slope	0.31	slope	0.31
	(moderately limited)				(moderately limited)		(moderately limited)		(moderately limited)	
73298:										
Tonti----------	Moderately limited		Very limited		Very limited		Moderately limited		Limited	
	seepage	0.50	percs slowly	1.00	percs slowly	1.00	erodes easily	0.60	rooting depth	0.80
	(moderately limited)		(very limited)		(very limited)		(moderately limited)		(limited)	
	slope	0.20	slope	0.78	slope	0.78	wetness	0.44	erodes easily	0.60
	(slightly limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
					erodes easily	0.60	slope	0.20	wetness	0.44
					(moderately limited)		(slightly limited)		(moderately limited)	
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	0.40	erodes easily	0.60	erodes easily	0.60	depth to bedrock	0.80
	(limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
	slope	0.10	depth to bedrock	0.18	slope	0.40	wetness	0.55	erodes easily	0.60
	(slightly limited)		(slightly limited)		(moderately 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
73301:										
Tick----------	Slightly limited		Limited		Limited		Slightly limited		Slightly limited	
	slope	0.20	slope	0.78	slope	0.78	slope	0.20	slope	0.20
	(slightly limited)		(limited)		(limited)		(slightly limited)		(slightly limited)	
			percs slowly	0.26	percs slowly	0.26				
			(slightly limited)		(slightly limited)					
73308:										
Grandgulf------	Moderately limited		Very limited		Very limited		Very limited		Moderately limited	
	seepage	0.50	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	erodes easily	0.60
	(moderately limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
					erodes easily	0.60	erodes easily	0.60		
					(moderately limited)		(moderately limited)			
73309:										
Clarksville----	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	0.32	large stones	0.18	droughty	0.01	large stones	0.01	droughty	0.01
	(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
									large stones	0.01
									(slightly limited)	
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)	
73310:										
Scholten-------	Limited		Very limited		Very limited		Moderately 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)	
	slope	0.20	slope	0.78	slope	0.78	slope	0.20	droughty	0.70
	(slightly limited)		(limited)		(limited)		(slightly limited)		(limited)	
					droughty	0.70			wetness	0.58
					(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
73310:										
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---------	Limited		Moderately limited		Moderately limited		Slightly limited		Slightly limited	
	seepage	0.82	slope	0.40	slope	0.40	slope	0.10	slope	0.10
	(limited)		(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)	
	slope	0.10								
	(slightly limited)									
73311:										
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)	
			large stones	0.51	droughty	0.70	large stones	0.17	droughty	0.70
			(moderately limited)		(limited)		(slightly limited)		(limited)	
Bendavis-------	Limited		Very limited		Very limited		Very limited		Limited	
	slope	0.99	slope	1.00	slope	1.00	depth to bedrock	1.00	slope	0.99
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	depth to bedrock	0.92	depth to bedrock	0.58	depth to bedrock	0.58	slope	0.99	depth to bedrock	0.92
	(limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
	seepage	0.50	large surface stones	0.13	droughty	0.45	wetness	0.28	droughty	0.45
	(moderately limited)		(slightly limited)		(moderately limited)		(slightly limited)		(moderately 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			droughty	0.57			droughty	0.57
	(moderately limited)				(moderately limited)				(moderately limited)	
73313:										
Fanchon--------	Moderately limited		Not limited		Not limited		Not limited		Not limited	
	seepage	0.50								
	(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
73313:										
Tonti----------	Moderately limited		Very limited		Very limited		Moderately limited		Limited	
	seepage	0.50	percs slowly	1.00	percs slowly	1.00	erodes easily	0.60	rooting depth	0.80
	(moderately limited)		(very limited)		(very limited)		(moderately limited)		(limited)	
					erodes easily	0.60	wetness	0.44	erodes easily	0.60
					(moderately limited)		(moderately limited)		(moderately limited)	
									wetness	0.44
									(moderately limited)	
73333:										
Taterhill------	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)	
73334:										
Horneybuck-----	Moderately limited		Limited		Limited		Moderately limited		Moderately limited	
	seepage	0.50	slope	0.78	slope	0.78	erodes easily	0.60	erodes easily	0.60
	(moderately limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.20	percs slowly	0.13	erodes easily	0.60	wetness	0.55	wetness	0.55
	(slightly limited)		(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.13	slope	0.20	slope	0.20
					(slightly limited)		(slightly limited)		(slightly limited)	
73335:										
Hobson---------	Moderately limited		Limited		Limited		Moderately limited		Limited	
	seepage	0.50	slope	0.98	slope	0.98	erodes easily	0.60	rooting depth	0.80
	(moderately limited)		(limited)		(limited)		(moderately limited)		(limited)	
	slope	0.31	large stones	0.43	erodes easily	0.60	wetness	0.44	erodes easily	0.60
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
			percs slowly	0.39	percs slowly	0.39	slope	0.31	wetness	0.44
			(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
Rueter---------	Moderately limited		Very limited		Limited		Moderately limited		Moderately limited	
	seepage	0.50	large stones	1.00	slope	0.98	slope	0.31	slope	0.31
	(moderately limited)		(very limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.31	slope	0.98	percs slowly	0.18			droughty	0.04
	(moderately limited)		(limited)		(slightly limited)				(slightly limited)	
			percs slowly	0.18	droughty	0.04				
			(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
73336:										
Rueter---------	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	large stones	0.84	percs slowly	0.18	large stones	0.98	large stones	0.98
	(moderately limited)		(limited)		(slightly limited)		(limited)		(limited)	
			percs slowly	0.18						
			(slightly limited)							
Gepp----------	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								
	(moderately limited)									
73337:										
Tonti----------	Moderately limited		Very limited		Very limited		Moderately limited		Limited	
	seepage	0.50	percs slowly	1.00	percs slowly	1.00	erodes easily	0.60	rooting depth	0.80
	(moderately limited)		(very limited)		(very limited)		(moderately limited)		(limited)	
	slope	0.31	slope	0.98	slope	0.98	wetness	0.44	erodes easily	0.60
	(moderately limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
					erodes easily	0.60	slope	0.31	wetness	0.44
					(moderately limited)		(moderately limited)		(moderately limited)	
Portia---------	Moderately limited		Limited		Limited		Moderately limited		Moderately limited	
	seepage	0.50	slope	0.78	slope	0.78	erodes easily	0.60	erodes easily	0.60
	(moderately limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.20			erodes easily	0.60	slope	0.20	slope	0.20
	(slightly limited)				(moderately limited)		(slightly limited)		(slightly limited)	
73338:										
Portia---------	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.80	slope	1.00	slope	1.00	slope	0.80	slope	0.80
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	seepage	0.50			erodes easily	0.60	erodes easily	0.60	erodes easily	0.60
	(moderately limited)				(moderately limited)		(moderately limited)		(moderately limited)	
Hobson---------	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	0.39	erodes easily	0.60	erodes easily	0.60	rooting depth	0.80
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
					percs slowly	0.39	wetness	0.44	erodes easily	0.60
					(moderately 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
73339:										
Arkana---------	Limited		Very limited		Very limited		Very limited		Limited	
	slope	0.99	slope	1.00	percs slowly	1.00	depth to bedrock	1.00	slope	0.99
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	depth to bedrock	0.85	percs slowly	1.00	slope	1.00	slope	0.99	depth to bedrock	0.85
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	seepage	0.50	depth to bedrock	0.29	depth to bedrock	0.29			droughty	0.16
	(moderately limited)		(slightly limited)		(slightly limited)				(slightly limited)	
Gepp----------	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								
	(moderately limited)									
73340:										
Rueter---------	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	percs slowly	0.18				
	(moderately limited)		(slightly limited)		(slightly limited)					
Gepp----------	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			droughty	0.06			droughty	0.06
	(moderately limited)				(slightly limited)				(slightly limited)	
73341:										
Gepp----------	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			droughty	0.09			droughty	0.09
	(moderately limited)				(slightly limited)				(slightly limited)	
Arkana---------	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	0.85	percs slowly	1.00	slope	1.00	depth to bedrock	1.00	depth to bedrock	0.85
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	seepage	0.50	depth to bedrock	0.29	droughty	0.34			droughty	0.34
	(moderately limited)		(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
73342:										
Alred----------	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	percs slowly	0.18			droughty	0.01
	(moderately limited)		(slightly limited)		(slightly limited)				(slightly limited)	
					droughty	0.01				
					(slightly limited)					
Arkana---------	Limited		Very limited		Very limited		Very limited		Limited	
	slope	0.99	slope	1.00	percs slowly	1.00	depth to bedrock	1.00	slope	0.99
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	depth to bedrock	0.85	percs slowly	1.00	slope	1.00	slope	0.99	depth to bedrock	0.85
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	seepage	0.50	depth to bedrock	0.29	droughty	0.78			droughty	0.78
	(moderately limited)		(slightly limited)		(limited)				(limited)	
73361:										
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)	
	seepage	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			cutbanks cave	0.90	droughty	0.62	large stones	0.55	droughty	0.62
			(limited)		(limited)		(moderately limited)		(limited)	
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)	
	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)	
			large stones	0.39	percs slowly	0.18				
			(moderately limited)		(slightly limited)					
74627:										
Hartville------	Not limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
			percs slowly	0.39	erodes easily	0.60	erodes easily	0.60	erodes easily	0.60
			(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.39	wetness	0.44	wetness	0.44
					(moderately 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
74636:										
Lecoma---------	Moderately limited		Limited		Limited		Moderately limited		Moderately limited	
	seepage	0.50	slope	0.98	slope	0.98	slope	0.31	slope	0.31
	(moderately limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.31								
	(moderately limited)									
74637:										
Lecoma---------	Limited		Very limited		Very limited		Limited		Limited	
	slope	0.80	slope	1.00	slope	1.00	slope	0.80	slope	0.80
	(limited)		(very limited)		(very limited)		(limited)		(limited)	
	seepage	0.50								
	(moderately limited)									
74642:										
Cornwall-------	Moderately limited		Very limited		Very limited		Very limited		Limited	
	seepage	0.50	ponded (wetness)	1.00	ponded (wetness)	1.00	ponded (wetness)	1.00	wetness	0.68
	(moderately limited)		(very limited)		(very limited)		(very limited)		(limited)	
			percs slowly	0.39	erodes easily	0.60	wetness	0.68	erodes easily	0.60
			(moderately limited)		(moderately limited)		(limited)		(moderately limited)	
					percs slowly	0.39	erodes easily	0.60		
					(moderately limited)		(moderately limited)			
74643:										
Lecoma---------	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)	
74644:										
Deible---------	Not limited		Very limited		Very limited		Very limited		Very limited	
			percs slowly	1.00	percs slowly	1.00	wetness	1.00	wetness	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
					erodes easily	0.60	erodes easily	0.60	erodes easily	0.60
					(moderately limited)		(moderately limited)		(moderately limited)	
74648:										
Aslinger-------	Moderately limited		Limited		Limited		Moderately limited		Moderately limited	
	seepage	0.50	slope	0.98	slope	0.98	erodes easily	0.60	erodes easily	0.60
	(moderately limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.31	percs slowly	0.13	erodes easily	0.60	wetness	0.44	wetness	0.44
	(moderately limited)		(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.13	slope	0.31	slope	0.31
					(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
74651:										
Waben----------	Very limited		Limited		Limited		Moderately limited		Moderately limited	
	seepage	1.00	slope	0.98	slope	0.98	slope	0.31	slope	0.31
	(very limited)		(limited)		(limited)		(moderately limited)		(moderately limited)	
	slope	0.31	large stones	0.51	droughty	0.02	large stones	0.04	large stones	0.04
	(moderately limited)		(moderately limited)		(slightly limited)		(slightly limited)		(slightly limited)	
									droughty	0.02
									(slightly limited)	
74658:										
Zanoni----------	Very limited		Not limited		Not limited		Not limited		Not limited	
	seepage	1.00								
	(very limited)									
75381:										
Bearthicket----	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)	
75390:										
Razort----------	Very limited		Not limited		Moderately limited		Moderately limited		Moderately limited	
	seepage	1.00			erodes easily	0.60	erodes easily	0.60	erodes easily	0.60
	(very limited)				(moderately limited)		(moderately limited)		(moderately limited)	
75394:										
Relfe----------	Very limited		Not limited		Very limited		Very limited		Very limited	
	seepage	1.00			droughty	1.00	too sandy	1.00	droughty	1.00
	(very limited)				(very limited)		(very limited)		(very limited)	
75395:										
Jamesfin-------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
	seepage	0.50	flooding	0.60	flooding	0.60	erodes easily	0.60	erodes easily	0.60
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					erodes easily	0.60				
					(moderately limited)					
75408:										
Secesh----------	Very limited		Not limited		Not limited		Not limited		Not limited	
	seepage	1.00								
	(very 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
75409:										
Relfe----------	Very limited seepage (very limited)	1.00	Moderately limited flooding (moderately limited)	0.60	Limited droughty (limited) flooding (moderately limited)	0.84 0.60	Very limited too sandy (very limited)	1.00	Limited droughty (limited)	0.84
75411:										
Tilk----------	Very limited seepage (very limited)	1.00	Moderately limited large stones (moderately limited)	0.51	Slightly limited droughty (slightly limited)	0.04	Limited large stones (limited)	0.90	Limited large stones (limited) droughty (slightly limited)	0.90 0.04
75416:										
Gladden--------	Very limited seepage (very limited)	1.00	Limited cutbanks cave (limited) flooding (moderately limited)	0.90 0.60	Moderately limited flooding (moderately limited)	0.60	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	
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) erodes easily (moderately limited)	0.60 0.60	Moderately limited erodes easily (moderately limited) large stones (slightly limited)	0.60 0.01	Moderately limited erodes easily (moderately limited) large stones (slightly limited)	0.60 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

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
75426:										
Gabriel--------	Not limited		Slightly limited		Moderately limited		Moderately limited		Moderately limited	
			percs slowly	0.13	erodes easily	0.60	erodes easily	0.60	erodes easily	0.60
			(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.13	wetness	0.60	wetness	0.60
					(slightly limited)		(moderately limited)		(moderately limited)	
75430:										
Wideman--------	Very limited		Limited		Moderately limited		Very limited		Not limited	
	seepage	1.00	cutbanks cave	0.90	flooding	0.60	too sandy	1.00		
	(very limited)		(limited)		(moderately limited)		(very limited)			
			flooding	0.60						
			(moderately limited)							
75433:										
Racket---------	Very limited		Moderately limited		Moderately limited		Not limited		Not limited	
	seepage	1.00	flooding	0.60	flooding	0.60				
	(very limited)		(moderately limited)		(moderately limited)					
75451:										
Gladden--------	Very limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
	seepage	1.00	flooding	0.60	flooding	0.60	erodes easily	0.60	erodes easily	0.60
	(very limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					erodes easily	0.60				
					(moderately limited)					
75462:										
Huzzah---------	Very limited		Limited		Moderately limited		Not limited		Not limited	
	seepage	1.00	cutbanks cave	0.90	flooding	0.60				
	(very limited)		(limited)		(moderately limited)					
			flooding	0.60						
			(moderately limited)							
75463:										
Huzzah---------	Very limited		Limited		Not limited		Moderately limited		Not limited	
	seepage	1.00	cutbanks cave	0.90			too sandy	0.60		
	(very limited)		(limited)				(moderately limited)			
75464:										
Cedargap-------	Very limited		Not limited		Not limited		Not limited		Not limited	
	seepage	1.00								
	(very 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
75465:										
Raftville------	Very limited		Limited		Limited		Very limited		Limited	
	seepage	1.00	depth to bedrock	0.66	depth to bedrock	0.66	depth to bedrock	1.00	depth to bedrock	0.94
	(very limited)		(limited)		(limited)		(very limited)		(limited)	
	depth to bedrock	0.94			droughty	0.03			droughty	0.03
	(limited)				(slightly limited)				(slightly limited)	
Gabriel--------	Not limited		Slightly limited		Moderately limited		Moderately limited		Moderately limited	
			percs slowly	0.13	erodes easily	0.60	erodes easily	0.60	erodes easily	0.60
			(slightly limited)		(moderately limited)		(moderately limited)		(moderately limited)	
					percs slowly	0.13	wetness	0.60	wetness	0.60
					(slightly limited)		(moderately limited)		(moderately limited)	
75466:										
Midco----------	Very limited		Limited		Limited		Limited		Limited	
	seepage	1.00	cutbanks cave	0.90	droughty	0.61	large stones	0.74	large stones	0.74
	(very limited)		(limited)		(limited)		(limited)		(limited)	
			flooding	0.60	flooding	0.60			droughty	0.61
			(moderately limited)		(moderately limited)				(limited)	
			large stones	0.51						
			(moderately limited)							
75470:										
Farewell-------	Moderately limited		Not limited		Moderately limited		Very limited		Very limited	
	seepage	0.32			erodes easily	0.60	wetness	1.00	wetness	1.00
	(moderately limited)				(moderately limited)		(very limited)		(very limited)	
							erodes easily	0.60	erodes easily	0.60
							(moderately limited)		(moderately limited)	
77000:										
Killarney------	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	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00
	(moderately limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			percs slowly	1.00	percs slowly	1.00	large stones	1.00	large stones	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
Frenchmill-----	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	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00
	(moderately limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			large stones	0.79	large stones	0.13	large stones	1.00	large stones	1.00
			(limited)		(slightly limited)		(very limited)		(very 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
77003:										
Delassus-------	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	1.00	percs slowly	1.00	large surface stones	0.70	rooting depth	0.80
	(moderately limited)		(very limited)		(very limited)		(limited)		(limited)	
	depth to bedrock	0.27	large surface stones	0.70	large surface stones	0.70	wetness	0.39	large surface stones	0.70
	(slightly limited)		(limited)		(limited)		(moderately limited)		(limited)	
77004:										
Irondale-------	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	0.97	large surface stones	1.00	large surface stones	1.00	depth to bedrock	1.00	large surface stones	1.00
	(limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	seepage	0.50	depth to bedrock	0.86	depth to bedrock	0.86	large surface stones	1.00	large stones	0.99
	(moderately limited)		(limited)		(limited)		(very limited)		(very limited)	
77007:										
Taumsauk-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	bedrock <20 in.	1.00	slope	1.00	shallow to bedrock	1.00	slope	1.00	bedrock <20 in.	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	shallow to bedrock	1.00	slope	1.00	depth to bedrock	1.00	slope	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	large surface stones	1.00
			(very limited)		(very limited)		(very limited)		(very limited)	
Irondale-------	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	0.97	large surface stones	1.00	large surface stones	1.00	depth to bedrock	1.00	large surface stones	1.00
	(limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			large stones	1.00	depth to bedrock	0.86	large surface stones	1.00	large stones	1.00
			(very limited)		(limited)		(very limited)		(very limited)	
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
77011:										
Taumsauk-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	bedrock <20 in.	1.00	shallow to bedrock	1.00	shallow to bedrock	1.00	depth to bedrock	1.00	bedrock <20 in.	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.70	large stones	1.00	droughty	1.00	large stones	1.00	droughty	1.00
	(limited)		(very limited)		(very limited)		(very limited)		(very limited)	
			slope	1.00	slope	1.00	slope	0.70	large stones	1.00
			(very limited)		(very limited)		(limited)		(very limited)	
Irondale-------	Limited		Very limited		Very limited		Very limited		Limited	
	depth to bedrock	0.88	slope	1.00	slope	1.00	depth to bedrock	1.00	depth to bedrock	0.88
	(limited)		(very limited)		(very limited)		(very limited)		(limited)	
	slope	0.70	depth to bedrock	0.42	depth to bedrock	0.42	slope	0.70	slope	0.70
	(limited)		(moderately limited)		(moderately limited)		(limited)		(limited)	
			large stones	0.30	percs slowly	0.17	large stones	0.65	large stones	0.65
			(slightly limited)		(slightly limited)		(limited)		(limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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		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	0.30	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)	
					slope	0.20	slope	0.20	slope	0.66
					(slightly limited)		(slightly limited)		(limited)	
70026:										
Tonti----------	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	0.30	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)	
									too acid	0.14
									(slightly limited)	
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)	
73019:										
Poynor---------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Limited	
	droughty	0.57	droughty	0.57	droughty	0.57	slope	0.30	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)	

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
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)	
73042:										
Niangua--------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	large surface stones	1.00	slope	1.00	slope	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	slope	1.00	large surface stones	1.00	large surface stones	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
							depth to bedrock	0.39	depth to bedrock	1.00
							(moderately limited)		(very limited)	
Bardley--------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	large surface stones	1.00	slope	1.00	depth to bedrock	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	slope	1.00	large surface stones	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	0.66	droughty	0.66	droughty	0.66	large surface stones	1.00	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
73053:										
Lily----------	Limited		Limited		Limited		Very limited		Very limited	
	depth to bedrock	0.76	depth to bedrock	0.76	depth to bedrock	0.76	depth to bedrock	1.00	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	droughty	0.48	droughty	0.48	slope	0.60	slope	0.60	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	slope	0.31	slope	0.31	droughty	0.48	too acid	0.06	percs slowly	0.32
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(moderately limited)	
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)	
	depth to bedrock	0.76	depth to bedrock	0.76	depth to bedrock	0.76	slope	0.60	slope	1.00
	(limited)		(limited)		(limited)		(moderately limited)		(very limited)	
	too acid	0.48	too acid	0.48	slope	0.60	too acid	0.48	too cobbly	0.87
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately 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
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)	
73055:										
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)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70
	(limited)		(limited)		(limited)		(limited)		(limited)	
Rueter---------	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)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70
	(limited)		(limited)		(limited)		(limited)		(limited)	
73068:										
Tick----------	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)	
	too acid	0.36	too acid	0.36	too acid	0.36	too acid	0.36	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
									too acid	0.07
									(slightly 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	0.32
	(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
73073:										
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)	
	droughty	0.75	droughty	0.75	droughty	0.75	too acid	0.42	percs slowly	0.32
	(limited)		(limited)		(limited)		(moderately limited)		(moderately 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)	
73080:										
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 surface stones	0.60	large surface stones	0.60	large surface stones	0.60	large surface stones	0.60	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	too acid	0.12	too acid	0.12	too acid	0.12	too acid	0.12	large surface stones	0.60
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(moderately limited)	
Bardley--------	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)	
	large stones	0.86	large stones	0.86	large stones	0.86	slope	1.00	slope	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	droughty	0.72	droughty	0.72	droughty	0.72	large stones	0.86	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(limited)		(very 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	
	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)	
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)	

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:										
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73139:										
Poynor---------	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	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.76	slope	0.76	slope	0.99	slope	0.99	percs slowly	0.32
	(limited)		(limited)		(limited)		(limited)		(moderately limited)	
	large surface stones	0.17	large surface stones	0.17	large surface stones	0.17	large surface stones	0.17	large surface stones	0.17
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
Clarksville----	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	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very 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	large surface stones	0.17
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
Scholten-------	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	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	wetness	0.78	wetness	0.78	slope	0.99	slope	0.99	slope	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	too acid	0.76	too acid	0.76	wetness	0.78	wetness	0.78	wetness	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
73140:										
Clarksville----	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)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70
	(limited)		(limited)		(limited)		(limited)		(limited)	
Scholten-------	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)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	wetness	1.00
	(limited)		(limited)		(limited)		(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
73143:										
Courtois-------	Not limited		Not limited		Slightly limited		Slightly limited		Very limited	
					slope	0.20	slope	0.20	percs slowly	1.00
					(slightly limited)		(slightly limited)		(very limited)	
									slope	0.66
									(limited)	
73144:										
Courtois-------	Limited		Limited		Limited		Limited		Very limited	
	slope	0.68	slope	0.68	slope	0.89	slope	0.89	percs slowly	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
									slope	1.00
									(very limited)	
73147:										
Fourche--------	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	0.28	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)	
73155:										
Gasconade------	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	slope	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	slope	1.00	percs slowly	0.61	slope	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
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)	

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
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)	
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)	
73220:										
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)	
	droughty	0.57	droughty	0.57	droughty	0.57	too acid	0.42	percs slowly	0.50
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately 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)	
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)	

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
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)	
	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	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	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)	
73236:										
Scholten-------	Limited		Limited		Limited		Moderately 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)	
	too acid	0.42	too acid	0.42	too acid	0.42	slope	0.31	slope	0.91
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
Poynor---------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Limited	
	too acid	0.42	too acid	0.42	too acid	0.42	too acid	0.42	percs slowly	0.73
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
					slope	0.20	slope	0.20	slope	0.66
					(slightly limited)		(slightly limited)		(limited)	
									too acid	0.03
									(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
73242:										
Fanchon--------	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Very limited	
	too acid	0.24	too acid	0.24	too acid	0.24	too acid	0.24	percs slowly	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
					slope	0.10	slope	0.10	slope	0.31
					(slightly limited)		(slightly limited)		(moderately limited)	
Tonti----------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Very limited	
	wetness	0.56	wetness	0.56	wetness	0.56	wetness	0.56	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	too acid	0.12	too acid	0.12	too acid	0.12	too acid	0.12	slope	0.31
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(moderately limited)	
					slope	0.10	slope	0.10	percs slowly	0.22
					(slightly limited)		(slightly limited)		(slightly limited)	
73269:										
Brussels-------	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 surface stones	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	slope	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	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
Gasconade------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	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)	
	shallow to bedrock	1.00	shallow to bedrock	1.00	slope	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	slope	1.00	shallow to bedrock	1.00	large surface stones	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
73295:										
Taterhill------	Not limited		Not limited		Moderately limited		Moderately limited		Very limited	
					slope	0.31	slope	0.31	percs slowly	0.99
					(moderately limited)		(moderately limited)		(very limited)	
									slope	0.91
									(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
73298:										
Tonti----------	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	0.30	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)	
					slope	0.20	slope	0.20	slope	0.66
					(slightly limited)		(slightly limited)		(limited)	
Hogcreek-------	Moderately limited		Moderately limited		Moderately limited		Very limited		Very limited	
	wetness	0.55	wetness	0.55	wetness	0.55	depth to bedrock	1.00	depth to bedrock	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(very limited)		(very limited)	
	depth to bedrock	0.18	depth to bedrock	0.18	depth to bedrock	0.18	wetness	0.55	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(moderately 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)	
73301:										
Tick----------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Very limited	
	too acid	0.36	too acid	0.36	too acid	0.36	too acid	0.36	percs slowly	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
					slope	0.20	slope	0.20	slope	0.66
					(slightly limited)		(slightly limited)		(limited)	
									too acid	0.07
									(slightly limited)	
73308:										
Grandgulf------	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)	
									ponded (wetness)	1.00
									(very limited)	
73309:										
Clarksville----	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)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	slope	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	too acid	0.03
	(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
73309:										
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)	
	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	slope	1.00	slope	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	wetness	0.28	wetness	0.28	wetness	0.28	large surface stones	0.70	depth to bedrock	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(limited)		(very limited)	
73310:										
Scholten-------	Limited		Limited		Limited		Moderately 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	0.78
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
	too acid	0.42	too acid	0.42	too acid	0.42	slope	0.20	slope	0.66
	(moderately limited)		(moderately limited)		(moderately limited)		(slightly limited)		(limited)	
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)	
Poynor---------	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Limited	
	too acid	0.42	too acid	0.42	too acid	0.42	too acid	0.42	percs slowly	0.73
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(limited)	
					slope	0.10	slope	0.10	slope	0.31
					(slightly limited)		(slightly limited)		(moderately limited)	
									too acid	0.03
									(slightly limited)	
73311:										
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	0.78
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately 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
73311:										
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)	
	droughty	0.57	droughty	0.57	droughty	0.57	too acid	0.42	percs slowly	0.78
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(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)	
73313:										
Fanchon--------	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Very limited	
	too acid	0.24	too acid	0.24	too acid	0.24	too acid	0.24	percs slowly	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
Tonti----------	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	0.30	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)	
									too acid	0.14
									(slightly limited)	
73333:										
Taterhill------	Not limited		Not limited		Not limited		Not limited		Very limited	
									percs slowly	1.00
									(very limited)	
									too acid	0.03
									(slightly limited)	
73334:										
Horneybuck-----	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)	
					slope	0.20	slope	0.20	slope	0.66
					(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
73335:										
Hobson---------	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)	
					slope	0.31	slope	0.31	wetness	1.00
					(moderately limited)		(moderately limited)		(very limited)	
									slope	0.91
									(limited)	
Rueter---------	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)	
	too acid	0.61	too acid	0.61	too acid	0.61	too acid	0.61	slope	0.91
	(limited)		(limited)		(limited)		(limited)		(limited)	
	droughty	0.04	droughty	0.04	slope	0.31	slope	0.31	too acid	0.21
	(slightly limited)		(slightly limited)		(moderately limited)		(moderately limited)		(slightly limited)	
73336:										
Rueter---------	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)	
	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	slope	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	too acid	0.42	too acid	0.42	too acid	0.42	too acid	0.42	too cobbly	0.33
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)	
Gepp----------	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)	
	too acid	0.61	too acid	0.61	too acid	0.61	too acid	0.61	slope	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
									too acid	0.07
									(slightly limited)	
73337:										
Tonti----------	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	0.30	too acid	0.30	slope	0.31	slope	0.31	wetness	1.00
	(slightly limited)		(slightly limited)		(moderately limited)		(moderately limited)		(very limited)	
					too acid	0.30	too acid	0.30	slope	0.91
					(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
73337:										
Portia---------	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Very limited	
	too acid	0.24	too acid	0.24	too acid	0.24	too acid	0.24	percs slowly	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)	
									too acid	0.21
									(slightly limited)	
73338:										
Portia---------	Moderately limited		Moderately limited		Limited		Limited		Very limited	
	slope	0.60	slope	0.60	slope	0.80	slope	0.80	percs slowly	1.00
	(moderately limited)		(moderately limited)		(limited)		(limited)		(very limited)	
									slope	1.00
									(very limited)	
									too acid	0.03
									(slightly limited)	
Hobson---------	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	0.44	wetness	0.44	wetness	0.44	wetness	0.44	slope	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
									wetness	1.00
									(very limited)	
73339:										
Arkana---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	depth to bedrock	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	0.76	slope	0.76	slope	0.99	poor filter	1.00	slope	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	depth to bedrock	0.29	depth to bedrock	0.29	depth to bedrock	0.29	slope	0.99	depth to bedrock	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(limited)		(very limited)	
Gepp----------	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)	
									slope	1.00
									(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
73340:										
Rueter	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)	
	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	percs slowly	0.61	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	too acid	0.01
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
Gepp	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	0.06	droughty	0.06	droughty	0.06			slope	1.00
	(slightly limited)		(slightly limited)		(slightly limited)				(very limited)	
73341:										
Gepp	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)	
	droughty	0.09	droughty	0.09	droughty	0.09			too acid	0.14
	(slightly limited)		(slightly limited)		(slightly limited)				(slightly limited)	
Arkana	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)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	0.34	droughty	0.34	droughty	0.34	poor filter	1.00	depth to bedrock	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(very limited)		(very limited)	
73342:										
Alred	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)	
	too acid	0.12	too acid	0.12	too acid	0.12	too acid	0.12	slope	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
	droughty	0.01	droughty	0.01	droughty	0.01			too acid	0.03
	(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
73342:										
Arkana---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	depth to bedrock	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	0.78	droughty	0.78	slope	0.99	poor filter	1.00	slope	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	slope	0.76	slope	0.76	droughty	0.78	slope	0.99	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
73361:										
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)	
	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	1.00	large surface stones	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	percs slowly	0.50
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
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)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70
	(limited)		(limited)		(limited)		(limited)		(limited)	
74627:										
Hartville------	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	0.44	wetness	0.44	wetness	0.44	wetness	0.44	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30		
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)			
74636:										
Lecoma---------	Not limited		Not limited		Moderately limited		Moderately limited		Very limited	
					slope	0.31	slope	0.31	percs slowly	1.00
					(moderately limited)		(moderately limited)		(very limited)	
									slope	0.91
									(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
74637:										
Lecoma---------	Moderately limited		Moderately limited		Limited		Limited		Very limited	
	slope	0.60	slope	0.60	slope	0.80	slope	0.80	percs slowly	1.00
	(moderately limited)		(moderately limited)		(limited)		(limited)		(very limited)	
									slope	1.00
									(very limited)	
74642:										
Cornwall-------	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	0.99	percs slowly	0.99	percs slowly	0.99	percs slowly	0.99	ponded (wetness)	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	wetness	0.68	wetness	0.68	wetness	0.68	wetness	0.68	wetness	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
74643:										
Lecoma---------	Not limited		Not limited		Not limited		Not limited		Very limited	
									percs slowly	1.00
									(very limited)	
74644:										
Deible---------	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)	
									wetness	1.00
									(very limited)	
74648:										
Aslinger-------	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	0.44	wetness	0.44	wetness	0.44	wetness	0.44	wetness	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(moderately limited)		(very limited)	
	droughty	0.01	droughty	0.01	slope	0.31	slope	0.31	slope	0.91
	(slightly limited)		(slightly limited)		(moderately limited)		(moderately limited)		(limited)	
74651:										
Waben----------	Slightly limited		Slightly limited		Moderately limited		Moderately limited		Limited	
	too acid	0.18	too acid	0.18	slope	0.31	slope	0.31	slope	0.91
	(slightly limited)		(slightly limited)		(moderately limited)		(moderately limited)		(limited)	
	droughty	0.02	droughty	0.02	too acid	0.18	too acid	0.18	percs slowly	0.32
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(moderately limited)	
					droughty	0.02			too acid	0.01
					(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
74658:										
Zanoni---------	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Slightly limited	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30	percs slowly	0.22
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
75381:										
Bearthicket----	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)	
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)	
75394:										
Relfe----------	Very limited		Very limited		Very limited		Very limited		Limited	
	droughty	1.00	droughty	1.00	droughty	1.00	poor filter	1.00	percs slowly	0.50
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	flooding	0.30		
	(very limited)		(very limited)		(very limited)		(slightly limited)			
	flooding	0.30	flooding	0.30	flooding	0.30				
	(slightly limited)		(slightly limited)		(slightly limited)					
75395:										
Jamesfin-------	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)	
									wetness	0.61
									(limited)	
									flooding	0.60
									(moderately limited)	
75408:										
Secesh---------	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)	
75409:										
Relfe----------	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		
	(limited)		(limited)		(limited)		(limited)			
	droughty	0.84	droughty	0.84	droughty	0.84				
	(limited)		(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
75411:										
Tilk----------	Very limited		Very limited		Very limited		Very limited		Slightly limited	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	poor filter	1.00	percs slowly	0.32
	(very limited)		(very limited)		(very limited)		(very limited)		(moderately limited)	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30	too acid	0.01
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
	too acid	0.18	too acid	0.18	too acid	0.18	too acid	0.18		
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)			
75416:										
Gladden--------	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	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	flooding	0.60
	(limited)		(limited)		(limited)		(limited)		(moderately 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	flooding	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	droughty	1.00	droughty	1.00	droughty	1.00	poor filter	1.00	percs slowly	0.50
	(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)					
Sandbur--------	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)	
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)	

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
75426:										
Gabriel--------	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)	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30		
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)			
75430:										
Wideman--------	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)	
75433:										
Racket---------	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)	
									wetness	0.69
									(limited)	
									flooding	0.60
									(moderately limited)	
75451:										
Gladden--------	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	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	flooding	0.60
	(limited)		(limited)		(limited)		(limited)		(moderately limited)	
75462:										
Huzzah---------	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	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	flooding	0.60
	(limited)		(limited)		(limited)		(limited)		(moderately limited)	
75463:										
Huzzah---------	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	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30		
	(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
75464:										
Cedargap-------	Slightly limited		Slightly limited		Slightly limited		Slightly limited		Limited	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30	percs slowly	0.78
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(limited)	
75465:										
Raftville------	Limited		Limited		Limited		Very limited		Very limited	
	depth to bedrock	0.66	depth to bedrock	0.66	depth to bedrock	0.66	depth to bedrock	1.00	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(very limited)		(very limited)	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30	percs slowly	0.62
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(limited)	
	too acid	0.24	too acid	0.24	too acid	0.24	too acid	0.24	too acid	0.01
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)	
Gabriel--------	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)	
	flooding	0.30	flooding	0.30	flooding	0.30	flooding	0.30		
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)			
75466:										
Midco----------	Limited		Limited		Limited		Limited		Limited	
	flooding	0.90	flooding	0.90	flooding	0.90	flooding	0.90	flooding	0.60
	(limited)		(limited)		(limited)		(limited)		(moderately limited)	
	droughty	0.61	droughty	0.61	droughty	0.61			percs slowly	0.32
	(limited)		(limited)		(limited)				(moderately limited)	
75470:										
Farewell-------	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	0.30	flooding	0.30	flooding	0.30	flooding	0.30	wetness	1.00
	(slightly limited)		(slightly limited)		(slightly limited)		(slightly limited)		(very limited)	
77000:										
Killarney------	Very limited		Very limited		Very limited		Very limited		Very limited	
	large surface stones	1.00	large surface stones	1.00	slope	1.00	slope	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	large surface stones	1.00	large surface stones	1.00	slope	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	wetness	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
77000:										
Frenchmill-----	Very limited		Very limited		Very limited		Very limited		Very limited	
	large surface stones	1.00	large surface stones	1.00	slope	1.00	slope	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	slope	1.00	large surface stones	1.00	large surface stones	1.00	slope	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	large surface stones	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
77003:										
Delassus-------	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 stones	0.70	large stones	0.70	large stones	0.70	large stones	0.70	slope	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	large surface stones	0.70	depth to bedrock	1.00
	(limited)		(limited)		(limited)		(limited)		(very limited)	
77004:										
Irondale-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	large surface stones	1.00	slope	1.00	depth to bedrock	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	slope	1.00	large surface stones	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	large surface stones	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
77007:										
Taumsauk-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	shallow to bedrock	1.00	shallow to bedrock	1.00	slope	1.00	depth to bedrock	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	slope	1.00	large surface stones	1.00	shallow to bedrock	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	slope	1.00	large surface stones	1.00	large surface stones	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
Irondale-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	slope	1.00	large surface stones	1.00	slope	1.00	depth to bedrock	1.00	percs slowly	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	large surface stones	1.00	slope	1.00	large surface stones	1.00	slope	1.00	slope	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
	poor filter	1.00	poor filter	1.00	poor filter	1.00	large surface stones	1.00	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(very limited)		(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	

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
77011:										
Taumsauk-------	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	slope	0.70	depth to bedrock	1.00
	(very limited)		(very limited)		(very limited)		(limited)		(very limited)	
	slope	0.45	slope	0.45	slope	0.70	too acid	0.30	slope	1.00
	(moderately limited)		(moderately limited)		(limited)		(slightly limited)		(very limited)	
Irondale-------	Moderately limited		Moderately limited		Limited		Very limited		Very limited	
	slope	0.45	slope	0.45	slope	0.70	depth to bedrock	1.00	percs slowly	1.00
	(moderately limited)		(moderately limited)		(limited)		(very limited)		(very limited)	
	depth to bedrock	0.42	depth to bedrock	0.42	depth to bedrock	0.42	slope	0.70	depth to bedrock	1.00
	(moderately limited)		(moderately limited)		(moderately limited)		(limited)		(very limited)	
	droughty	0.02	droughty	0.02	droughty	0.02			slope	1.00
	(slightly limited)		(slightly limited)		(slightly limited)				(very limited)	
Rock outcrop---	Not rated		Not rated		Not rated		Not rated		Not rated	
99001:										
Water----------	Not rated		Not rated		Not rated		Not rated		Not rated	
99013:										
Riverwash------	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: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	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	55-95	45-90	25-40	8-20
	20-34	GRX-SIL, GRV-SIL, GRV-SICL, GRX-SICL	GC-GM, GC	A-2-6, A-2-4, 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-2-7, A-7-6	0-5	0-10	15-80	10-75	10-70	10-65	45-80	25-50
70026:												
Tonti----------	0-8	SIL	CL, CL-ML	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	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, GC-GM	A-2-6, A-2-4, 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, GP-GC	A-7-6, A-2-7	0-5	0-10	25-75	20-70	15-65	10-60	45-80	25-50
73013:												
Lowassie--------	0-10	SIL	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	70-90	20-35	5-15
	10-18	SICL, SIL	CL	A-4, A-7-6, A-6	0	0	100	100	90-100	70-95	25-45	10-20
	18-36	SIC, C	MH, CH	A-7-5, A-7-6	0	0	100	100	90-100	85-95	45-70	20-35
	36-80	SICL, SIL	CL-ML, CL	A-4, A-6, A-7-6	0	0	95-100	90-100	85-100	70-90	20-45	5-20
73019:												
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-1-b, 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-1-a, 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-2-4, 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-7-6, A-7-5	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-1-b, 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-1-a, 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-2-4, 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-7-6, A-7-5	0	0-10	95-100	90-100	85-95	70-90	50-80	25-40
73042:												
Niangua---------	0-3	GRV-SIL	GC-GM, GC	A-1-b, A-6, A-2-4	0-5	0-20	35-55	30-50	25-45	20-40	20-35	5-15
	3-14	GRV-SIL, GRX-SIL	GC, GC-GM	A-1-b, A-6, A-2-4	0-5	0-20	35-55	30-50	25-45	20-40	20-35	5-15
	14-52	GR-C, C	CH	A-7-6	0-5	0-15	65-100	60-100	55-90	50-85	65-90	40-65
	52-80	BR	---	---	---	---	---	---	---	---	---	---
Bardley---------	0-4	GRV-SIL	GC	A-2-4, A-6	0-15	0-5	35-55	30-50	25-45	20-40	25-40	10-15
	4-8	GRX-SIL, GRV-L	GC, GP-GC	A-2-4, A-2-6	0-15	0-5	20-35	15-30	15-25	10-25	25-40	10-15
	8-27	C, GR-C	CH	A-7-6	0	0-10	75-100	70-100	65-95	60-85	65-95	40-70
	27-80	BR	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73053:												
Lily----------	0-3	L	CL-ML, ML	A-6, A-4	0	0-5	90-100	85-100	75-90	55-65	10-35	2-15
	3-15	L, CL	CL	A-7-6, A-4, 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-7-6, A-4	0	0-10	60-80	55-75	50-70	40-50	25-45	10-20
	21-60	BR	---	---	---	---	---	---	---	---	---	---
Bender----------	0-4	CBV-FSL	SC, GM	A-1-b, A-2-4	0-2	20-40	50-75	45-70	35-60	20-35	10-30	2-10
	4-12	CBV-FSL	GM, SC, SM	A-1-b, A-2-4	0	20-40	50-80	45-70	35-60	20-35	10-30	2-10
	12-23	GRX-SL, CBX-L	GC, GP-GC, GW-GC	A-4, A-1-a, A-2	0-2	10-55	25-50	20-45	10-40	5-35	25-30	5-10
	23-80	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-7-6	0	0-5	70-100	60-100	55-90	55-85	35-50	15-25
	20-38	SICL, SIC, GRV-SIC	CH, CL, GC	A-2-7, A-7-6	0	0-5	50-95	45-90	35-85	30-80	45-60	20-35
	38-80	GRV-SIC, GR-C, GRX-C	GC, CH, GP-GC	A-2-7, A-7-6	0	0-10	20-75	15-60	10-60	5-55	45-70	20-40
73055:												
Alred----------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-7	GRV-SIL	GC-GM, GC, GM	A-1-b, A-2-4	0-7	0-25	35-50	25-50	25-50	20-35	15-25	NP-10
	7-11	GR-SIL, GRV-SIL	GC, GM	A-2-4, A-4	0-7	0-25	50-75	35-70	35-65	30-50	15-25	NP-10
	11-30	GRV-L, GRX-L, GRV-SIL, GRX-SIL	GP-GC, GC	A-2-6, A-1-a	0-10	0-40	25-50	15-50	15-50	10-35	20-35	5-15
	30-80	C, GR-C, CB-C	CH	A-7-6, A-7-5	0-7	0-18	80-100	70-100	65-95	60-95	50-80	25-45
Rueter----------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-4	GRV-SIL	GC-GM, GM, GC	A-1-b, A-2-4	0-7	0-25	35-50	25-50	25-50	20-35	15-25	NP-10
	4-17	GR-SIL, GRV-SIL	CL-ML, GM, GC	A-2-4, A-4	0-7	0-25	50-75	35-70	35-65	30-50	15-25	NP-10
	17-32	GRV-L, CBV-SIL, GRV-SIL, GRX-L	GP-GC, GC	A-2-4, A-2-6, A-1-a	0-10	0-40	25-50	15-50	15-50	10-35	20-35	5-15
	32-43	GRV-CL, GRV-SICL, CBV-SIC, GRV-SIC, GRV-C	GC	A-7-6, A-2-6, A-2-7	0-10	0-40	35-50	25-50	25-50	20-40	35-50	15-25
	43-71	C, GR-C, CB-C, GRV-C, CBV-C	GC, CH	A-2-7, A-7-5	0-10	0-40	35-95	25-90	25-90	25-85	60-80	30-45
73068:												
Tick----------	0-5	GRV-SIL	GC-GM, GM	A-1-a, 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	CL, GC-GM, GM	A-1-b, A-2-4, A-4, A-6	0-15	0-15	35-100	30-90	25-85	20-70	15-30	2-11
	10-18	SICL, GR-SICL, CL	CL, GC-GM	A-7-6, A-6, A-2-4	0-15	0-10	60-100	50-100	45-95	35-90	20-42	5-18
	18-42	C, SIC, GR-SIC, GR-C	CL, CH, GC	A-7-6	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, MH, GC	A-7-5	0-15	0-15	60-100	55-100	55-100	45-95	43-77	18-36
73073:												
Scholten--------	0-7	GRV-SIL	GM, GC-GM, GC	A-2-4, A-4, A-1-b	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-2-4, A-4, A-1-a	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-1-b, 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-2-6, A-2-7, A-7-6	0-10	0-35	30-65	25-60	20-60	15-55	40-70	20-40

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73073:												
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-1-b, 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-a, 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, A-2-4	0-5	0-30	25-55	20-50	20-45	15-45	25-40	10-20
	28-80	C, CB-C	CH, MH, CL	A-7-5, A-7-6	0-5	0-30	80-100	70-100	65-95	60-95	45-70	25-35
73080:												
Alred----------	0-4	CBX-L	GC-GM, GC	A-6, A-1-b, A-2-4	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, GP-GC	A-1-b, A-1-a, A-6	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-7-6, A-2-4	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, GC	A-6, A-1-b, A-2-4	0-5	25-50	40-60	35-55	30-50	25-40	20-35	5-15
	4-8	GRX-SIL	GC, GP-GC	A-2-6, A-2-4	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----	0-80	BR	---	---	---	---	---	---	---	---	---	---
73081:												
Bender----------	0-1	SL MPM			---	---	---	---	---	---	---	---
	1-5	CBX-SL	GC-GM, GM	A-1-b, A-1-a	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	GC-GM, GM	A-2-4, A-1-b	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, GP-GM	A-2-6, A-1-a	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, GC	A-6, A-2-4, A-1-b	0	45-65	45-60	35-55	30-50	25-40	20-35	5-15
	4-17	GR-SIL, GRV-SIL, GRX-SIL	GC-GM, GC	A-1-b, A-1-a, A-6	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, A-7-6, A-2-4	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----	0-80	BR	---	---	---	---	---	---	---	---	---	---
73139:												
Poynor----------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-4	GR-SIL	GC-GM, GM, SC	A-1-b, A-2-4	0-2	0-15	60-80	50-75	25-50	20-35	15-25	NP-10
	4-13	GRV-SIL, GR-SIL	GC-GM, GM, CL	A-2-4, A-4	0-7	0-25	50-75	35-70	35-65	30-55	15-25	NP-10
	13-24	GRV-SICL, GRX-SIL	GC	A-2-6, A-6, A-2-4	0-10	0-40	30-50	20-50	20-50	15-45	25-35	10-15
	24-80	C, CB-C, GR-C	CH	A-7-5, A-7-6	0-12	0-15	80-100	70-100	65-95	60-95	50-80	25-45

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73139:												
Clarksville-----	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-5	GR-SIL	GM, SC-SM, SC	A-1-b, A-2-4, A-4	0-2	0-15	60-80	50-75	25-50	20-40	15-25	NP-10
	5-8	GR-SIL, GRV-SIL	GM, GC	A-1-b, A-4	0-7	0-25	50-75	35-70	30-65	25-50	15-25	NP-10
	8-18	GR-L, GR-SIL, GRV-L, GRV-SIL	GC-GM, GC	A-2-6, A-1-b, A-6	0-7	0-25	50-75	35-70	30-65	25-50	20-35	5-15
	18-42	GRV-L, GRV-SIL, GRV-CL, GRV-SICL, GRX-CL	GC, GP-GC, GC-GM	A-2-6, A-7-6	0-10	0-40	25-50	15-50	10-45	10-40	30-45	15-25
	42-65	C, GR-C, GRV-C	CL, CH, GC	A-2-6, A-7-6	0-7	0-20	30-95	25-90	25-85	25-80	40-60	20-30
Scholten--------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-3	GR-SIL	SC, GC-GM, GM	A-1-b, A-4	0-2	0-15	60-80	50-75	45-50	20-40	15-25	NP-10
	3-8	GRV-SIL, GR-SIL	CL-ML, GM, GC	A-2-4, A-4	0-7	0-25	50-75	35-70	35-65	30-50	15-25	NP-10
	8-17	GRV-SICL, GRV-SIL	GC-GM, GC	A-1-b, A-6	0-7	0-25	35-50	25-50	25-50	20-45	20-40	5-20
	17-41	GRV-SICL, CBV-SIL, CBV-SICL, GRV-SIL, GRX-SIL	GC, GP-GC	A-2-4, A-2-6	0-7	0-25	25-50	15-50	15-50	10-35	25-35	10-15
	41-80	GR-SICL, GRV-SICL, GR-C, GRV-C, GR-SIC	CH, GC	A-2-6, A-7-6	0-7	0-25	45-80	35-75	35-75	30-70	40-70	20-40
73140:												
Clarksville-----	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-6	GR-SIL	SC, GM	A-1-b, A-2-4	0-2	0-15	60-80	50-75	25-50	20-35	15-25	NP-10
	6-13	GR-SIL, GRV-SIL	GC, GC-GM, GM	A-1-b, A-4	0-7	0-25	50-75	35-70	30-65	25-50	15-25	NP-10
	13-21	GR-L, GR-SIL, GRV-L, GRV-SIL	GC-GM, GC	A-1-b, A-6	0-7	0-25	50-75	35-70	30-65	25-50	20-35	5-15
	21-43	GRV-L, GRV-SIL, GRV-CL, GRV-SICL, GRX-CL	GC, GP-GC	A-7-6, A-2-7, A-2-6	0-10	0-40	25-50	15-50	10-45	10-40	35-45	15-25
	43-66	C, GR-C, GRV-C	GC, CL, CH	A-2-6, A-7-6	0-7	0-25	35-95	25-90	25-85	25-80	40-60	20-30
Scholten--------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-6	GRV-SIL	GC, GC-GM, GM	A-1-b, A-2-4	0-7	0-25	35-50	25-50	25-50	20-35	15-25	NP-10
	6-13	GR-SIL, GRV-SIL	GM, GC-GM, GC	A-2-4, A-4	0-7	0-25	50-75	35-70	35-65	30-50	15-25	NP-10
	13-34	GRV-CL, GRX-L, GRV-SIL, GRX-CL	GP-GC, GC	A-2-6, A-1-a, A-6	0-7	0-25	25-50	15-50	15-50	10-45	20-35	5-15
	34-58	GRV-SIL, GRV-CL, GRV-L, GRX-CL, GRX-L, GRX-SIL	GC, GP-GC	A-2-4, A-2-6	0-7	0-25	25-50	15-50	15-50	10-35	25-35	10-15
	58-80	GR-SICL, GR-CL, GR-C, GRV-C, GRV-CL	GC, CL, CH	A-2-6, A-7-6	0-10	0-40	45-80	35-75	35-75	30-70	35-70	20-40
73143:												
Courtois--------	0-7	SIL	CL, CL-ML	A-6, A-4	0	0	80-100	75-100	65-95	55-80	20-35	5-15
	7-15	SIL, SICL, SIC	CL	A-4, A-7-6	0	0	85-100	85-100	70-95	60-90	30-45	10-25
	15-32	SICL, C, SIC, GR-CL, GRV-CL	GC, CL	A-7-6, A-2-6	0	0-25	50-100	35-100	35-95	30-95	40-50	20-30
	32-80	C, GR-C	CH	A-7-6, A-7-5	0	0-10	80-100	60-100	60-95	55-95	60-80	30-45
73144:												
Courtois--------	0-7	SIL	CL, CL-ML	A-6, A-4	0	0	80-100	75-100	65-95	55-80	20-35	5-15
	7-15	SICL, SIL, SIC	CL	A-4, A-7-6	0	0	85-100	85-100	70-95	60-90	30-45	10-25
	15-32	SICL, C, SIC, GR-CL, GRV-CL	GC, CL	A-7-6, A-2-6	0	0-25	50-100	35-100	35-95	30-95	40-50	20-30
	32-80	C, GR-C	CH	A-7-6, A-7-5	0	0-10	80-100	60-100	60-95	60-95	60-80	30-45

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73147:												
Fourche---------	0-6	SIL	CL-ML, CL	A-4	0	0	100	95-100	90-100	85-100	20-30	5-10
	6-30	SIL, SICL	CL	A-4, A-6	0	0	100	95-100	90-100	85-100	30-40	10-20
	30-54	SIL, SICL, SIC	CL	A-6, A-7-6, A-4	0	0-2	85-100	85-100	75-100	60-95	30-45	10-25
	54-66	SIC, C	CH	A-7-6	0	0-2	85-100	75-100	70-100	60-95	50-70	25-40
73155:												
Gasconade-------	0-4	SIC	CL, CH, ML	A-7-6, A-4	0-5	0-10	90-100	85-95	80-85	75-80	35-60	10-30
	4-13	CBV-CL, GRV-C, GRV-SIC, FLV-SIC	GC, GM	A-2-6, A-7-5, A-2-7	0-25	10-50	35-60	25-50	25-50	25-40	40-70	20-35
	13-80	BR	---	---	---	---	---	---	---	---	---	---
Rock outcrop----	0-80	BR	---	---	---	---	---	---	---	---	---	---
73159:												
Yelton----------	0-3	SIL	CL-ML, ML, CL	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, A-7-6, A-4	0	0	85-100	80-100	75-95	55-90	30-45	10-20
	19-38	L, SL, GR-L, GRV-SL	CL, GC-GM	A-6, A-4, A-1-a	0	0-5	40-95	35-90	25-80	15-60	20-35	5-15
	38-65	SCL, L, GR-L, GRV-CL	GC, CL	A-6, A-2-4	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, A-1-b	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-1-b, A-2-4, A-4	0-5	0-5	35-65	30-60	30-60	25-50	10-25	2-10
	9-25	GRV-SIL, GRV-SICL	GC, GC-GM	A-1-b, 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-1-b	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-1-b, 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-2-4, 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, CL	A-7, A-7-6	0	0-5	90-100	85-100	80-95	70-85	45-75	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-7-6	0	0-5	70-100	60-100	55-90	55-85	35-50	15-25
	18-35	GR-SICL, SIC, GR-SIC, GRV-SIC	GC, CL, CH	A-2-7, A-7-6	0	0-10	50-95	40-90	35-85	30-75	45-60	20-35
	35-80	GRV-SIC, GR-C, GRX-C	GC, CH, GP-GC	A-2-7, A-7-6	0	0-7	20-75	15-60	10-60	5-55	45-70	20-40
73220:												
Poynor----------	0-4	GRX-SIL	GC, GP-GM, GC-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, GP-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, GP-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	0-3	0-30	80-100	75-100	70-95	65-85	51-70	25-35

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73221:												
Poynor----------	0-4	GRV-SIL	GC, GC-GM, GM	A-1-b, 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-a, 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, A-2-4	0-5	0-20	30-55	25-50	20-50	15-45	25-40	10-20
	28-80	C, GR-C, SIC	CH, MH, GC	A-7-5, A-7-6	0	0-10	70-100	60-100	55-95	45-90	50-80	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, CL-ML	A-6, A-4	0	0	95-100	95-100	90-100	75-95	20-35	5-14
	20-29	SIL, SICL	CL	A-6, A-7-6, A-4	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	---	---	---	---	---	---	---	---	---	---
	1-4	GRV-SL	GP-GM, GM, GC	A-1-a, A-2-4, A-1-b	0-10	0-15	30-55	25-50	15-40	10-25	10-20	NP-10
	4-11	CBV-L, GR-SL, GRX-SL, GRV-L	SC, SC-SM, GP-GM	A-1-b, A-2-4, A-1-a	0-25	0-40	35-80	30-75	15-45	5-30	10-30	NP-10
	11-31	CBV-L, GRV-L, GRV-SL, CBV-CL	GP-GC, GC-GM, GM	A-7-6, A-1-a, A-2-4	0-25	0-45	30-60	25-55	15-50	10-40	20-50	5-20
	31-39	CBV-L, GRX-L, GRV-SCL, CBV-CL	GP-GC, GC-GM, GM	A-7-6, A-1-a, A-2-4	0-25	0-45	30-60	25-55	15-50	10-40	20-50	5-20
	39-80	GRV-L, GRV-C, CB-SCL, CBV-SC, CBV-L	GC, GC-GM, GM	A-6, A-7-6, A-2-4	0-20	0-35	35-60	30-60	25-55	20-45	25-50	7-20
Bender----------	0-1	MPM	---	---	---	---	---	---	---	---	---	---
	1-5	CBX-SL	GW-GM, GP-GM, GC-GM	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	GM, GC-GM, GP-GM	A-2-4, A-1-a	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	GP-GM, GP-GC, GM	A-1-a, A-2-4	0-20	0-60	20-55	15-50	10-40	5-20	5-35	NP-10
	31-80	BR	---	---	---	---	---	---	---	---	---	---
73236:												
Scholten--------	0-7	GRV-SIL	GM, CL-ML, ML	A-2, A-4, A-1-a	0-3	0-15	30-80	25-75	20-75	15-70	15-19	2-4
	7-21	GRV-SIL, CBX-SIL, GRV-SICL	GC-GM, CL, GC	A-4, A-2, A-6, A-1-b	0-4	0-30	30-75	25-65	25-65	25-65	18-32	4-12
	21-34	GRX-SIL, GRV-SIL, GRX-SICL	CL, GC, GC-GM	A-4, A-7-6, A-1-b	0-3	0-30	20-60	20-50	20-45	15-40	22-44	6-18
	34-80	GR-C, GRX-C, CBV-C	CH, CL, GC	A-2-6, A-7-6, A-2-7	0-10	0-45	20-65	20-60	20-60	15-55	38-77	17-48
Poynor----------	0-4	GRV-SIL	GP-GM, GC-GM, SC-SM	A-2, A-1-a, A-2-4	0-24	0-7	25-75	25-50	20-50	10-35	12-20	2-5
	4-10	GRV-SIL, GR-SIL	GC-GM, GM, CL-ML	A-1-a, A-2-4, A-4	0-2	0-7	25-75	20-70	17-65	15-60	12-20	2-6
	10-28	GRV-SIL, GRX-SIL, CBX-SICL	GC, SC, GM	A-2-4, A-2-7, A-1-a	0-2	0-40	25-75	20-50	17-50	15-35	14-50	3-22
	28-80	GR-C, C, CB-C	CH, CL	A-7-6	0-3	0-45	80-100	70-100	65-95	60-90	41-80	20-53

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73242:												
Fanchon---------	0-5	SIL	CL, CL-ML	A-4, A-6	0	0	80-100	75-100	65-95	50-90	21-30	6-11
	5-10	SIL	CL, CL-ML	A-4, A-6	0	0	80-100	75-100	65-95	50-90	21-30	6-11
	10-28	SICL, GR-SIL, GR-SICL, SIL	CL, GC	A-4, A-6	0-3	0-5	60-100	50-95	45-90	40-80	27-40	9-16
	28-47	GRV-L, GR-CL, GRV-CL	GC, CL	A-2-6, A-6, A-7-6	0-5	0-20	45-80	35-75	35-75	30-55	32-45	13-25
	47-80	C, GR-C, GRV-C, GR-SIC	GC, CL, MH	A-7-6, A-2-6, A-7-5	0-5	0-15	30-100	25-100	25-95	20-80	37-61	15-28
Tonti----------	0-6	SIL	CL-ML, SM	A-4	0	0-4	80-100	75-95	55-90	45-85	15-25	3-6
	6-22	SICL, GR-SIL, GR-SICL, SIL	CL, GC-GM	A-4, A-6	0	0-4	65-100	60-95	55-90	45-85	25-40	7-22
	22-35	GRV-SIL, GRX-SIL, GRX-L	CL, GC, GC-GM	A-2, A-1-b, A-6	0-40	0-15	35-75	30-70	25-70	20-65	20-34	6-18
	35-80	CB-C, GR-C, SIC	GW-GC, MH	A-2-7, A-7-5	0-5	0-75	20-100	5-90	5-85	5-80	41-70	17-35
73269:												
Brussels--------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-10	GR-SICL	CL, GC	A-6, A-7-6	0-5	0-15	50-80	50-70	50-65	45-60	30-45	15-25
	10-49	GRV-SICL, GRV-SIC, GRV-C	GC	A-2-6, A-7-6	0-5	0-15	25-60	25-50	25-50	25-45	40-50	20-30
	49-70	GR-SICL, GR-SIC, C	CL, GC	A-7-6, A-4	0-5	0-15	50-95	50-90	50-85	45-80	30-45	10-25
Gasconade-------	0-9	GR-C	CH, CL	A-7-6, A-7-5, A-6	0-5	0-15	70-85	60-80	50-75	50-70	40-70	20-35
	9-14	CBV-CL, CBV-C, GRV-SIC, GRV-C	GC	A-2-6, A-7-6, A-7-5	0-10	0-40	35-65	30-60	30-60	25-50	40-70	20-35
	14-80	BR	---	---	---	---	---	---	---	---	---	---
Rock outcrop----	0-80	BR	---	---	---	---	---	---	---	---	---	---
73295:												
Taterhill-------	0-9	SIL	ML, CL-ML	A-4	0	0	80-100	75-100	65-95	50-90	16-23	3-7
	9-30	SIL, GR-SIL, SICL, GR-SICL, GR-L	CL, GC-GM	A-4, A-6	0	0-10	60-100	50-95	45-90	40-80	19-34	5-13
	30-80	GR-CL, GRV-L, GRV-CL	GC, MH	A-2-4, A-6, A-7-6	0	0-15	40-80	30-75	25-70	25-55	25-52	8-23
73298:												
Tonti----------	0-8	SIL	CL, CL-ML	A-4, A-6	0	0-5	80-100	75-100	70-95	65-85	20-35	4-14
	8-20	GR-SICL, GR-SIL, SICL	CL, GC	A-4, A-6	0	0-5	65-100	60-100	55-95	45-85	25-40	8-20
	20-34	GRX-SIL, GRV-SICL	GC-GM, CL, GC	A-2-4, A-4, A-6	0-5	0-10	35-75	30-70	25-70	20-65	25-40	7-20
	34-80	GRX-SIC, GRV-C	CH, GW-GC, GC	A-2-7, A-7-6	0-5	0-10	20-70	5-70	5-70	5-65	45-80	25-50
Hogcreek--------	0-5	SIL	ML, CL-ML	A-4	0	0	90-100	75-100	70-100	60-90	16-20	3-5
	5-16	SIL, GR-SIL, SICL	CL, GC, GC-GM	A-4, A-6	0	0	65-100	60-100	55-95	45-85	20-34	5-13
	16-22	GR-SICL, SICL, SIL	CL, GC, GC-GM	A-2-4, A-7-6, A-6	0	0-7	35-75	30-70	25-70	20-65	23-41	7-17
	22-28	GRX-SIL, GRV-SIL, GRX-L, GRX-CL	GC, GW-GC	A-2-4, A-6, A-1-a	0	0-10	20-70	15-50	15-45	10-40	20-36	5-14
	28-80	BR	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73301:												
Tick----------	0-5	GRV-SIL	GC-GM, GW-GM, SC-SM	A-1-a, A-2-4, A-4	0-2	0-15	40-60	30-50	30-50	25-40	14-23	2-7
	5-10	GRV-SIL, GR-SIL, SIL	GM, GC-GM, CL	A-1-a, A-2-4, A-6	0-15	0-15	50-100	35-90	25-85	15-80	15-30	2-11
	10-18	SICL, GR-SICL, CL, GR-L	CL, GC-GM	A-1-a, A-7-6, A-6	0-15	0-15	60-100	50-90	45-85	40-80	20-42	5-18
	18-42	C, SIC, GR-SIC, GR-C	CH, CL, GC	A-2-7, A-7-6	0-15	0-15	60-100	50-100	50-95	45-85	41-74	20-45
	42-80	C, GR-C, GRV-SIC, SIC	GP-GC, MH	A-2-7, A-7-5	0-15	0-24	40-100	30-100	30-95	25-90	43-77	18-36
73308:												
Grandgulf-------	0-10	SIL	ML	A-4	0	0	100	95-100	90-100	75-90	25-35	3-10
	10-48	SICL, SIL	CL, CL-ML	A-4, A-6	0	0	100	95-100	90-100	80-90	25-40	5-15
	48-80	SICL, SIL, GR-SIL	CL, GC-GM	A-4, A-6	0	0	55-100	50-100	45-100	40-95	25-40	5-15
73309:												
Clarksville-----	0-1	MPM	---	---	---	---	---	---	---	---	---	---
	1-5	GRX-SIL	GC-GM, GM, GW-GM	A-1-b, A-4, A-1-a	0-10	0-15	20-55	15-50	10-50	10-45	10-21	2-6
	5-11	GRV-SIL, GR-SIL, CB-SIL	GC-GM, GM, CL-ML	A-2-4, A-4, A-1-a	0	0-15	35-85	25-75	20-65	15-60	10-21	2-6
	11-42	GRX-SIL, CBV-SIL, GRV-L	GW-GC, GC	A-2-4, A-6, A-1-a	0-10	0-25	20-60	15-50	10-45	5-40	20-39	5-16
	42-80	GRV-C, GR-C, CBX-CL, C, GRX-C	GW-GC, MH	A-7-5, A-2-7	0-20	0-40	20-90	15-80	15-80	10-70	41-70	17-33
Bendavis--------	0-3	GRV-SIL	GC, GC-GM, GM	A-2-4, A-4, A-1-a	0-5	0-5	30-55	25-50	20-45	15-40	10-20	2-8
	3-14	GR-SIL, GRV-SIL	GM, CL-ML, CL	A-4, A-2-4	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-2-4, A-6, A-2	0-5	0-5	30-55	20-50	15-45	15-40	25-30	7-15
	34-80	BR	---	---	---	---	---	---	---	---	---	---
73310:												
Scholten--------	0-7	GRV-SIL	GM, SC-SM	A-2-4, A-1-a	0-3	0-15	30-80	20-50	20-45	15-35	15-19	2-4
	7-21	GRV-SIL, GRX-SIL, CBV-SICL	GC-GM, CL, GP-GC	A-4, A-1-a, A-6	0-4	0-30	15-75	10-65	10-65	5-65	18-32	4-12
	21-34	GRX-SIL, GRV-SIL, GRX-SICL	CL, GC, GC-GM	A-1-b, A-4, A-7-6	0-5	0-15	20-65	20-60	20-60	20-55	22-44	6-18
	34-80	GR-C, GRV-C, GRX-C, CBV-C, CBX-C	CH, CL, GC, GP-GC	A-2-7, A-7-6, A-2-6	0-10	0-30	20-65	15-60	10-60	5-55	38-77	17-48
Bendavis--------	0-8	GR-SIL	ML, CL, GM	A-4	0-5	0-5	55-80	50-75	45-70	40-65	15-20	2-8
	8-10	GRV-SIL, GR-SIL, SIL	GM, ML, CL	A-4, A-1-b	0-5	0-15	35-90	30-85	25-80	20-75	15-20	2-8
	10-31	GRV-SIL, GRX-SICL, CBV-SIL, GRX-CL	GC-GM, GP-GC, CL	A-1-a, A-4, A-6	0-60	0-20	25-80	20-75	15-70	10-65	20-30	5-15
	31-80	BR	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73310:												
Poynor----------	0-4	GRV-SIL	GM, GC-GM	A-1-b, A-2-4, A-4	0-10	0-7	30-65	25-60	20-55	20-50	12-20	2-5
	4-10	GRV-SIL, GR-SIL	GC-GM, GM	A-1-b, A-2-4, A-4	0-2	0-7	35-65	30-60	30-55	25-50	12-20	2-6
	10-28	GRV-SIL, GRX-SIL, CBX-SICL, GRV-L	GC, GM	A-2-4, A-7-6, A-1-a	0-2	0-40	25-65	20-60	20-55	15-50	14-50	3-22
	28-80	GR-C, CB-C, GRV-C, GRX-C, CBX-C	GC, CH, GW-GC	A-7-6, A-2-7	0-3	0-65	20-80	10-75	10-75	5-70	41-80	20-53
73311:												
Scholten--------	0-7	GRV-SIL	ML, CL-ML, GM	A-2-4, A-4	0	0-7	45-60	35-50	35-50	30-40	15-19	2-4
	7-21	GRV-SIL, CBX-SIL, GRV-SICL	GC-GM, CL	A-4, A-1-b, A-6	0-4	0-30	30-75	25-65	25-65	25-65	18-32	4-12
	21-34	GRX-SIL, GRV-SIL, GRX-SICL	CL, GC, GC-GM	A-1-b, A-2-4, A-7-6	0-3	0-20	25-65	20-60	20-60	15-55	22-44	6-18
	34-80	GR-C, GRV-C, GRX-C, CBV-C, CBX-C	CH, GC	A-2-7, A-7-6, A-2-6	0-10	0-30	20-65	20-60	20-60	15-55	38-77	17-48
Bendavis--------	0-5	GRV-SIL	GC, GC-GM, GM	A-1-b, 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-4, A-2-4, A-1-b	0-5	0-5	35-65	30-60	30-60	25-50	10-25	2-10
	9-25	GRV-SIL, GRV-SICL	GC, GC-GM	A-1-b, 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----------	0-4	GRV-SIL	CL, GC-GM, GP-GM	A-1-a, A-2-4, A-4	0-3	0-15	40-80	15-70	15-65	10-60	20-30	2-8
	4-10	GRV-SIL, GRX-SIL	CL, GC-GM, GP-GM	A-1-a, A-2-4, A-4	0-3	0-15	40-85	15-75	15-75	10-65	20-30	2-8
	10-28	GRV-SICL, GRX-SIL	GC, CL	A-2-6, A-6, A-2-4	0-5	0-25	35-70	25-60	25-55	20-55	25-40	10-20
	28-80	C, CB-C	CH, MH, GC	A-7-5, A-2-7	0	0-15	80-100	75-100	70-100	60-100	51-70	25-35
73313:												
Fanchon---------	0-5	SIL	CL, CL-ML	A-4, A-6	0	0	80-100	75-100	65-95	50-90	21-30	6-11
	5-10	SIL	CL, CL-ML	A-4, A-6	0	0	80-100	75-100	65-95	50-90	21-30	6-11
	10-28	SICL, GR-SIL, GR-SICL, SIL	CL, GC	A-4, A-6	0-3	0-5	60-100	50-95	45-90	40-80	27-40	9-16
	28-47	GRV-L, GR-CL, GRV-CL	GC, CL	A-2-6, A-6, A-7-6	0-5	0-20	45-80	35-75	35-75	30-55	32-45	13-25
	47-80	C, GR-C, GRV-C, GR-SIC	GC, CL, MH	A-2-6, A-7-6, A-7-5	0-5	0-15	30-100	25-100	25-95	20-80	37-61	15-28
Tonti----------	0-8	SIL	CL, CL-ML	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, SIL, SICL	CL, GC	A-4, A-6	0	0-5	65-95	60-90	55-85	45-80	25-40	8-20
	20-34	GRV-SIL, GRX-SIL, GRV-SICL	GC, GC-GM	A-2-6, A-2-4, A-6	0-5	0-10	30-55	25-50	20-45	20-40	25-40	7-20
	34-80	GRV-C, GR-C, GRX-C	CH, CL, GC, GW-GC	A-2-7, A-7-6	0-5	0-10	20-75	10-70	5-65	5-60	45-80	25-50

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73333:												
Taterhill-------	0-11	SIL	CL, CL-ML	A-4	0	0	95-100	85-100	75-100	65-90	20-30	5-10
	11-15	SIL	CL, CL-ML	A-4	0	0	95-100	85-100	75-100	65-90	20-30	5-10
	15-28	SIL, SICL, GR-SIL, GR-SICL	CL, GC	A-6, A-4	0	0-7	60-100	50-95	45-90	40-85	25-40	10-20
	28-48	GRV-L, GR-SIL, GR-CL, GRV-SICL	CL, GC	A-2-4, A-6, A-7-6	0	0-7	35-80	25-75	20-75	15-55	30-45	10-25
	48-80	GR-L, SIL, GR-CL, SICL	CL, GC	A-7, A-6	0	0-10	60-100	50-95	45-90	40-85	30-45	10-25
73334:												
Horneybuck------	0-6	SIL	SC-SM, CL	A-4	0	0	90-100	85-100	45-95	45-95	20-30	5-10
	6-26	GR-SIL, GR-SICL, SIL, SICL	GC, CL	A-2-4, A-6	0	0	60-100	55-100	30-95	30-95	30-40	10-20
	26-37	GR-SIL, GR-SICL, GRV-SIL, SICL	GC, CL	A-2-4, A-6	0	0	40-100	35-100	20-95	20-95	30-40	10-20
	37-60	GR-CL, GRV-SICL, GRV-SIC	CL, GP-GC	A-2-7, A-2-6, A-7-6	0	0-15	35-80	30-75	25-75	20-70	30-50	15-30
73335:												
Hobson----------	0-10	SIL	CL, CL-ML	A-4	0	0	85-100	85-100	80-100	60-90	20-30	5-10
	10-16	SIL	CL, CL-ML	A-4	0	0	85-100	85-100	80-100	60-90	20-30	5-10
	16-32	L, SIL, CL, GR-SICL	CL	A-4, A-6	0	0	70-100	70-100	65-95	50-85	30-40	10-20
	32-42	GR-L, GRV-SIL, GRV-CL, GR-SICL	GC	A-2-6, A-2-4, A-6	0	0-15	25-80	25-70	20-70	15-50	25-40	10-20
	42-80	C, GR-C, GRV-C	GC	A-2-7, A-7-5, A-2-6	0	0-15	25-100	25-90	25-90	20-85	40-80	20-45
Rueter----------	0-4	GRV-SIL	GM, GC-GM, GC	A-4, A-1-b, A-2	0-7	0-25	35-55	25-50	25-50	20-40	15-25	NP-10
	4-17	GR-SIL, GRV-SIL	CL-ML, GM, CL	A-2-4, A-4	0-7	0-25	45-75	35-70	35-65	30-55	15-25	NP-10
	17-32	GRV-SIL, GRV-L, CBV-SIL	GP-GC, GC-GM, GC	A-2-4, A-2-6, A-1-a	0-10	0-40	30-55	25-50	12-50	10-35	20-35	5-15
	32-43	GRV-C, GRV-CL, GRV-SICL, CBV-SIC, GRV-SIC	GC	A-2-7, A-2-6, A-7-6	0-10	0-40	30-50	25-50	25-50	20-40	35-50	15-25
	43-71	C, GR-C, CB-C, GRV-C, CBV-C	GC, CH	A-2-7, A-7-5	0-10	0-45	35-95	25-90	25-90	25-85	60-80	30-45
73336:												
Rueter----------	0-5	GR-SIL	GM, CL, CL-ML	A-4, A-2-4	0-7	0-25	60-80	50-75	45-70	35-65	15-25	NP-10
	5-12	GR-SIL, GRV-SIL	GM, CL	A-2-4, A-4	0-7	0-25	45-80	35-75	35-70	30-65	15-25	NP-10
	12-24	GRV-SIL, GRV-L, CBV-SIL	GP-GC, GC	A-2, A-6, A-1-a	0-10	0-40	25-60	15-50	15-50	10-45	20-35	5-16
	24-43	CBV-SIC, GRV-CL, GRV-SIC, GRV-C, GRV-SICL	GC, SC	A-2-6, A-7-6	0-10	0-35	30-55	25-50	25-50	20-45	35-50	15-25
	43-80	C, GR-C, CB-C, GRV-C, CBV-C	GC, CH	A-2-7, A-7-5	0-10	0-40	35-95	25-90	25-90	25-85	60-80	30-45
Gepp----------	0-5	GR-SIL	CL-ML, CL, GM	A-4, A-2-4	0-5	0-15	60-100	50-75	40-70	30-60	15-25	NP-10
	5-10	SIL, GR-SIL, GRV-SIL	GC-GM, GM, CL	A-1-b, A-4	0-7	0-10	35-90	30-85	25-70	20-60	15-25	NP-10
	10-16	GR-CL, GR-SICL, SIC, GR-C	GC, MH, CH	A-2-6, A-7-6, A-7-5	0	0-7	60-100	50-100	40-70	30-60	35-65	15-30
	16-76	C	CH	A-7-5, A-7-6	0	0-10	85-100	75-100	70-95	65-90	60-80	30-45

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73337:												
Tonti----------	0-10	SIL	CL, CL-ML	A-4, A-6	0	0-5	80-100	75-100	70-95	65-85	20-35	4-14
	10-25	GR-SICL, GR-SIL, SICL	CL, GC, SC	A-4, A-6	0	0-5	65-100	60-100	55-100	45-95	25-40	8-20
	25-36	GRX-SIL, GRV-SIL, GRV-SICL, GRX-SICL	GC, GC-GM, SC	A-2-4, A-4, A-6	0-5	0-10	35-75	30-70	20-45	20-40	25-40	7-20
	36-80	GRX-SIC, GRV-C, GR-C, GRX-C	CH, GC, GW-GC	A-2-7, A-7, A-7-6	0-5	0-10	20-75	15-70	15-65	10-60	45-80	25-50
Portia----------	0-6	SIL	ML, CL-ML	A-4	0	0	90-100	85-100	75-95	60-90	15-25	NP-7
	6-16	L, SIL	ML, CL	A-4	0	0	90-100	85-100	70-95	50-90	15-30	3-10
	16-21	SCL, L, CL	CL, SC-SM	A-4, A-6	0	0	90-100	85-100	70-95	40-90	23-38	7-15
	21-31	GR-SC, CL, C	CL, SC	A-2-4, A-7-6	0	0	75-100	60-100	60-90	35-80	25-50	8-23
	31-80	C	CH	A-7-5, A-7-6	0	0	85-100	85-100	80-95	70-85	60-80	30-45
73338:												
Portia----------	0-6	SIL	SM, CL-ML	A-4, A-1-b	0	0	90-100	85-100	50-90	25-70	15-25	NP-7
	6-16	L, SIL	SM, CL	A-4, A-1-b	0	0	90-100	85-100	50-95	25-75	15-30	3-10
	16-21	SCL, L, CL	CL, SC-SM	A-2-4, A-6	0	0	85-100	80-100	65-95	30-75	23-38	7-15
	21-31	GR-SC, CL, C	CL, SC	A-2-4, A-7-6	0	0	75-100	60-100	50-100	25-90	25-50	8-23
	31-80	C	CH	A-7-5, A-7-6	0-2	0	85-100	75-100	70-95	65-85	60-80	30-45
Hobson----------	0-8	SIL	CL, CL-ML	A-4	0	0	85-100	85-100	80-95	60-85	20-30	5-10
	8-13	SIL	CL, CL-ML	A-4	0	0	85-100	85-100	80-95	60-85	20-30	5-10
	13-27	L, CL, GR-SIL, GR-SICL	CL	A-6, A-4	0	0	70-100	70-100	65-95	50-85	30-40	10-20
	27-36	GRV-L, GR-SIL, GRV-CL, GR-SICL	GC	A-2-6, A-2-4, A-6	0	0-15	25-80	25-70	20-70	15-50	25-40	10-20
	36-70	GR-C, C, GRV-C	CL, GC, CH	A-7-5, A-2-6	0	0-15	30-100	25-90	25-90	20-85	40-80	20-45
73339:												
Arkana----------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-7	GRV-SIL	GC	A-2-4, A-6	0	0-10	35-50	25-50	20-50	20-50	20-35	10-15
	7-12	SIC, GR-SICL, GR-C, GRV-C	CL, CH, GC	A-7-6, A-6, A-2-6	0	0-5	35-75	25-75	20-70	20-65	30-60	15-30
	12-30	C	CH	A-7-5, A-7-6	0	0	95-100	85-100	70-100	65-100	60-80	30-45
	30	BR	---	---	---	---	---	---	---	---	---	---
Gepp----------	0-10	GRV-SIL	GM, GC	A-1-b, A-2-4	0-7	0-15	35-55	25-50	25-50	20-35	15-25	NP-10
	10-19	GR-CL, GR-SICL, SIC, C	GC, CL, MH	A-6, A-7-5	0	0-7	60-100	50-100	50-95	45-85	35-65	15-30
	19-60	C	CH	A-7-5, A-7-6	0	0-10	85-100	75-100	70-95	65-90	60-80	30-45
73340:												
Rueter----------	0-6	GRV-SIL	GC, GC-GM, GM	A-2-4, A-1-b, A-2	0-7	0-20	35-55	25-50	25-50	20-35	15-25	NP-10
	6-10	GRV-SIL, GR-SIL	GC-GM, GM, GC	A-2-4, A-4	0-7	0-25	50-75	35-70	35-65	30-50	15-25	NP-10
	10-28	CBV-SIL, GRV-SIL, GRV-L	SC, GP-GC, GC	A-4, A-1-a, A-6	0-10	0-40	25-75	15-50	15-50	10-40	20-35	5-15
	28-42	CBV-SIC, GRV-CL, GRV-C, GRV-SIC, GRV-SICL	GC	A-7-6, A-2-6	0-10	0-40	35-65	25-50	25-50	20-40	35-50	15-25
	42-80	C, GR-C, CB-C, GRV-C, CBV-C	GC, CH	A-2-7, A-7-5	0-10	0-40	35-100	25-95	25-95	25-95	60-80	30-45
Gepp----------	0-4	GR-SIL	GC, CL, GM	A-4, A-2-4	0-7	0-25	50-100	50-75	40-70	30-60	15-25	NP-10
	4-9	GRV-SIL	GM, GC	A-1-b, A-2-4	0-7	0-20	35-60	25-50	25-50	20-35	15-25	NP-10
	9-17	GR-CL, GR-SICL, SIC, C, GR-C	GC, CL, MH	A-6, A-7-6, A-7-5	0	0-7	60-100	50-100	50-95	45-85	35-65	15-30
	17-72	C	CH	A-7-6, A-7-5	0-2	0-10	85-100	75-100	70-95	65-85	60-80	30-45

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
73341:												
Gepp----------	0-4	GRV-SIL	GP-GM, GC	A-1-a, A-2-6	0-7	0-25	35-55	20-50	15-50	10-35	15-30	NP-12
	4-15	GR-CL, GR-SICL, SIC, C	GC, CL, MH	A-6, A-7-6, A-7-5	0	0-7	60-100	50-100	50-95	45-85	35-65	15-30
	15-68	C	CH	A-7-5, A-7-6	0-2	0-10	85-100	75-100	70-95	65-85	60-80	30-45
Arkana----------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-9	GRV-SIL	GC, GC-GM	A-2-6, A-1-b	0	0-10	35-50	25-50	20-35	20-30	20-35	5-15
	9-14	SIC, GR-SICL, GR-C, GRV-C	CH, SC, GC	A-7-6, A-6, A-2-6	0	0-5	35-75	25-75	25-70	20-60	30-60	15-30
	14-29	C	CH	A-7-6, A-7-5	0	0	95-100	85-100	80-95	65-85	60-80	30-45
	29	BR	---	---	---	---	---	---	---	---	---	---
73342:												
Alred----------	0-8	GRV-SIL	GM, GC	A-2-4, A-1-b	0-7	0-25	35-50	25-50	25-50	20-35	15-25	NP-10
	8-11	GR-SIL, GRV-SIL	GM, GC	A-2-4, A-4	0-7	0-25	50-75	35-70	35-65	30-50	15-25	NP-10
	11-24	GRV-L, GRX-L, GRV-SIL, GRX-SIL	GP-GC, GC	A-2-6, A-1-a	0-10	0-40	25-50	15-50	15-50	10-35	20-35	5-15
	24-67	C, GR-C, CB-C	CH	A-7-5, A-7-6	0-2	0-15	80-100	70-100	65-95	60-95	50-80	25-45
Arkana----------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-5	GRV-SIL	GC, GC-GM	A-1-b, A-6	0-1	0-10	35-70	25-50	20-50	20-40	20-35	5-15
	5-17	C, GR-SICL, GR-SIC, GRV-C	CL, GC, CH	A-7-6, A-6, A-2-6	0	0-5	35-75	25-75	20-70	20-60	30-60	15-30
	17-25	C	CH	A-7-6, A-7-5	0	0	95-100	85-100	70-95	65-85	60-80	30-45
	25-80	BR	---	---	---	---	---	---	---	---	---	---
73361:												
Coulstone-------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-5	GRV-SL	GC-GM, GC, GW-GM	A-2-4, A-1-a	0-10	0-25	30-55	25-50	15-45	5-35	10-20	NP-10
	5-8	GR-SL, CBV-L, GR-SIL	GC-GM, GW-GM, SC	A-1-a, A-2-4	0-25	0-50	30-85	25-75	15-75	5-35	10-30	NP-10
	8-23	GRV-SL, CBX-SL, GRV-L	GC-GM, GC, GW-GM	A-1-a, A-1-b, A-2-4	0-25	0-50	30-60	25-50	15-45	5-35	10-30	NP-10
	23-52	GRV-LS, GRV-SL, CBX-SL	GP-GC, GW-GM, GC	A-1-a, A-2-4	0-15	0-30	30-60	25-50	15-45	5-35	10-30	NP-10
	52-80	CB-SCL, CL, CB-SC, GRV-C	GC-GM, CL	A-2-4, A-6, A-7-6	0-25	0-25	40-100	35-90	30-90	25-70	25-50	7-25
Alred----------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-7	GRV-SIL	GM, GC-GM, GC	A-1-b, A-2-4	0-7	0-25	35-50	25-50	25-50	20-35	15-25	NP-10
	7-11	GR-SIL, GRV-SIL	GC	A-2-4, A-4	0-7	0-25	50-75	35-70	35-65	30-50	15-25	NP-10
	11-30	GRV-L, GRX-L, GRV-SIL, GRX-SIL	GP-GC, GC	A-2-6, A-1-a	0-10	0-40	25-50	15-50	15-50	10-35	20-35	5-15
	30-80	C, GR-C, CB-C	CH	A-7-6, A-7-5	0-2	0-15	80-100	70-100	65-95	60-95	50-80	25-45
74627:												
Hartville-------	0-7	SIL	CL, CL-ML	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, CL	A-7-6	0	0	95-100	85-100	80-98	75-95	45-60	30-40
	40-80	SICL	CL	A-7-6, A-6	0	0	85-95	75-95	65-95	60-90	40-50	25-40
74636:												
Lecoma----------	0-9	L	CL-ML, ML, CL	A-4	0	0	90-100	90-100	80-95	55-65	15-25	NP-10
	9-31	L, CL	CL	A-6, A-4	0	0	90-100	90-100	65-100	55-80	25-35	10-15
	31-80	L, SCL, CL	CL, SC	A-6, A-4	0	0	90-100	85-100	70-95	45-80	25-40	10-20

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
74637:												
Lecoma----------	0-7	L	CL-ML, ML, SM	A-4	0	0	90-100	90-100	65-95	40-65	15-25	NP-10
	7-24	L, CL	CL	A-6, A-4	0	0	90-100	90-100	65-100	55-80	25-35	10-15
	24-80	L, SCL, CL	CL, SC	A-6, A-4	0	0	85-100	80-100	65-95	40-75	25-40	10-20
74642:												
Cornwall--------	0-8	SIL	CL, CL-ML	A-4	0	0	85-100	80-100	80-100	75-95	20-30	5-10
	8-31	SIL, SICL	CL	A-6, A-4	0	0	85-100	80-100	80-100	75-100	30-40	10-20
	31-43	SIL, SICL, GR-SIL, GRV-SIL	CL, GC	A-6, A-2-4	0-2	0-15	30-100	25-100	25-100	20-95	30-40	10-20
	43-80	SIL, SICL, GR-SIL, GR-L, GRV-SICL, GRV-SIL	CL, GC	A-7-6, A-2-4, A-6	0-2	0-15	30-100	20-100	20-100	15-100	30-45	10-25
74643:												
Lecoma----------	0-9	SIL	CL-ML, CL	A-4	0	0	100	100	90-100	70-90	20-30	5-10
	9-24	L, SIL, SICL	CL	A-6, A-4	0	0	95-100	90-100	85-95	75-85	25-40	10-20
	24-80	L, SIL, CL, SICL	CL	A-6, A-7-6, A-4	0	0	90-100	85-100	75-95	55-85	30-45	10-25
74644:												
Deible----------	0-7	SIL	CL, CL-ML	A-4, A-6	0	0	90-100	85-100	80-100	75-95	20-35	5-15
	7-16	SIL	CL, CL-ML	A-6, A-4	0	0	85-100	75-100	65-100	65-95	20-35	5-15
	16-40	SICL, SIC	CL, CH	A-7-6, A-6	0	0	100	95-100	90-100	80-95	40-60	20-30
	40-65	SIL, CL, SICL, GR-CL	CL	A-7-6, A-6	0	0	85-100	75-100	70-100	60-95	30-45	15-25
74648:												
Aslinger--------	0-4	SIL	CL, CL-ML	A-4	0	0	95-100	90-100	80-95	70-90	20-30	5-10
	4-8	SIL	CL, CL-ML	A-4	0	0	95-100	90-100	80-95	60-90	20-30	5-10
	8-21	SIL, SICL	CL	A-6, A-4	0	0	80-100	75-100	70-100	60-95	25-40	10-20
	21-29	GR-L, GR-SIL, GRV-L, GRV-SIL, GRX-L, GRX-SIL	GC-GM, GC, CL	A-2-6, A-6, A-1-a	0-2	0-15	30-85	25-75	20-70	15-65	20-35	5-15
	29-55	GR-L, GR-CL, GRV-L, GRV-CL	GC, CL	A-2-6, A-6, A-2-4	0-2	0-15	35-80	25-75	25-70	20-65	25-40	10-25
	55-70	GR-SICL, GR-C, GRV-CL, GRX-C, CBX-C	GC	A-2-7, A-2-6, A-7-6	0-10	0-40	35-65	25-60	25-55	20-50	35-60	15-35
74651:												
Waben----------	0-4	GR-SIL	CL-ML, ML, CL	A-4	0-5	0-5	60-90	50-75	50-70	50-65	15-25	NP-10
	4-22	GR-SIL, GRV-L, GRV-SIL	GC-GM, GC, SC	A-1-b, A-2-4, A-4	0-5	0-25	30-80	25-50	25-50	20-40	20-30	5-10
	22-47	GRV-L, GRV-SIL	GC, GC-GM	A-2-6, A-6, A-1-b	0-5	0-40	30-60	25-50	25-50	20-40	25-35	5-15
	47-80	GRV-SCL, GRV-CL, GRX-CL	GC	A-2-7, A-2-4, A-2-6	0-5	0-40	30-60	25-50	25-50	20-40	30-45	10-25
74658:												
Zanoni----------	0-7	FSL	CL-ML, ML, SM	A-4	0	0	85-100	75-100	60-85	40-55	14-23	3-6
	7-36	FSL, L, GR-SL, SL	CL, SM, SC	A-4, A-2-4	0	0	75-100	65-100	55-85	35-55	12-29	3-10
	36-50	SL, FSL, GR-SL, L, SCL	GM, SC	A-6, A-2-4, A-1-b	0	0	60-100	50-95	35-80	20-50	12-32	3-13
	50-80	SR- GRX-LS GR-L	GP-GC, SC, GW-GM	A-2-6, A-1-a	0	0	20-80	10-75	5-40	5-25	12-30	3-11

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
75381:												
Bearthicket-----	0-6	SIL	CL-ML, CL	A-4	0	0	100	95-100	95-100	75-100	20-30	5-10
	6-19	SIL	CL-ML, CL	A-4	0	0	100	95-100	95-100	75-100	20-30	5-10
	19-45	SICL, SIL	CL	A-6, A-4	0	0	95-100	95-100	90-100	70-100	25-35	10-15
	45-64	L, SIL	CL-ML, CL	A-4, A-6	0	0	95-100	90-100	90-100	65-100	20-35	5-15
	64-80	COSL, FSL, L, SL, GR-SL, GR-FSL, GRV-SL	GC-GM, SC, CL-ML, CL	A-2-4, A-6, A-1-b	0	0-10	60-100	50-100	50-100	20-60	15-30	5-15
75390:												
Razort----------	0-7	SIL	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	70-100	55-90	20-35	5-15
	7-34	SIL, L, CL	CL	A-7-6, A-4	0	0	80-100	75-100	70-95	50-75	30-45	10-20
	34-80	GR-L, GRV-L	GC-GM, GC	A-6, A-4, A-1-b	0	0	35-80	30-75	25-70	20-50	20-35	5-15
75394:												
Relfe----------	0-6	GR-SL	GC-GM, GM, SC-SM, SC	A-1-a, A-2-4, A-1-b	0-1	0-10	55-100	50-75	30-55	15-30	17-25	3-9
	6-80	SR- CBX-COS GRV-LS	GW, SC, SP-SM, SP	A-1-a, A-2-4, A-2-6	0-5	0-40	20-85	5-50	5-40	0-15	15-35	2-15
75395:												
Jamesfin--------	0-6	SIL	CL, CL-ML	A-4	0	0	95-100	95-100	90-100	75-100	20-30	5-10
	6-15	SIL	CL, CL-ML	A-4	0	0	95-100	95-100	90-100	75-100	20-30	5-10
	15-53	SIL	CL	A-4, A-6	0	0	95-100	95-100	90-100	75-100	25-35	10-15
	53-62	FSL, L, SIL	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	75-100	50-100	20-35	5-15
75408:												
Secesh----------	0-4	SIL	CL-ML, CL	A-4	0	0	80-100	75-100	65-95	50-90	20-30	5-10
	4-10	L, SIL	CL-ML, CL	A-4	0	0	80-100	75-100	65-95	50-90	20-30	5-10
	10-26	L, SIL, GR-L, GR-SIL	CL	A-4, A-6	0	0-10	70-100	60-90	55-90	50-80	25-40	10-20
	26-36	L, SCL, GR-L, GRV-SL	SC, GC	A-2-6, A-6, A-2-4	0-7	0-25	50-100	35-90	25-80	15-50	25-35	10-15
	36-80	GRV-SL, GRV-COSL, GRX-COSL, GRX-SCL	GC, GP-GC	A-2-6, A-1-a	0-7	0-40	25-55	15-50	10-40	5-30	20-35	5-15
75409:												
Relfe----------	0-7	SL	SC-SM, SC	A-4, A-2-4, A-1-b	0-1	0-10	75-100	75-100	45-65	20-40	15-25	5-10
	7-64	GRV-LCOS, GRV-COS, GRX-S, GRX-LCOS	GW, GW-GM, GP, SP-SM	A-2-4, A-1-a	0-7	0-40	20-80	15-50	5-35	0-10	15-25	NP-10
75411:												
Tilk----------	0-8	GRV-SL	GC-GM, GW-GC, SC	A-2-4, A-1-a	0	0-15	30-90	15-50	10-35	5-35	20-25	5-10
	8-16	GRV-L, CBV-L, GRX-L, GRV-COSL	SC, GC-GM, GW-GC	A-2-4, A-1-a	0	0-15	30-90	15-50	10-45	5-35	20-25	5-10
	16-47	GRX-L, GRV-L, GRX-SL, GRV-SL, CBV-L	SC, SC-SM, GC, GW-GC	A-2-6, A-1-a	0-5	0-40	30-90	15-50	10-45	5-35	20-30	5-15
	47-70	GRX-LCOS, CBX-LCOS, GRV-COSL, GRX-COSL, CBX-COSL, GRX-SL	GW-GC, GC, GP-GC	A-2-6, A-1-a	0-30	0-40	20-50	15-40	10-30	5-20	20-30	5-15

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
75416:												
Gladden---------	0-5	L	CL, CL-ML	A-4	0	0	90-100	80-100	70-95	50-75	20-30	5-10
	5-26	L, SIL	CL, CL-ML	A-4	0	0	90-100	80-100	70-100	60-80	20-30	5-10
	26-58	SL, FSL, L	CL, CL-ML, SM, SC-SM	A-2-4, A-4	0	0	90-100	80-100	50-95	30-70	15-30	NP-10
	58-77	COS, S, LS	SM, SP-SM, SC-SM	A-1-b, A-2-4	0	0	80-100	75-100	5-85	5-35	10-20	NP-5
75417:												
Relfe----------	0-6	GRV-SL	GP-GM, GC, GC-GM	A-2-4, A-1-a	0-1	0-5	30-55	25-50	15-35	10-20	10-25	3-9
	6-80	SR- CBX-COS GRV-LS	GC, GW-GM, GW	A-1-a, A-2-4	0-5	0-40	25-60	10-55	5-40	3-15	8-20	2-10
Sandbur---------	0-8	FSL	CL, ML, SM	A-4, A-2-4	0	0	80-100	75-100	60-80	35-55	10-30	NP-10
	8-50	SR- FS SIL	CL, ML, SM	A-4, A-2-4	0	0-5	80-100	75-100	55-95	20-85	10-30	NP-10
	50-80	CBX-L, GRX-COSL, GRV-SL, STX-L	GW-GM, GC-GM, GC	A-1-a, A-2-4	0-38	0-30	30-60	20-55	10-30	5-20	10-30	NP-10
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, 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	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	A-2-6, A-6, A-7-6	0	0-15	45-70	35-65	30-60	20-40	30-45	11-20
Tilk----------	0-8	GRV-L	GC-GM, GM, GC	A-1-b, A-2-4	0	0-15	30-55	25-50	25-45	20-35	10-25	2-8
	8-47	GRV-SL, GRX-L	GP-GM, GC-GM, GC	A-1-a, A-2-4	0-5	0-30	25-60	15-50	10-45	5-35	10-20	3-10
	47-80	SR- CBX-LCOS GRX-COSL	GP, GC	A-1-a, A-2-4	0-25	0-40	15-55	10-50	5-30	3-20	10-20	2-10
75426:												
Gabriel---------	0-14	SIL	CL, CL-ML	A-6, A-4	0	0	100	95-100	90-100	70-90	25-35	5-15
	14-46	SIL, CL, SICL	CL	A-7-6, A-6	0	0	100	100	90-100	70-95	35-45	15-20
	46-81	SIL, CL, SICL	CL	A-7-6, A-6	0	0	100	100	90-100	70-95	35-45	15-20
75430:												
Wideman---------	0-5	FSL	SM, SC-SM	A-4, A-2-4	0	0	95-100	85-100	60-90	35-50	15-25	NP-7
	5-13	FSL	SM, SC-SM	A-4, A-2-4	0	0	95-100	85-100	60-90	35-50	15-25	NP-7
	13-21	L, FSL	SM, ML, CL-ML	A-4, A-2-4	0	0	95-100	85-100	60-95	35-75	15-30	NP-7
	21-49	S, FS, LS, LFS	SM, SC-SM	A-2-4, A-1-b	0	0	95-100	85-100	50-85	15-35	10-20	NP-4
	49-71	GR-FS, GR-LS, LFS, GR-SL, FSL	SP-SM, SC-SM	A-1-b, A-4	0	0	95-100	50-100	35-85	5-50	10-25	NP-7
75433:												
Racket----------	0-7	L	CL, CL-ML	A-4, A-6	0	0	80-100	75-100	65-95	55-85	25-35	5-12
	7-42	L, GR-L, SIL	CL, CL-ML	A-4, A-6	0	0	80-100	70-100	65-95	55-95	25-40	5-20
	42-80	SR- GRX-S GR-SL	GM, GP-GM	A-1-a, A-4	0	0-15	40-85	20-75	10-50	5-50	15-30	NP-5
75451:												
Gladden---------	0-5	SIL	ML, CL, CL-ML	A-4	0	0	90-100	85-100	65-100	65-90	20-30	NP-10
	5-53	GR-SIL, GR-L	CL, ML, SM, SC-SM	A-2-4, A-4, A-1-b	0	0-15	65-100	50-75	45-75	25-65	15-30	NP-10
	53-80	GRX-COSL, GRV-SL, GRV-L	GP-GM, GM, GW-GM, SC-SM	A-4, A-2-4, A-1-a, A-1-b	0	0-15	30-90	15-50	10-50	5-40	10-20	NP-5

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
75462:												
Huzzah----------	0-6	SL	SC, SC-SM, SM	A-4, A-2-4	0	0	90-100	85-100	60-90	25-40	15-25	NP-10
	6-23	SL, FSL, L	SC-SM, CL, SM	A-4, A-2-4	0	0	90-100	85-100	60-90	25-65	15-25	NP-10
	23-47	SL, FSL, GR-L, SIL	SC-SM, CL, SM	A-4, A-2, A-1-b	0	0-5	65-100	65-100	50-95	20-70	15-25	NP-10
	47-60	GRV-S, FS, LS, LFS, GR-SL, FSL	GM, GP-GM, SM, SC-SM	A-1-a, A-2-4, A-4	0	0-15	40-100	35-100	25-90	10-40	10-20	NP-5
75463:												
Huzzah----------	0-10	SL	SC, SC-SM, SM	A-4, A-2-4	0	0	90-100	85-100	60-90	25-40	15-25	NP-10
	10-24	SL, FSL, L	SC-SM, CL, SM	A-4, A-2-4	0	0	90-100	85-100	60-90	25-65	15-25	NP-10
	24-38	SL, FSL, GR-L, SIL	SC-SM, CL, SM	A-4, A-2, A-1-b	0	0-5	65-100	65-100	50-95	20-70	15-25	NP-10
	38-60	GRV-S, FS, LS, LFS, GR-SL, FSL	GM, GP-GM, SM, SC-SM	A-1-a, A-2-4, A-4	0	0-15	40-100	35-100	25-90	10-40	10-20	NP-5
75464:												
Cedargap--------	0-6	GR-L	SC, CL, SC-SM	A-6, A-2-4	0	0-5	80-100	50-75	40-65	35-60	20-35	4-15
	6-20	CL, GR-L	SC, CL, SC-SM	A-6, A-2-4	0	0-5	80-100	50-95	40-90	35-85	20-40	4-20
	20-36	GRV-COSL, GRX-SL, GRX-SCL	GP-GC, GW-GC, GM	A-2-6, A-2-7, A-2-4	0	0-7	35-65	15-50	15-40	5-30	25-50	10-20
	36-60	GRX-L, GRX-SCL, GRV-CL	GW-GC, GC, GP-GC	A-2-7, A-2-4	0	0-25	25-50	15-50	15-20	5-15	30-50	10-25
75465:												
Raftville-------	0-9	SL	SM, SC-SM	A-4, A-1-b	0	0-5	80-100	75-100	50-90	20-50	15-25	NP-7
	9-24	SIL, L	ML, CL	A-4	0	0-5	80-100	75-100	70-90	50-70	15-30	NP-10
	24-39	GR-SCL, GR-L, GRV-L, GRV-CL	GC	A-2-6, A-2-4, A-6	0	0-30	30-80	25-75	25-70	20-50	30-40	10-20
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Gabriel---------	0-9	L	CL, SC-SM	A-4, A-6, A-2-4	0	0	100	100	85-100	30-65	20-40	4-20
	9-19	SIL	CL, CL-ML	A-6, A-4	0	0	100	100	90-100	70-90	25-35	5-15
	19-25	SIL	CL	A-7-6, A-6, A-4	0	0	100	100	90-100	70-95	25-45	10-20
	25-63	SICL	CL	A-7-6, A-6	0	0	100	100	90-100	70-95	37-45	17-20
75466:												
Midco----------	0-8	GRV-L	GM, GP-GM	A-2-4, A-1-a, A-1-b	0	0-30	30-60	25-50	15-45	12-35	20-30	2-7
	8-26	GRV-L, GRV-SL	GM, GP-GM, GC-GM	A-1-b, A-2-4, A-1-a	0	0-35	35-70	20-65	15-45	12-35	15-25	2-7
	26-60	GRV-L, GRV-LS, GRX-SL	GC-GM, GP-GM	A-1-a, A-2-4	0	0-45	15-70	10-60	10-50	5-30	15-25	NP-5
75470:												
Farewell--------	0-8	GR-SIL	CL-ML, CL, GC-GM	A-6, A-4	0	0	55-85	50-75	45-75	40-70	20-35	5-15
	8-18	SIL, GR-SIL, L, GR-L	CL-ML, CL	A-4, A-6	0	0	90-100	60-100	55-100	50-100	20-35	5-15
	18-39	SIL, GR-L, GR-CL, SICL	CL, SC, GC	A-7-6, A-2-6, A-2-4	0	0-15	50-95	50-90	40-80	35-70	30-45	10-25
	39-80	GRV-SL, GRV-L, SIL, GR-SCL, GRV-CL	CL, GC, GP-GC	A-7-6, A-2-6, A-2-4	0-2	0-15	50-100	25-100	25-95	10-90	30-45	10-25

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
77000:												
Killarney-------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-5	CBV-SIL	GC-GM, GC, GM	A-2-4, A-4, A-1-b	0-10	15-60	50-70	35-60	30-55	25-50	15-25	NP-10
	5-16	GR-SIL, CBV-SIL, GRV-SIL	CL, GM, GC-GM	A-4, A-2-4	0-10	0-60	50-90	45-85	40-75	35-65	15-25	NP-10
	16-32	GRV-SIL, CBV-SIL	GC, GC-GM	A-2-4, A-1-b, A-6	0-10	0-60	40-70	35-60	30-55	25-50	20-35	5-15
	32-48	GR-L, CBV-SIL, CBV-L, GRV-L, GRV-SIL, GRX-SIL	GC	A-2-6, A-6, A-2-4	0-10	0-60	25-80	20-70	15-65	15-50	25-35	10-15
	48-80	GR-L, GR-CL, GRV-L, GRV-CL, CBV-L	CL, GC	A-2-6, A-2-4, A-7-6	0	0-40	40-90	35-85	25-75	20-65	25-45	10-25
Frenchmill------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-6	CBV-SIL	GM, SC, GC	A-1-b, A-4	0-10	20-60	50-70	35-60	30-55	20-50	15-25	NP-10
	6-19	GR-SIL, GRV-SIL, CBV-L	GM, CL	A-2-4, A-4	0-10	0-60	50-95	45-85	35-75	30-70	15-25	NP-10
	19-27	CBV-SIL, GRV-SIL	GC-GM, GC	A-2-4, A-1-b, A-6	0-10	0-60	40-70	35-60	30-55	25-50	20-35	5-15
	27-58	GRV-L, CBV-L, GRV-CL, CBX-CL	GC	A-2-4, A-6	0-10	0-60	40-70	35-60	25-55	20-50	25-40	10-20
	58-80	SCL, CL, GR-SCL, GR-CL, CB-CL	GC, CL	A-7-6, A-6, A-2-4	0-10	0-40	65-100	60-100	35-85	30-80	30-45	10-25
77003:												
Delassus--------	0-8	GR-SIL	CL, ML	A-4	0	0-15	75-100	60-80	55-80	55-70	15-25	NP-10
	8-13	SIL, GR-SIL	CL-ML, CL	A-4	0	0-15	75-100	70-90	65-90	55-80	20-30	5-10
	13-20	L, SIL, GR-L, GR-SIL	CL	A-6, A-4	0	0-15	75-100	70-90	55-90	50-85	25-40	10-20
	20-59	SIL, GR-L, SL, GR-COSL, GR-SIL, CBV-L	CL, SC, GC-GM, CL-ML	A-6, A-2-4, A-1-b	0-10	0-40	40-90	35-80	25-75	20-65	20-35	5-15
	59-78	CB-L, GRV-SIL, GR-SICL, CBV-SICL	GC, SC	A-6, A-2-6, A-2-4	0-10	0-50	40-90	35-80	30-65	25-50	25-40	10-20
77004:												
Irondale--------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-4	GR-SIL	CL, GM, CL-ML	A-4	0-5	0-8	65-95	60-85	45-80	40-75	15-25	NP-10
	4-9	GR-SIL, GRV-SIL, CB-SIL, CBV-SIL	CL, GM	A-4, A-2-4	0-10	5-50	50-95	45-85	40-80	35-75	15-25	NP-10
	9-15	GRV-SIL, CBV-SIL	GC-GM, GC	A-2-4, A-6	0-10	10-50	40-70	35-60	30-55	30-50	20-35	5-15
	15-22	GRV-SIL, GRV-L, CBV-SICL	GC	A-2-4, A-6	0-5	10-50	40-70	25-60	25-55	20-50	30-40	10-20
	22-80	BR	---	---	---	---	---	---	---	---	---	---
77007:												
Taumsauk--------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-5	CB-SIL	CL, CL-ML, GM	A-4	0-5	7-40	65-95	60-85	45-80	40-75	15-25	NP-10
	5-17	CBX-SICL, GRV-SIL, GRV-CL, GRV-SICL, CBV-SIL, CBV-SICL	GC	A-2-4, A-2-6, A-7-6	0-15	15-50	40-70	35-60	30-55	30-50	25-45	10-25
	17-80	BR	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
77007:												
Irondale--------	0-1	SPM	---	---	---	---	---	---	---	---	---	---
	1-5	CBV-SIL	GC, GC-GM, GM	A-2-4, A-4, A-1-b	0-10	30-50	45-70	40-60	30-55	25-45	15-25	NP-10
	5-10	GRV-SIL, GR-SIL, CB-SIL, CBV-SIL	GM, GC, CL, GC-GM	A-4, A-2-4	0-10	3-50	50-90	45-85	40-80	35-75	15-25	NP-10
	10-17	GRV-SIL, CBV-SIL	GC-GM, CL, GC	A-2-4, A-6	0-10	15-50	40-70	35-60	30-55	30-50	20-35	5-15
	17-35	GRV-CL, GRV-L, CBV-SICL	GC	A-2-4, A-2-6, A-6	0-10	15-50	40-70	25-60	25-55	20-50	30-40	10-20
	35-80	BR	---	---	---	---	---	---	---	---	---	---
Rock outcrop----	0-80	BR	---	---	---	---	---	---	---	---	---	---
77011:												
Taumsauk--------	0-4	GR-SIL	CL-ML, GM, CL	A-2-4, A-4	0-20	5-45	45-80	40-75	35-65	30-60	15-25	1-10
	4-15	CBV-SIL, CBX-SICL, CBV-SICL	GP-GC, GC	A-7-6, A-2-7, A-1-a	0-20	15-75	15-75	10-60	10-50	10-45	15-45	4-20
	---	BR	---	---	---	---	---	---	---	---	---	---
Irondale--------	0-3	GR-SIL	CL, CL-ML, GM	A-4	0	0-5	65-95	60-85	45-80	40-75	15-25	NP-10
	3-6	CB-SIL, GR-SIL, CBV-SIL, GRV-SIL	GM, CL	A-4, A-2-4	0-5	0-15	50-95	40-85	40-80	35-75	15-25	NP-10
	6-13	GRV-SIL, CBV-SIL	GC-GM, GC, CL	A-2-4, A-6	2-5	10-17	51-70	38-62	33-61	30-59	22-39	6-19
	13-28	GRV-L, GRV-CL, CBV-SICL, GRV-SICL	GC, CL	A-7-6, A-2-6	2-9	9-17	50-70	37-63	30-58	27-56	29-45	12-25
	28-80	BR	---	---	---	---	---	---	---	---	---	---
Rock outcrop----	0-80	BR	---	---	---	---	---	---	---	---	---	---
99001. Water												
99013. Riverwash												

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	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	.15	.49			
	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	.05	.24			
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	.43	.55	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	.28	.49			
	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	.17	.55			
	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	.10	.24			
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	1.0-2.0	.49	.49	5	5	56
	10-18	1-10	55-84	15-35	1.30-1.50	4.00-14.00	0.20-0.22	3.0-5.9	0.2-1.0	.43	.43			
	18-36	1-10	25-59	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	.55	.55			
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	.15	.49	3	7	38
	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	.17	.55			
	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	.15	.15			
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	7	38
	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	.15	.15			
73042:														
Niangua----------	0-3	10-25	55-80	10-27	1.10-1.40	4.00-14.00	0.10-0.17	0.1-2.9	0.5-3.0	.24	.49	3	8	0
	3-14	10-25	55-80	10-27	1.10-1.40	4.00-14.00	0.09-0.14	0.1-2.9	0.5-1.0	.24	.43			
	14-52	2-10	10-30	60-85	1.10-1.30	1.40-4.00	0.07-0.10	3.0-5.9	0.5-1.0	.10	.17			
	52-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Bardley----------	0-4	5-15	52-75	18-27	1.40-1.55	4.00-14.00	0.12-0.17	0.1-2.9	2.0-4.0	.28	.37	2	8	0
	4-8	10-30	45-75	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	2-15	5-25	60-90	1.20-1.40	4.00-14.00	0.08-0.12	3.0-5.9	0.5-1.0	.17	.17			
	27-80	---	---	---	---	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	5	56
	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	.17	.37			
	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			
	23-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
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	.05	.20			

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73055:														
Alred----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	4	8	0
	1-7	10-40	50-80	5-15	1.20-1.45	4.00-14.00	0.09-0.15	0.1-2.9	1.0-10	.20	.43			
	7-11	10-40	50-80	5-15	1.25-1.45	4.00-14.00	0.12-0.17	0.1-2.9	0.5-2.0	.20	.49			
	11-30	10-40	40-80	10-27	1.40-1.55	4.00-14.00	0.06-0.15	0.1-2.9	0.2-1.0	.15	.49			
	30-80	0-30	5-40	45-95	1.50-1.65	0.42-1.40	0.07-0.09	3.0-5.9	0.1-1.0	.10	.17			
Rueter----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	0
	1-4	10-40	50-80	5-15	1.05-1.25	14.00-42.00	0.09-0.15	0.1-2.9	2.0-10	.15	.37			
	4-17	10-40	50-80	5-15	1.05-1.25	14.00-42.00	0.12-0.18	0.1-2.9	0.2-3.0	.32	.55			
	17-32	10-40	40-80	10-27	1.15-1.35	14.00-42.00	0.06-0.15	0.1-2.9	0.2-1.0	.15	.49			
	32-43	5-35	25-50	27-50	1.30-1.50	4.00-14.00	0.05-0.08	0.1-2.9	0.2-1.0	.10	.32			
	43-71	1-30	5-40	60-95	1.50-1.70	4.00-14.00	0.04-0.09	3.0-5.9	0.2-0.5	.05	.10			
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	.15	.37	4	7	38
	5-10	14-45	45-68	9-25	1.25-1.45	14.00-42.00	0.08-0.22	0.0-2.9	0.8-2.0	.20	.43			
	10-18	11-50	32-64	27-40	1.40-1.55	4.00-14.00	0.05-0.20	0.0-2.9	0.2-0.8	.28	.32			
	18-42	1-36	20-50	40-70	1.40-1.55	1.40-4.00	0.04-0.11	3.0-5.9	0.1-0.5	.15	.17			
	42-80	1-27	19-42	40-80	1.60-1.80	0.42-1.40	0.01-0.04	3.0-5.9	0.0-0.5	.15	.15			
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	.20	.49	4	7	38
	7-21	13-25	47-75	12-28	1.30-1.50	4.00-14.00	0.02-0.11	0.1-2.9	0.2-1.0	.24	.64			
	21-34	11-32	40-72	17-40	1.60-1.90	0.01-0.42	0.01-0.05	0.1-5.9	0.1-0.3	.17	.49			
	34-80	6-40	10-50	35-80	1.30-1.60	14.00-42.00	0.01-0.03	3.0-5.9	0.1-0.3	.10	.24			
Poynor----------	0-4	12-37	50-80	6-15	1.20-1.45	14.00-42.00	0.04-0.12	0.1-2.9	1.0-3.0	.15	.43	3	7	38
	4-10	15-30	50-70	8-16	1.25-1.45	14.00-42.00	0.02-0.09	0.1-2.9	0.2-1.0	.15	.49			
	10-28	5-15	50-80	15-35	1.40-1.55	14.00-42.00	0.02-0.09	0.1-2.9	0.1-0.8	.15	.43			
	28-80	2-40	5-40	45-86	1.50-1.65	4.00-14.00	0.07-0.09	3.0-5.9	0.1-0.5	.10	.20			
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	.15	.64			
	17-27	10-20	50-70	27-35	1.40-1.55	4.00-14.00	0.09-0.13	0.1-2.9	0.2-0.5	.15	.43			
	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	.10	.15			
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	.05	.20	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	4.00-14.00	0.08-0.12	3.0-5.9	0.5-1.0	.15	.15			
	27-80	---	---	---	---	0.00-0.42	---	---	---	---	---			
Rock outcrop---------	0-80	---	---	---	---	0.00-0.11	---	---	---	---	---	--	---	---
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	.15	.28			
	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	---	---	---	---			
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	.10	.10			
Rock outcrop---------	0-80	---	---	---	---	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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73139:														
Poynor----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	0
	1-4	10-40	50-80	5-15	1.20-1.45	14.00-42.00	0.15-0.20	0.1-2.9	1.0-8.0	.15	.32			
	4-13	10-40	50-80	5-15	1.25-1.45	14.00-42.00	0.12-0.18	0.1-2.9	0.2-2.0	.20	.43			
	13-24	10-40	40-80	15-30	1.40-1.55	14.00-42.00	0.05-0.12	0.1-2.9	0.2-1.0	.10	.43			
	24-80	1-30	10-50	45-90	1.50-1.65	4.00-14.00	0.07-0.09	3.0-5.9	0.2-0.3	.05	.10			
Clarksville----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	0
	1-5	10-40	50-70	5-15	1.20-1.40	14.00-42.00	0.15-0.20	0.1-2.9	2.0-10	.17	.28			
	5-8	10-40	50-70	5-15	1.20-1.40	14.00-42.00	0.12-0.18	0.1-2.9	0.5-2.0	.17	.37			
	8-18	10-40	40-80	10-27	1.30-1.45	14.00-42.00	0.09-0.14	0.1-2.9	0.1-1.0	.10	.32			
	18-42	15-50	20-60	20-40	1.35-1.55	4.00-14.00	0.05-0.12	0.1-2.9	0.1-0.5	.10	.28			
	42-65	10-40	15-40	40-60	1.35-1.55	4.00-14.00	0.04-0.08	3.0-5.9	0.1-0.2	.20	.24			
Scholten----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	0
	1-3	10-40	50-80	5-15	1.20-1.40	14.00-42.00	0.15-0.20	0.1-2.9	2.0-7.0	.28	.43			
	3-8	10-40	50-80	5-15	1.20-1.40	4.00-14.00	0.12-0.18	0.1-2.9	1.0-2.0	.37	.55			
	8-17	5-30	50-80	10-36	1.30-1.45	4.00-14.00	0.08-0.12	0.1-2.9	0.7-2.0	.17	.37			
	17-41	5-30	50-80	15-30	1.55-1.75	0.01-0.42	0.02-0.06	0.1-2.9	0.2-0.3	.17	.43			
	41-80	5-25	10-50	35-80	1.35-1.55	14.00-42.00	0.01-0.05	3.0-5.9	0.0-0.2	.15	.24			
73140:														
Clarksville----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	0
	1-6	10-40	50-70	5-15	1.20-1.40	14.00-42.00	0.15-0.20	0.0-2.9	2.0-10	.15	.37			
	6-13	10-40	50-70	5-15	1.20-1.40	14.00-42.00	0.12-0.18	0.0-2.9	0.5-2.0	.20	.49			
	13-21	10-40	40-80	10-27	1.30-1.45	14.00-42.00	0.09-0.14	0.0-2.9	0.2-1.0	.15	.49			
	21-43	15-50	20-60	20-40	1.35-1.55	4.00-14.00	0.05-0.12	0.0-2.9	0.2-0.5	.05	.28			
	43-66	10-40	15-40	40-60	1.35-1.55	4.00-14.00	0.04-0.08	3.0-5.9	0.1-0.2	.05	.15			
Scholten----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	0
	1-6	10-40	50-80	5-15	1.20-1.40	14.00-42.00	0.09-0.15	0.0-2.9	1.0-5.0	.10	.37			
	6-13	10-40	50-80	5-15	1.20-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.6-2.0	.15	.43			
	13-34	20-52	20-60	10-30	1.30-1.45	4.00-14.00	0.06-0.10	0.0-2.9	0.1-0.7	.05	.32			
	34-58	15-45	20-60	15-30	1.55-1.75	0.01-0.42	0.02-0.06	0.0-2.9	0.0-0.5	.17	.43			
	58-80	10-45	10-50	35-80	1.35-1.55	14.00-42.00	0.01-0.05	3.0-5.9	0.0-0.3	.15	.32			
73143:														
Courtois----------	0-7	2-20	50-80	10-27	1.20-1.40	4.00-14.00	0.18-0.23	0.0-2.9	1.0-10	.28	.43	4	5	56
	7-15	2-20	50-75	25-40	1.25-1.55	4.00-14.00	0.17-0.21	0.0-2.9	0.5-3.0	.37	.37			
	15-32	2-25	35-60	35-50	1.40-1.60	4.00-14.00	0.06-0.14	3.0-5.9	0.2-1.0	.20	.20			
	32-80	1-25	5-40	60-95	1.30-1.60	4.00-14.00	0.06-0.10	3.0-5.9	0.1-1.0	.10	.15			
73144:														
Courtois----------	0-7	2-20	50-80	10-27	1.20-1.40	4.00-14.00	0.18-0.23	0.0-2.9	1.0-10	.28	.43	4	5	56
	7-15	2-20	50-85	25-40	1.25-1.55	4.00-14.00	0.17-0.21	0.0-2.9	0.5-3.0	.32	.32			
	15-32	2-25	35-60	35-50	1.40-1.60	4.00-14.00	0.06-0.14	3.0-5.9	0.2-1.0	.20	.20			
	32-80	1-25	5-40	60-95	1.30-1.60	4.00-14.00	0.06-0.10	3.0-5.9	0.1-1.0	.10	.15			
73147:														
Fourche----------	0-6	2-20	50-80	10-20	1.00-1.20	4.00-14.00	0.20-0.22	0.0-2.9	1.0-5.0	.43	.43	5	5	56
	6-30	2-20	55-75	20-35	1.20-1.45	1.40-4.00	0.16-0.20	0.0-2.9	0.2-0.9	.43	.43			
	30-54	2-20	40-75	25-50	1.30-1.60	1.40-4.00	0.14-0.18	0.0-2.9	0.2-0.3	.37	.37			
	54-66	1-25	10-40	50-80	1.30-1.60	1.40-4.00	0.08-0.12	3.0-5.9	0.2-0.3	.15	.15			
73155:														
Gasconade----------	0-4	2-20	40-60	40-60	1.35-1.50	4.00-14.00	0.11-0.15	3.0-5.9	6.0-12	.15	.15	1	8	0
	4-13	2-40	20-60	35-75	1.45-1.70	1.40-4.00	0.04-0.10	3.0-5.9	2.0-10	.05	.10			
	13-80	---	---	---	---	0.00-0.42	---	---	---	---	---			
Rock outcrop---------	0-80	---	---	---	---	0.00-0.42	---	---	---	---	---	--	---	---

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
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	.28	.32			
	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	.20	.24			
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	.17	.49	2	7	38
	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	7	38
	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	.17	.17			
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	.32	.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	.24	.32			
	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	.15	.28			
	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	.05	.20			
73220:														
Poynor----------	0-4	12-37	50-80	6-14	1.20-1.45	14.00-42.00	0.04-0.12	0.1-2.9	0.5-4.0	.28	.37	3	8	0
	4-10	20-31	50-70	8-27	1.25-1.45	14.00-42.00	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	4.00-14.00	0.08-0.12	3.0-5.9	0.1-0.5	.28	.28			
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	.15	.49	3	7	38
	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	.17	.55			
	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	.15	.49			
	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	.15	.15			
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	.43	.43	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	.49	.49			
	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	.49	.49			
	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	.43	.43			
73223:														
Coulstone----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	5	56
	1-4	45-70	25-50	5-12	1.20-1.45	42.00-141.00	0.05-0.18	0.1-2.9	1.0-3.0	.05	.20			
	4-11	35-70	25-50	6-24	1.25-1.45	42.00-141.00	0.03-0.09	0.1-2.9	0.2-1.0	.10	.20			
	11-31	35-60	15-55	14-35	1.40-1.55	14.00-42.00	0.02-0.10	0.1-2.9	0.1-0.3	.10	.24			
	31-39	35-60	15-55	14-40	1.40-1.55	14.00-42.00	0.02-0.10	0.1-2.9	0.1-0.3	.05	.20			
	39-80	30-55	8-40	20-55	1.50-1.65	14.00-42.00	0.03-0.11	0.1-5.9	0.1-0.3	.05	.15			
Bender----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	---	---	---	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	.05	.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	.10	.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	0.1-0.5	.05	.28			
	31-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73236:														
Scholten----------	0-7	17-33	54-74	9-13	1.20-1.40	12.00-42.00	0.07-0.19	0.1-2.9	1.0-3.0	.24	.49	4	7	38
	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	.24	.64			
	21-34	11-32	27-72	17-41	1.60-1.90	0.01-0.42	0.01-0.05	0.1-2.9	0.1-0.3	.17	.49			
	34-80	6-40	10-65	29-72	1.30-1.60	4.00-14.00	0.01-0.03	3.0-5.9	0.1-0.3	.10	.24			

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73236:														
Poynor----------	0-4	12-37	49-82	6-14	1.20-1.45	14.00-42.00	0.07-0.19	0.1-2.9	1.0-3.0	.15	.43	3	7	38
	4-10	12-37	49-82	6-14	1.25-1.45	14.00-42.00	0.07-0.19	0.1-2.9	0.7-2.0	.15	.49			
	10-28	5-38	27-85	10-35	1.40-1.55	4.00-14.00	0.11-0.18	0.1-2.9	0.2-1.0	.15	.49			
	28-80	2-41	10-50	45-86	1.50-1.65	4.00-14.00	0.08-0.12	3.0-5.9	0.1-0.5	.10	.15			
73242:														
Fanchon----------	0-5	20-40	50-70	5-15	1.35-1.45	4.00-14.00	0.18-0.24	0.0-2.9	1.0-3.0	.32	.37	5	5	56
	5-10	20-40	50-70	5-15	1.35-1.45	4.00-14.00	0.16-0.22	0.0-2.9	0.5-1.0	.37	.43			
	10-28	20-40	40-65	14-30	1.30-1.45	4.00-14.00	0.14-0.21	0.0-2.9	0.1-0.5	.37	.37			
	28-47	20-35	35-55	22-40	1.30-1.45	4.00-14.00	0.08-0.14	0.0-2.9	0.1-0.5	.15	.32			
	47-80	5-35	15-40	40-75	1.25-1.40	4.00-14.00	0.10-0.14	3.0-5.9	0.1-0.5	.10	.10			
Tonti----------	0-6	8-45	48-82	10-17	1.30-1.50	14.00-42.00	0.19-0.22	0.0-2.9	1.0-3.0	.37	.49	4	5	56
	6-22	8-40	23-77	15-37	1.30-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.3-1.0	.37	.49			
	22-35	10-50	20-78	12-30	1.60-1.90	0.01-0.42	0.02-0.04	0.0-2.9	0.1-0.5	.24	.55			
	35-80	2-25	5-60	38-75	1.20-1.40	4.00-14.00	0.03-0.11	3.0-5.9	0.1-0.4	.15	.24			
73269:														
Brussels----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	5	8	0
	1-10	1-20	40-70	27-40	1.05-1.25	1.40-4.00	0.09-0.14	3.0-5.9	4.0-8.0	.15	.28			
	10-49	1-20	30-60	35-50	1.30-1.50	1.40-4.00	0.06-0.10	3.0-5.9	2.0-4.0	.10	.28			
	49-70	1-40	30-70	20-40	1.30-1.50	1.40-4.00	0.06-0.10	3.0-5.9	0.5-2.0	.20	.37			
Gasconade----------	0-9	10-40	10-40	40-70	1.05-1.35	1.40-4.00	0.08-0.10	3.0-5.9	6.0-10	.10	.15	1	8	0
	9-14	10-40	10-50	35-70	1.30-1.50	1.40-4.00	0.04-0.07	3.0-5.9	2.0-10	.10	.20			
	14-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Rock outcrop---------	0-80	---	---	---	---	0.00-0.42	---	---	---	---	---	--	---	---
73295:														
Taterhill----------	0-9	15-40	42-75	10-18	1.35-1.45	14.00-42.00	0.18-0.24	0.0-2.9	1.0-4.0	.43	.43	5	5	56
	9-30	14-35	35-73	13-30	1.30-1.45	4.00-14.00	0.12-0.19	0.0-2.9	0.2-1.0	.37	.37			
	30-80	14-55	15-66	20-50	1.30-1.45	4.00-14.00	0.04-0.15	0.0-2.9	0.1-0.3	.10	.32			
73298:														
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	.43	.55	4	5	56
	8-20	5-20	45-75	20-35	1.30-1.50	4.00-14.00	0.12-0.18	0.1-2.9	0.1-1.0	.28	.49			
	20-34	8-20	50-75	15-35	1.60-1.90	0.00-0.42	0.02-0.08	0.1-2.9	0.1-0.5	.20	.49			
	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	.05	.24			
Hogcreek----------	0-5	8-30	60-80	8-15	1.30-1.50	14.00-42.00	0.20-0.22	0.0-2.9	1.0-3.0	.43	.49	2	5	56
	5-16	5-25	45-80	12-30	1.30-1.50	14.00-42.00	0.14-0.20	0.0-2.9	0.5-1.0	.43	.55			
	16-22	5-35	40-70	17-38	1.20-1.40	4.00-14.00	0.09-0.17	0.0-2.9	0.2-0.7	.20	.49			
	22-28	10-45	35-75	12-32	1.60-1.90	0.01-0.42	0.02-0.06	0.1-2.9	0.1-0.3	.17	.49			
	28-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73301:														
Tick----------	0-5	22-45	45-64	8-18	1.20-1.45	14.00-42.00	0.06-0.22	0.0-2.9	1.0-3.0	.17	.37	4	7	38
	5-10	14-45	45-68	9-25	1.25-1.45	14.00-42.00	0.08-0.22	0.0-2.9	0.5-2.0	.24	.43			
	10-18	11-50	32-64	14-45	1.40-1.55	4.00-14.00	0.05-0.20	0.0-2.9	0.2-1.0	.24	.32			
	18-42	1-36	21-49	32-69	1.40-1.55	1.40-4.00	0.04-0.11	3.0-5.9	0.1-0.5	.15	.17			
	42-80	1-27	19-42	40-78	1.60-1.80	0.42-1.40	0.01-0.04	3.0-5.9	0.0-0.5	.15	.15			
73308:														
Grandgulf----------	0-10	3-15	65-85	12-20	1.20-1.40	4.00-14.00	0.20-0.24	0.0-2.9	1.0-4.0	.43	.43	5	5	56
	10-48	5-20	55-80	15-30	1.20-1.50	4.00-14.00	0.18-0.22	0.0-2.9	0.2-1.0	.49	.49			
	48-80	5-30	55-75	20-30	1.20-1.50	4.00-14.00	0.12-0.22	0.0-2.9	0.2-0.8	.43	.43			

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73309:														
Clarksville----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	56
	1-5	13-37	52-75	6-16	1.20-1.45	14.00-42.00	0.07-0.20	0.0-2.9	1.0-3.0	.10	.43			
	5-11	14-36	55-70	7-16	1.20-1.45	14.00-42.00	0.10-0.17	0.1-2.9	0.5-2.0	.15	.43			
	11-42	12-32	40-60	13-35	1.20-1.45	4.00-14.00	0.06-0.11	0.1-2.9	0.3-0.8	.10	.37			
	42-80	5-35	20-55	37-70	1.30-1.55	4.00-10.00	0.04-0.10	0.1-2.9	0.1-0.3	.10	.15			
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	.49	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	.28	.49			
	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	.15	.55			
	34-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73310:														
Scholten----------	0-7	15-35	50-75	5-15	1.20-1.40	14.00-42.00	0.07-0.19	0.1-2.9	1.0-3.0	.20	.49	4	7	38
	7-21	10-25	47-75	12-30	1.30-1.50	4.00-14.00	0.02-0.11	0.1-2.9	0.2-1.0	.24	.64			
	21-34	10-35	25-75	17-40	1.60-1.90	0.01-0.42	0.01-0.05	0.1-2.9	0.1-0.3	.17	.49			
	34-80	5-40	10-65	35-75	1.30-1.60	4.00-14.00	0.01-0.03	3.0-5.9	0.1-0.3	.10	.24			
Bendavis----------	0-8	14-35	50-80	5-15	1.30-1.50	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.28	.49	2	5	56
	8-10	14-35	50-80	5-15	1.30-1.50	14.00-42.00	0.06-0.20	0.0-2.9	0.5-2.0	.28	.49			
	10-31	12-31	40-80	10-30	1.30-1.50	4.00-14.00	0.03-0.14	0.0-2.9	0.2-0.8	.24	.55			
	31-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Poynor----------	0-4	10-40	50-82	5-15	1.20-1.45	14.00-42.00	0.07-0.19	0.1-2.9	1.0-3.0	.15	.43	3	7	38
	4-10	10-40	50-82	5-15	1.25-1.45	14.00-42.00	0.07-0.19	0.1-2.9	0.7-2.0	.15	.49			
	10-28	5-40	27-85	10-35	1.40-1.55	4.00-14.00	0.11-0.18	0.1-2.9	0.2-0.8	.15	.49			
	28-80	2-40	10-60	40-86	1.50-1.65	4.00-14.00	0.02-0.16	3.0-5.9	0.1-0.5	.10	.15			
73311:														
Scholten----------	0-7	15-35	50-75	5-15	1.20-1.40	14.00-42.00	0.07-0.19	0.1-2.9	1.0-3.0	.24	.49	4	7	38
	7-21	10-25	50-75	12-30	1.30-1.50	4.00-14.00	0.02-0.11	0.1-2.9	0.2-0.7	.24	.64			
	21-34	10-35	25-75	17-40	1.60-1.90	0.01-0.42	0.01-0.05	0.1-2.9	0.1-0.3	.15	.49			
	34-80	5-40	10-65	35-75	1.30-1.60	4.00-14.00	0.01-0.03	3.0-5.9	0.1-0.3	.10	.24			
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	.49	2	5	56
	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	.43			
	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	.43			
	25-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Poynor----------	0-4	10-40	50-80	5-15	1.20-1.45	14.00-42.00	0.04-0.12	0.1-2.9	1.0-3.0	.20	.43	3	7	38
	4-10	10-40	50-80	8-27	1.25-1.45	14.00-42.00	0.02-0.09	0.1-2.9	0.2-1.0	.10	.37			
	10-28	5-40	50-80	8-35	1.40-1.55	4.00-14.00	0.02-0.09	0.1-2.9	0.1-0.8	.15	.43			
	28-80	2-40	5-60	45-85	1.50-1.65	4.00-14.00	0.08-0.12	3.0-5.9	0.1-0.5	.10	.15			
73313:														
Fanchon----------	0-5	20-40	50-70	5-15	1.35-1.45	4.00-14.00	0.18-0.24	0.0-2.9	1.0-3.0	.32	.37	5	5	56
	5-10	20-40	50-70	5-15	1.35-1.45	4.00-14.00	0.16-0.22	0.0-2.9	0.5-1.0	.37	.43			
	10-28	20-35	45-65	14-30	1.30-1.45	4.00-14.00	0.14-0.21	0.0-2.9	0.1-0.5	.37	.37			
	28-47	20-40	35-50	22-45	1.30-1.45	4.00-14.00	0.08-0.14	0.0-2.9	0.1-0.5	.10	.32			
	47-80	8-35	15-40	40-75	1.25-1.40	4.00-14.00	0.10-0.14	3.0-5.9	0.1-0.5	.10	.20			
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	.43	.55	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	.28	.49			
	20-34	10-30	35-75	15-35	1.60-1.90	0.01-0.42	0.02-0.08	0.1-2.9	0.1-0.5	.17	.55			
	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	.05	.24			
73333:														
Taterhill----------	0-11	5-40	50-80	10-20	1.35-1.45	4.00-14.00	0.20-0.22	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	11-15	5-40	50-80	10-20	1.35-1.45	4.00-14.00	0.18-0.22	0.0-2.9	0.5-1.0	.55	.55			
	15-28	5-45	35-75	15-30	1.35-1.45	4.00-14.00	0.14-0.18	0.0-2.9	0.2-0.8	.43	.49			
	28-48	5-45	30-65	18-40	1.30-1.45	4.00-14.00	0.08-0.16	0.0-2.9	0.1-0.5	.28	.37			
	48-80	5-45	30-65	18-40	1.35-1.45	4.00-14.00	0.10-0.16	0.0-2.9	0.1-0.5	.28	.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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73334:														
Horneybuck----------	0-6	5-40	50-80	10-20	1.25-1.45	4.00-14.00	0.20-0.24	0.0-2.9	1.0-4.0	.37	.37	5	5	56
	6-26	5-35	50-80	18-30	1.30-1.50	4.00-14.00	0.11-0.22	0.0-2.9	0.1-1.0	.32	.43			
	26-37	5-30	45-75	20-35	1.40-1.60	1.40-4.20	0.10-0.21	0.0-2.9	0.1-0.5	.28	.37			
	37-60	5-30	40-60	27-50	1.35-1.55	1.40-4.20	0.02-0.18	3.0-5.9	0.1-0.5	.28	.28			
73335:														
Hobson----------	0-10	5-40	50-80	8-18	0.95-1.10	4.00-14.00	0.20-0.24	0.1-2.9	1.0-4.0	.43	.43	4	6	48
	10-16	5-40	50-80	8-18	0.95-1.10	4.00-14.00	0.20-0.24	0.1-2.9	0.5-2.0	.55	.55			
	16-32	5-45	30-75	18-30	1.25-1.45	1.40-14.00	0.16-0.20	0.1-2.9	0.1-0.5	.37	.43			
	32-42	10-45	20-70	15-35	1.55-1.75	0.42-1.40	0.03-0.07	0.1-2.9	0.1-0.5	.10	.43			
	42-80	2-35	5-35	45-85	1.35-1.55	1.40-4.00	0.03-0.07	6.0-8.9	0.1-0.5	.05	.17			
Rueter----------	0-4	10-40	50-80	5-15	1.05-1.25	4.00-14.00	0.09-0.15	0.0-2.9	2.0-10	.15	.37	3	8	0
	4-17	10-40	50-80	5-15	1.05-1.25	4.00-14.00	0.12-0.18	0.0-2.9	0.2-2.0	.32	.55			
	17-32	10-40	40-80	10-27	1.15-1.35	4.00-14.00	0.05-0.15	0.0-2.9	0.2-1.0	.10	.49			
	32-43	5-35	25-50	27-50	1.30-1.50	1.40-4.00	0.04-0.08	0.0-2.9	0.2-0.7	.10	.20			
	43-71	1-30	5-40	60-95	1.50-1.70	1.40-4.00	0.04-0.09	3.0-5.9	0.1-0.5	.05	.10			
73336:														
Rueter----------	0-5	10-40	50-80	5-15	1.05-1.25	4.00-14.00	0.09-0.18	0.0-2.9	2.0-10	.15	.37	3	8	0
	5-12	10-40	50-80	5-16	1.05-1.25	4.00-14.00	0.12-0.20	0.0-2.9	0.2-2.0	.20	.49			
	12-24	10-40	40-80	10-27	1.15-1.35	4.00-14.00	0.06-0.15	0.0-2.9	0.2-1.0	.15	.37			
	24-43	5-35	25-50	27-50	1.30-1.50	1.40-4.00	0.05-0.12	0.0-2.9	0.2-0.7	.10	.20			
	43-80	1-30	5-40	60-95	1.50-1.70	1.40-4.00	0.04-0.09	3.0-5.9	0.1-0.5	.05	.10			
Gepp----------	0-5	10-40	50-80	8-18	0.95-1.05	4.00-14.00	0.09-0.15	0.0-2.9	2.0-10	.10	.24	4	8	0
	5-10	10-40	50-80	5-20	0.95-1.05	4.00-14.00	0.09-0.17	0.0-2.9	0.3-1.0	.10	.24			
	10-16	5-30	30-60	27-65	1.25-1.40	4.00-14.00	0.09-0.16	3.0-5.9	0.3-0.7	.15	.28			
	16-76	1-30	5-40	60-95	1.20-1.40	4.00-14.00	0.07-0.10	3.0-5.9	0.1-0.5	.05	.10			
73337:														
Tonti----------	0-10	5-30	60-82	8-20	1.30-1.50	4.00-14.00	0.15-0.22	0.1-2.9	1.0-4.0	.37	.43	4	5	56
	10-25	5-20	45-75	20-35	1.30-1.50	4.00-14.00	0.12-0.20	0.1-2.9	0.1-1.0	.32	.37			
	25-36	10-30	35-75	15-35	1.60-1.90	0.01-0.42	0.02-0.08	0.1-2.9	0.1-0.5	.28	.37			
	36-80	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			
Portia----------	0-6	15-45	50-75	7-15	0.95-1.15	4.00-14.00	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	6-16	15-45	30-70	14-27	1.25-1.45	4.00-14.00	0.22-0.24	0.0-2.9	0.3-1.0	.49	.49			
	16-21	20-55	10-50	20-35	1.25-1.45	4.00-14.00	0.14-0.22	0.0-2.9	0.1-0.5	.28	.37			
	21-31	20-55	5-40	35-55	1.40-1.60	4.00-14.00	0.08-0.17	3.0-5.9	0.1-0.5	.24	.28			
	31-80	1-30	5-35	60-95	1.40-1.60	4.00-14.00	0.06-0.10	3.0-5.9	0.1-0.5	.10	.15			
73338:														
Portia----------	0-6	15-45	50-75	7-15	0.95-1.15	4.00-14.00	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	6-16	15-45	30-70	14-27	1.25-1.45	4.00-14.00	0.22-0.24	0.0-2.9	0.3-1.0	.49	.49			
	16-21	20-55	10-50	20-35	1.25-1.45	4.00-14.00	0.14-0.22	0.0-2.9	0.1-0.5	.28	.37			
	21-31	20-55	5-40	35-55	1.40-1.60	4.00-14.00	0.08-0.17	3.0-5.9	0.1-0.5	.24	.28			
	31-80	1-30	5-35	60-95	1.40-1.60	4.00-14.00	0.06-0.10	3.0-5.9	0.1-0.5	.10	.15			
Hobson----------	0-8	5-40	50-80	8-18	0.95-1.10	4.00-14.00	0.20-0.24	0.1-2.9	1.0-4.0	.37	.37	4	6	48
	8-13	5-40	50-80	8-18	0.95-1.10	4.00-14.00	0.20-0.24	0.1-2.9	0.2-1.0	.43	.43			
	13-27	5-45	30-75	18-30	1.25-1.45	1.40-14.00	0.16-0.20	0.1-2.9	0.1-0.5	.37	.37			
	27-36	10-45	20-70	15-35	1.55-1.75	0.42-1.40	0.03-0.07	0.1-2.9	0.1-0.5	.05	.20			
	36-70	2-35	5-35	45-85	1.35-1.55	1.40-4.00	0.03-0.07	6.0-8.9	0.1-0.5	.05	.10			
73339:														
Arkana----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	2	8	0
	1-7	10-40	50-80	10-27	0.95-1.05	4.00-14.00	0.10-0.16	0.0-2.9	4.0-8.0	.15	.32			
	7-12	5-30	30-60	27-65	1.25-1.40	4.00-14.00	0.07-0.16	3.0-5.9	0.5-4.0	.15	.24			
	12-30	1-30	5-40	60-95	1.20-1.40	4.00-14.00	0.07-0.10	6.0-8.9	0.5-2.0	.10	.15			
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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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
73339:														
Gepp----------	0-10	10-40	50-80	8-18	0.95-1.05	4.00-14.00	0.09-0.15	0.0-2.9	2.0-10	.10	.24	4	8	0
	10-19	5-30	30-60	27-65	1.25-1.40	4.00-14.00	0.09-0.16	3.0-5.9	0.5-2.0	.15	.28			
	19-60	1-30	5-40	60-95	1.20-1.40	4.00-14.00	0.07-0.10	3.0-5.9	0.2-0.7	.05	.10			
73340:														
Rueter----------	0-6	10-40	50-80	5-15	1.05-1.25	4.00-14.00	0.08-0.16	0.0-2.9	2.0-10	.15	.37	3	8	0
	6-10	10-40	50-80	5-15	1.05-1.25	4.00-14.00	0.08-0.20	0.0-2.9	0.2-2.0	.20	.49			
	10-28	10-40	40-80	10-27	1.15-1.35	4.00-14.00	0.06-0.18	0.0-2.9	0.2-1.0	.15	.37			
	28-42	5-35	25-50	27-50	1.30-1.50	1.40-4.00	0.05-0.08	0.0-2.9	0.1-0.7	.10	.20			
	42-80	1-30	5-40	60-95	1.50-1.70	1.40-4.00	0.04-0.09	3.0-5.9	0.1-0.5	.05	.10			
Gepp----------	0-4	15-45	50-80	8-18	0.95-1.05	4.00-14.00	0.09-0.17	0.0-2.9	2.0-10	.10	.24	4	8	0
	4-9	10-40	50-80	5-20	0.95-1.05	4.00-14.00	0.09-0.17	0.0-2.9	0.3-1.0	.10	.24			
	9-17	5-30	30-60	27-65	1.25-1.40	4.00-14.00	0.07-0.16	3.0-5.9	0.2-0.7	.15	.28			
	17-72	1-30	5-40	60-95	1.20-1.40	4.00-14.00	0.07-0.10	3.0-5.9	0.1-0.5	.05	.10			
73341:														
Gepp----------	0-4	10-45	50-80	8-18	0.95-1.05	4.00-14.00	0.07-0.15	0.0-2.9	2.0-10	.10	.24	4	8	0
	4-15	5-30	30-60	27-65	1.25-1.40	4.00-14.00	0.09-0.16	3.0-5.9	0.3-1.0	.15	.28			
	15-68	1-30	5-40	60-95	1.20-1.40	4.00-14.00	0.07-0.10	3.0-5.9	0.1-0.5	.05	.10			
Arkana----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	2	8	0
	1-9	10-40	50-80	10-27	0.95-1.05	4.00-14.00	0.10-0.16	0.0-2.9	4.0-8.0	.15	.32			
	9-14	5-30	30-60	27-65	1.25-1.40	4.00-14.00	0.07-0.12	3.0-5.9	1.0-3.0	.15	.24			
	14-29	1-30	5-40	60-95	1.20-1.40	4.00-14.00	0.07-0.12	6.0-8.9	0.5-2.0	.10	.15			
	---	---	---	---	---	0.00-0.11	---	---	---	---	---			
73342:														
Alred----------	0-8	10-40	50-80	5-15	1.20-1.45	4.00-14.00	0.09-0.15	0.0-2.9	1.0-8.0	.15	.32	4	8	0
	8-11	10-40	50-80	5-15	1.25-1.45	4.00-14.00	0.12-0.17	0.0-2.9	0.5-1.0	.15	.37			
	11-24	10-40	40-80	10-27	1.40-1.55	4.00-14.00	0.06-0.15	0.0-2.9	0.2-0.7	.15	.37			
	24-67	0-30	5-40	45-95	1.50-1.65	1.40-4.00	0.07-0.09	3.0-5.9	0.1-0.5	.05	.10			
Arkana----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	2	8	0
	1-5	10-40	50-80	10-25	0.95-1.05	4.00-14.00	0.10-0.16	0.0-2.9	4.0-8.0	.15	.32			
	5-17	5-30	30-60	27-65	1.25-1.40	4.00-14.00	0.07-0.12	3.0-5.9	0.5-3.0	.15	.20			
	17-25	1-30	5-40	60-95	1.20-1.40	4.00-14.00	0.07-0.12	6.0-8.9	0.5-2.0	.10	.15			
	25-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
73361:														
Coulstone----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	3	8	0
	1-5	40-70	25-50	3-10	1.10-1.35	14.00-42.00	0.06-0.10	0.1-2.9	2.0-6.0	.05	.17			
	5-8	40-70	25-55	3-10	1.10-1.35	14.00-42.00	0.06-0.12	0.1-2.9	0.5-2.0	.10	.28			
	8-23	40-70	15-50	6-20	1.35-1.45	14.00-42.00	0.03-0.11	0.1-2.9	0.2-0.5	.10	.37			
	23-52	60-85	5-35	3-12	1.35-1.55	42.00-141.00	0.03-0.11	0.1-2.9	0.2-0.5	.10	.24			
	52-80	5-65	8-40	25-75	1.45-1.55	14.00-42.00	0.05-0.14	2.9-5.9	0.1-0.3	.20	.24			
Alred----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	4	8	0
	1-7	10-40	50-80	5-15	1.20-1.45	4.00-14.00	0.09-0.15	0.0-2.9	1.0-8.0	.20	.43			
	7-11	10-40	50-80	5-15	1.25-1.45	4.00-14.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.49			
	11-30	10-40	40-80	10-27	1.40-1.55	4.00-14.00	0.06-0.15	0.0-2.9	0.2-0.8	.15	.37			
	30-80	0-30	5-40	45-95	1.50-1.65	1.40-4.00	0.07-0.09	3.0-5.9	0.1-0.5	.05	.10			
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	3	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			

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
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			
74642:														
Cornwall----------	0-8	2-20	60-80	10-20	1.00-1.20	4.00-14.00	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	4	5	56
	8-31	2-20	60-80	20-35	1.25-1.45	4.00-14.00	0.20-0.22	0.0-2.9	0.2-1.0	.55	.55			
	31-43	2-20	50-70	15-30	1.50-1.70	0.42-1.40	0.08-0.20	0.0-2.9	0.1-0.5	.49	.49			
	43-80	2-40	20-80	20-40	1.45-1.65	4.00-14.00	0.06-0.14	0.0-2.9	0.1-0.3	.55	.55			
74643:														
Lecoma----------	0-9	5-40	50-80	8-18	0.95-1.15	4.00-14.00	0.22-0.24	0.1-2.9	1.0-2.0	.37	.37	5	5	56
	9-24	5-40	40-80	18-30	1.25-1.45	4.00-14.00	0.18-0.22	0.1-2.9	0.2-0.5	.37	.37			
	24-80	5-40	30-70	20-40	1.25-1.45	4.00-14.00	0.14-0.20	3.0-5.9	0.1-0.5	.28	.28			
74644:														
Deible----------	0-7	5-30	50-80	10-27	1.30-1.45	4.00-14.00	0.22-0.24	0.0-2.9	1.0-4.0	.55	.55	3	5	56
	7-16	5-30	50-80	10-27	1.30-1.45	4.00-14.00	0.20-0.22	0.0-2.9	0.3-1.0	.49	.49			
	16-40	2-20	40-70	35-60	1.35-1.50	0.01-0.42	0.10-0.16	6.0-8.9	0.3-0.8	.32	.32			
	40-65	2-30	30-70	25-40	1.35-1.50	1.40-4.00	0.18-0.21	3.0-5.9	0.1-0.5	.37	.43			
74648:														
Aslinger----------	0-4	10-40	50-80	10-20	0.90-1.10	4.00-14.00	0.18-0.22	0.0-2.9	2.0-4.0	.43	.43	4	5	56
	4-8	10-40	50-80	10-20	0.90-1.10	4.00-14.00	0.18-0.22	0.0-2.9	0.5-2.0	.49	.49			
	8-21	5-20	45-70	20-35	1.25-1.45	4.00-14.00	0.08-0.16	0.0-2.9	0.2-1.0	.49	.49			
	21-29	10-45	45-70	12-27	1.40-1.70	1.40-4.00	0.01-0.05	0.0-2.9	0.2-0.3	.15	.55			
	29-55	10-45	25-50	18-35	1.30-1.60	1.40-4.00	0.05-0.13	0.0-2.9	0.2-0.3	.10	.37			
	55-70	5-45	15-50	35-55	1.30-1.60	1.40-4.00	0.02-0.13	3.0-5.9	0.1-0.3	.05	.17			
74651:														
Waben----------	0-4	5-40	50-80	10-15	1.20-1.50	14.00-42.00	0.09-0.13	0.0-2.9	1.0-3.0	.20	.32	4	8	0
	4-22	5-40	40-80	12-22	1.20-1.50	14.00-42.00	0.05-0.13	0.0-2.9	0.5-1.0	.15	.49			
	22-47	15-52	28-65	15-27	1.30-1.60	14.00-42.00	0.05-0.15	0.0-2.9	0.1-0.8	.10	.32			
	47-80	20-50	20-50	27-40	1.30-1.60	14.00-42.00	0.05-0.15	0.0-2.9	0.1-0.5	.10	.24			
74658:														
Zanoni----------	0-7	30-75	20-60	7-12	1.30-1.50	14.00-42.00	0.09-0.22	0.0-2.9	1.0-4.0	.17	.20	4	3	86
	7-36	35-80	15-40	6-19	1.30-1.50	14.00-42.00	0.08-0.18	0.0-2.9	0.3-1.0	.17	.20			
	36-50	35-85	10-40	6-22	1.20-1.50	14.00-42.00	0.07-0.17	0.0-2.9	0.1-0.5	.15	.20			
	50-80	40-88	5-45	6-20	1.20-1.50	14.00-141.00	0.03-0.17	0.0-2.9	0.1-0.3	.02	.20			
75381:														
Bearthicket----------	0-6	2-40	50-85	10-20	1.20-1.40	4.00-14.00	0.22-0.24	0.0-2.9	1.0-4.0	.43	.43	5	5	56
	6-19	2-40	50-85	10-20	1.20-1.50	4.00-14.00	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43			
	19-45	2-40	50-80	15-30	1.20-1.50	4.00-14.00	0.20-0.22	0.0-2.9	0.2-1.0	.43	.43			
	45-64	2-40	40-80	10-25	1.20-1.50	4.00-14.00	0.18-0.22	0.0-2.9	0.2-0.5	.43	.43			
	64-80	40-80	10-50	5-20	1.20-1.50	4.00-14.00	0.07-0.13	0.0-2.9	0.2-0.5	.15	.15			
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	.49	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	.43	.49			
	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	.17	.37			
75394:														
Relfe----------	0-6	48-80	17-45	4-15	1.10-1.50	14.00-42.00	0.05-0.09	0.0-2.9	1.0-4.0	.10	.17	5	8	0
	6-80	85-96	2-35	1-13	1.10-1.50	42.00-141.00	0.03-0.05	0.0-2.9	0.0-0.7	.02	.10			

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
75395:														
Jamesfin----------	0-6	2-40	50-85	10-20	1.20-1.40	4.00-14.00	0.22-0.24	0.1-2.9	2.0-4.0	.37	.37	5	5	56
	6-15	2-40	50-85	10-20	1.20-1.40	4.00-14.00	0.22-0.24	0.1-2.9	1.0-2.0	.49	.49			
	15-53	2-35	50-80	15-27	1.20-1.50	4.00-14.00	0.20-0.22	0.1-2.9	0.2-1.0	.49	.49			
	53-62	2-65	30-80	7-27	1.20-1.50	4.00-14.00	0.14-0.22	0.1-2.9	0.2-1.0	.37	.43			
75408:														
Secesh----------	0-4	10-40	50-75	10-20	1.00-1.10	4.00-14.00	0.21-0.23	0.0-2.9	2.0-4.0	.20	.32	5	5	56
	4-10	10-52	28-70	10-20	1.00-1.10	4.00-14.00	0.19-0.23	0.0-2.9	0.5-2.0	.32	.37			
	10-26	10-40	35-65	18-27	1.20-1.40	4.00-14.00	0.14-0.21	0.0-2.9	0.3-1.0	.28	.43			
	26-36	40-60	20-50	15-27	1.30-1.50	4.00-14.00	0.13-0.19	0.0-2.9	0.2-0.5	.15	.28			
	36-80	52-85	5-35	10-27	1.50-1.70	14.00-42.00	0.04-0.12	0.0-2.9	0.2-0.5	.05	.24			
75409:														
Relfe----------	0-7	50-80	10-45	4-10	1.10-1.50	42.00-141.00	0.11-0.15	0.0-2.9	1.0-4.0	.02	.05	5	8	0
	7-64	75-98	2-35	1-10	1.10-1.50	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.7	.02	.05			
75411:														
Tilk----------	0-8	45-80	20-50	5-15	1.00-1.30	14.00-42.00	0.03-0.11	0.0-2.9	2.0-8.0	.05	.20	5	8	0
	8-16	45-80	20-50	5-15	1.00-1.30	14.00-42.00	0.04-0.14	0.0-2.9	0.9-2.0	.10	.37			
	16-47	35-75	20-50	7-20	1.25-1.50	14.00-42.00	0.04-0.14	0.0-2.9	0.2-1.0	.10	.28			
	47-70	52-85	5-35	5-15	1.35-1.60	42.00-141.00	0.02-0.10	0.0-2.9	0.0-0.5	.05	.15			
75416:														
Gladden----------	0-5	35-52	33-50	10-15	0.95-1.15	4.00-14.00	0.18-0.22	0.0-2.9	1.0-3.0	.32	.32	4	3	86
	5-26	20-52	33-70	10-15	0.95-1.15	4.00-14.00	0.15-0.22	0.0-2.9	0.5-1.0	.37	.37			
	26-58	30-75	20-50	5-20	1.25-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.1-1.0	.37	.37			
	58-77	70-98	2-25	1-10	1.45-1.55	42.00-140.00	0.02-0.12	0.0-2.9	0.0-0.2	.10	.10			
75417:														
Relfe----------	0-6	48-80	15-45	4-15	1.10-1.50	14.00-42.00	0.05-0.09	0.1-2.9	1.0-4.0	.05	.17	5	5	56
	6-80	85-96	2-35	1-13	1.10-1.30	42.00-141.00	0.03-0.05	0.1-2.9	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	4	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	0.2-1.0	.28	.28			
	50-80	52-85	5-35	5-27	1.35-1.60	14.00-42.00	0.04-0.10	0.1-2.9	0.1-0.5	.05	.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	.37	.37	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	.24	.32			
	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	.24	.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	.10	.24			
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	.24	4	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	.10	.28			
	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	.15			
75426:														
Gabriel----------	0-14	2-10	60-80	12-27	1.25-1.30	4.00-14.00	0.22-0.24	0.1-2.9	2.0-4.0	.37	.37	5	6	48
	14-46	2-40	50-75	25-35	1.25-1.40	1.40-4.00	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43			
	46-81	2-40	50-75	25-35	1.35-1.45	1.40-4.00	0.18-0.20	3.0-5.9	0.1-1.0	.43	.43			
75430:														
Wideman----------	0-5	50-80	10-50	5-15	1.20-1.40	42.00-141.00	0.12-0.16	0.0-2.9	1.0-3.0	.17	.17	5	1	180
	5-13	50-80	10-50	5-15	1.20-1.40	42.00-141.00	0.12-0.16	0.0-2.9	1.0-2.0	.17	.17			
	13-21	30-80	10-50	5-20	1.30-1.50	14.00-42.00	0.12-0.18	0.0-2.9	0.2-2.0	.37	.37			
	21-49	70-99	0-30	1-10	1.40-1.60	42.00-141.00	0.06-0.10	0.0-2.9	0.2-1.0	.10	.10			
	49-71	50-95	5-40	1-15	1.30-1.60	14.00-42.00	0.04-0.12	0.0-2.9	0.3-1.0	.10	.17			
75433:														
Racket----------	0-7	15-40	40-70	15-27	1.25-1.45	4.00-14.00	0.18-0.24	0.0-2.9	2.0-6.0	.20	.24	4	6	48
	7-42	15-50	40-70	18-35	1.25-1.45	4.00-14.00	0.14-0.20	3.0-5.9	1.0-2.0	.32	.32			
	42-80	60-90	5-45	3-10	1.35-1.55	14.00-141.00	0.01-0.04	0.0-2.9	0.5-1.0	.05	.15			

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
75451:														
Gladden----------	0-5	10-45	50-80	10-20	1.25-1.45	4.00-14.00	0.20-0.24	0.0-2.9	2.0-5.0	.37	.37	4	5	56
	5-53	30-75	20-55	5-20	1.30-1.50	4.00-14.00	0.12-0.19	0.0-2.9	0.5-1.0	.24	.43			
	53-80	45-85	5-40	5-20	1.30-1.55	42.00-141.00	0.02-0.13	0.0-2.9	0.1-1.0	.05	.15			
75462:														
Huzzah----------	0-6	45-80	10-50	5-15	1.25-1.45	4.00-14.00	0.18-0.24	0.0-2.9	1.0-4.0	.20	.20	5	5	56
	6-23	40-80	10-50	5-15	1.25-1.45	4.00-14.00	0.18-0.24	0.0-2.9	0.5-3.0	.20	.20			
	23-47	30-80	10-60	5-15	1.25-1.45	4.00-14.00	0.16-0.20	0.0-2.9	0.5-2.0	.15	.20			
	47-60	52-96	2-40	2-12	1.35-1.55	42.00-141.00	0.02-0.08	0.0-2.9	0.1-0.5	.10	.10			
75463:														
Huzzah----------	0-10	45-80	10-50	5-15	1.25-1.45	4.00-14.00	0.18-0.24	0.0-2.9	1.0-4.0	.20	.20	5	6	48
	10-24	40-80	10-50	5-15	1.25-1.45	4.00-14.00	0.18-0.24	0.0-2.9	1.0-3.0	.20	.20			
	24-38	30-80	10-60	5-15	1.25-1.45	4.00-14.00	0.16-0.20	0.0-2.9	0.5-2.0	.20	.20			
	38-60	52-96	2-40	2-12	1.35-1.55	42.00-141.00	0.02-0.08	0.0-2.9	0.1-0.5	.10	.10			
75464:														
Cedargap----------	0-6	30-52	28-50	10-27	1.20-1.40	14.00-42.00	0.08-0.21	0.0-2.9	3.0-6.0	.10	.15	5	8	0
	6-20	30-52	20-50	10-35	1.20-1.40	14.00-42.00	0.08-0.21	0.0-2.9	1.0-3.0	.17	.24			
	20-36	45-75	5-30	15-35	1.30-1.50	14.00-42.00	0.03-0.12	0.0-2.9	0.3-2.0	.05	.10			
	36-60	30-70	5-35	20-35	1.40-1.55	4.00-14.00	0.04-0.14	0.0-2.9	0.1-0.5	.02	.10			
75465:														
Raftville----------	0-9	45-75	10-50	5-15	1.05-1.35	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.32	.32	4	---	---
	9-24	20-52	28-60	7-20	1.25-1.50	14.00-42.00	0.14-0.20	0.0-2.9	0.5-1.0	.37	.37			
	24-39	20-60	20-50	20-35	1.30-1.50	14.00-42.00	0.10-0.18	0.0-2.9	0.2-0.5	.28	.28			
	---	---	---	---	---	0.00-0.11	---	---	---	---	---			
Gabriel----------	0-9	8-66	19-77	10-25	1.20-1.40	14.00-42.00	0.20-0.22	0.0-2.9	2.0-6.0	.43	.43	5	6	48
	9-19	2-12	60-80	12-27	1.25-1.30	4.00-14.00	0.20-0.22	0.1-2.9	2.0-4.0	.32	.32			
	19-25	2-15	50-75	12-27	1.25-1.40	1.40-4.00	0.20-0.22	3.0-5.9	0.7-2.0	.49	.49			
	25-63	2-15	50-75	25-35	1.35-1.45	1.40-4.00	0.18-0.20	3.0-5.9	0.1-1.0	.43	.43			
75466:														
Midco----------	0-8	35-50	35-50	7-15	1.10-1.30	14.00-42.00	0.10-0.12	0.0-2.9	0.5-2.0	.24	.32	5	8	0
	8-26	45-70	15-50	5-15	1.20-1.40	14.00-42.00	0.05-0.11	0.0-2.9	0.0-1.0	.24	.32			
	26-60	50-80	5-45	3-15	1.20-1.40	14.00-42.00	0.02-0.06	0.0-2.9	0.0-1.0	.24	.28			
75470:														
Farewell----------	0-8	10-40	50-70	12-27	1.20-1.40	4.00-14.00	0.20-0.24	0.0-2.9	3.0-6.0	.43	.43	5	4	86
	8-18	10-50	30-70	12-35	1.40-1.65	4.00-14.00	0.14-0.22	0.0-2.9	2.0-3.0	.32	.43			
	18-39	10-50	20-60	18-40	1.40-1.65	4.00-14.00	0.05-0.20	3.0-5.9	0.5-1.0	.24	.37			
	39-80	20-70	15-60	16-40	1.40-1.65	4.00-14.00	0.03-0.19	3.0-8.9	0.1-0.5	.10	.32			
77000:														
Killarney----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	4	8	0
	1-5	10-45	50-80	5-15	0.95-1.10	4.00-14.00	0.09-0.15	0.0-2.9	3.0-6.0	.15	.37			
	5-16	10-45	50-80	5-15	0.95-1.10	4.00-14.00	0.12-0.20	0.0-2.9	0.5-2.0	.20	.64			
	16-32	10-40	50-75	10-27	1.15-1.45	4.00-14.00	0.08-0.14	0.0-2.9	0.2-1.0	.17	.55			
	32-48	20-45	40-60	10-27	1.55-1.75	0.01-0.42	0.02-0.06	0.0-2.9	0.1-0.3	.15	.49			
	48-80	20-50	30-50	15-40	1.45-1.65	1.40-4.00	0.03-0.07	0.0-2.9	0.0-0.3	.15	.43			
Frenchmill----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	5	8	0
	1-6	10-45	50-80	5-15	1.10-1.40	4.00-14.00	0.09-0.15	0.0-2.9	1.0-8.0	.15	.37			
	6-19	10-45	45-80	5-15	1.20-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.5-2.0	.20	.43			
	19-27	10-40	50-70	10-27	1.20-1.50	4.00-14.00	0.08-0.14	0.0-2.9	0.2-0.8	.17	.49			
	27-58	23-50	30-50	12-30	1.30-1.55	4.00-14.00	0.06-0.12	0.0-2.9	0.1-0.5	.17	.37			
	58-80	23-60	15-50	20-40	1.20-1.50	4.00-14.00	0.10-0.16	0.0-2.9	0.1-0.3	.20	.20			

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 extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
77003:														
Delassus----------	0-8	5-40	50-80	5-15	1.20-1.40	4.00-14.00	0.17-0.22	0.0-2.9	2.0-5.0	.24	.37	3	5	56
	8-13	5-40	50-80	10-20	1.20-1.40	4.00-14.00	0.17-0.23	0.0-2.9	0.5-2.0	.32	.49			
	13-20	5-40	40-70	18-35	1.30-1.50	4.00-14.00	0.14-0.20	0.0-2.9	0.3-0.8	.28	.49			
	20-59	20-60	20-70	7-27	1.60-1.80	0.01-0.42	0.03-0.07	0.0-2.9	0.1-0.3	.28	.43			
	59-78	5-40	35-70	15-35	1.30-1.50	4.00-14.00	0.04-0.10	0.0-2.9	0.1-0.2	.10	.32			
77004:														
Irondale----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	2	8	0
	1-4	5-45	50-80	5-15	1.00-1.20	4.00-14.00	0.15-0.21	0.0-2.9	4.0-10	.20	.37			
	4-9	5-45	50-80	5-15	1.10-1.40	4.00-14.00	0.12-0.20	0.0-2.9	1.0-3.0	.28	.43			
	9-15	2-45	50-80	10-27	1.10-1.50	4.00-14.00	0.08-0.14	0.0-2.9	0.7-1.0	.17	.43			
	15-22	10-45	35-60	18-35	1.20-1.50	4.00-14.00	0.06-0.12	0.0-2.9	0.2-1.0	.15	.32			
	22-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
77007:														
Taumsauk----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	1	8	0
	1-5	5-45	50-80	10-20	1.10-1.30	4.00-14.00	0.15-0.21	0.0-2.9	2.0-8.0	.24	.43			
	5-17	2-45	40-80	15-35	1.30-1.50	4.00-14.00	0.06-0.14	0.0-2.9	0.5-3.0	.10	.37			
	17-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Irondale----------	0-1	---	---	---	---	42.00-141.00	0.10-0.20	---	35-90	---	---	2	8	0
	1-5	5-45	50-80	5-15	1.00-1.20	4.00-14.00	0.09-0.15	0.0-2.9	4.0-10	.15	.43			
	5-10	5-45	50-80	5-15	1.10-1.40	4.00-14.00	0.12-0.20	0.0-2.9	1.0-3.0	.17	.49			
	10-17	2-45	50-80	10-27	1.10-1.50	4.00-14.00	0.08-0.14	0.0-2.9	0.5-2.0	.20	.49			
	17-35	10-45	35-60	18-35	1.20-1.50	1.40-4.00	0.06-0.12	0.0-2.9	0.2-1.0	.10	.37			
	35-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Rock outcrop---------	0-80	---	---	---	---	0.00-0.11	---	---	---	---	---	--	---	---
77011:														
Taumsauk----------	0-4	5-45	50-80	10-20	1.10-1.30	4.00-14.00	0.06-0.14	0.0-2.9	2.0-8.0	.20	.37	1	8	0
	4-15	2-45	40-80	15-35	1.30-1.50	4.00-14.00	0.04-0.10	0.0-2.9	0.5-2.0	.10	.32			
	---	---	---	---	---	0.00-0.11	---	---	---	---	---			
Irondale----------	0-3	5-45	50-80	5-15	1.00-1.20	4.00-14.00	0.15-0.21	0.0-2.9	4.0-10	.15	.37	2	8	0
	3-6	5-45	50-80	5-15	1.10-1.40	4.00-14.00	0.12-0.20	0.0-2.9	1.0-3.0	.28	.49			
	6-13	2-45	50-80	10-27	1.40-1.55	4.00-14.00	0.09-0.16	0.0-2.9	0.7-1.0	.20	.49			
	13-28	10-45	35-60	18-35	1.40-1.65	1.40-4.00	0.06-0.14	0.0-2.9	0.7-1.0	.17	.37			
	28-80	---	---	---	---	0.00-0.11	---	---	---	---	---			
Rock outcrop---------	0-80	---	---	---	---	0.00-0.11	---	---	---	---	---	--	---	---
99001. Water														
99013. Riverwash														

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	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
70022:					
Tonti----------	0-8	5.0-15	4.0-10	5.0-6.5	0
	8-20	12-22	10-25	3.6-6.0	0
	20-34	5.0-14	5.0-15	3.6-5.0	0
	34-80	12-22	10-20	3.6-5.0	0
70026:					
Tonti----------	0-8	5.0-15	4.0-10	4.5-6.5	0
	8-20	6.0-15	4.0-12	3.5-6.0	0
	20-34	5.0-14	5.0-15	3.5-5.5	0
	34-80	12-22	10-20	3.5-5.5	0
73013:					
Lowassie----------	0-10	5.0-12	4.0-10	5.1-7.3	0
	10-18	5.0-15	5.0-15	4.5-6.0	0
	18-36	12-35	5.0-25	3.5-5.5	0
	36-80	8.0-31	6.0-32	3.5-5.5	0
73019:					
Poynor----------	0-4	8.0-18	3.0-9.0	3.5-6.5	0
	4-10	4.0-10	3.0-10	3.5-6.0	0
	10-28	5.0-15	3.0-12	3.5-6.0	0
	28-80	15-25	10-20	3.5-5.0	0
73021:					
Poynor----------	0-4	5.0-12	2.0-8.0	3.5-6.5	0
	4-10	2.0-8.0	2.0-8.0	3.5-6.0	0
	10-28	3.0-10	3.0-12	3.5-6.0	0
	28-80	15-25	12-25	3.5-5.0	0
73042:					
Niangua----------	0-3	6.0-16	3.0-13	4.5-7.3	0
	3-14	6.0-15	3.0-12	4.5-6.0	0
	14-52	30-55	23-45	5.1-7.3	0
	52-80	---	---	---	0
Bardley----------	0-4	20-30	15-25	4.5-7.3	0
	4-8	5.0-10	2.0-7.0	4.5-6.5	0
	8-27	30-50	21-40	4.5-7.3	0
	27-80	---	---	---	0
73053:					
Lily----------	0-3	3.0-12	2.0-10	3.5-5.5	0
	3-15	9.0-15	5.0-12	3.5-5.5	0
	15-21	9.0-15	5.0-12	3.5-5.5	0
	21-60	---	---	---	---
Bender----------	0-4	3.0-10	2.0-8.0	3.5-6.5	0
	4-12	3.0-10	2.0-8.0	3.5-6.5	0
	12-23	5.0-14	3.0-12	3.5-6.0	0
	23-80	---	---	---	---
73054:					
Viburnum----------	0-7	8.0-18	3.0-9.0	4.5-6.5	0
	7-20	4.0-10	3.0-10	4.5-5.5	0
	20-38	5.0-15	3.0-12	3.5-5.5	0
	38-80	15-25	10-20	3.5-5.5	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
73055:					
Alred----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-7	4.4-19	2.3-11	4.5-6.0	0
	7-11	3.7-7.6	1.6-3.9	4.5-6.0	0
	11-30	3.2-9.7	1.7-6.4	4.5-5.5	0
	30-80	9.8-46	6.7-53	5.1-6.5	0
Rueter----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-4	6.8-23	2.8-10	4.5-6.0	0
	4-17	2.5-7.0	0.8-4.1	4.5-6.0	0
	17-32	2.9-11	1.7-7.2	4.5-5.5	0
	32-43	8.6-21	5.5-17	5.1-6.0	0
	43-71	12-42	9.3-36	5.1-6.5	0
73068:					
Tick----------	0-5	5.5-11	1.7-4.6	4.5-6.5	0
	5-10	4.0-5.9	1.7-2.9	3.5-5.5	0
	10-18	4.4-8.5	3.5-7.9	3.5-5.5	0
	18-42	4.9-19	3.8-15	3.5-5.5	0
	42-80	3.1-15	2.2-12	3.5-5.5	0
73073:					
Scholten----------	0-7	4.3-8.8	2.0-4.0	4.5-6.5	0
	7-21	4.6-10	2.5-7.1	4.5-5.5	0
	21-34	6.1-11	3.9-7.5	4.5-5.5	0
	34-80	6.8-21	6.1-16	3.5-5.5	0
Poynor----------	0-4	3.0-10	3.0-8.0	4.5-6.5	0
	4-10	3.0-10	3.0-8.0	4.5-6.5	0
	10-28	3.0-10	3.0-8.0	4.5-6.5	0
	28-80	15-25	10-20	3.5-5.5	0
73080:					
Alred----------	0-4	5.0-18	4.0-16	4.5-7.3	0
	4-17	5.0-12	3.0-10	4.5-6.5	0
	17-27	8.0-13	6.0-11	4.5-6.5	0
	27-80	30-50	21-40	4.5-7.8	0
Bardley----------	0-4	5.0-18	4.0-16	5.1-7.3	0
	4-8	5.0-10	2.0-7.0	5.1-6.5	0
	8-27	30-50	21-40	6.6-7.8	0
	27-80	---	---	---	---
Rock outcrop.					
73081:					
Bender----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	4.0-18	2.0-8.0	4.5-6.0	0
	5-21	2.0-5.0	1.0-15	4.5-6.0	0
	21-31	1.0-7.0	1.0-30	4.5-6.0	0
	31-80	---	---	---	---
Alred----------	0-4	5.0-18	4.0-16	5.1-6.5	0
	4-17	5.0-12	3.0-10	5.1-6.5	0
	17-27	8.0-13	6.0-11	4.5-6.5	0
	27-80	30-50	21-40	4.5-7.3	0
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	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
73139:					
Poynor----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-4	6.9-15	2.8-7.0	3.5-6.0	0
	4-13	3.2-7.3	1.2-3.2	3.5-6.0	0
	13-24	2.9-12	1.8-8.3	4.5-5.5	0
	24-80	8.5-22	6.1-19	4.5-5.5	0
Clarksville----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	7.1-25	2.3-21	3.5-6.0	0
	5-8	3.7-8.1	1.7-5.2	3.5-6.0	0
	8-18	3.7-9.6	1.9-7.9	4.5-5.5	0
	18-42	5.1-13	3.7-9.1	4.5-5.5	0
	42-65	6.4-16	5.2-12	4.5-5.5	0
Scholten----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-3	9.2-18	3.6-8.5	3.5-6.0	0
	3-8	5.6-8.6	2.3-4.3	3.5-6.0	0
	8-17	7.3-18	4.5-13	4.5-5.5	0
	17-41	5.7-14	4.6-11	4.5-5.5	0
	41-80	7.6-22	5.2-18	4.5-5.5	0
73140:					
Clarksville----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-6	7.1-25	2.3-21	3.5-6.0	0
	6-13	3.7-8.1	1.7-5.2	3.5-6.0	0
	13-21	3.7-9.6	1.9-7.9	4.5-5.5	0
	21-43	5.1-13	3.7-9.1	4.5-5.5	0
	43-66	6.4-16	5.2-12	4.5-5.5	0
Scholten----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-6	5.5-11	1.9-4.5	3.5-6.0	0
	6-13	3.9-6.4	1.7-3.9	3.5-6.0	0
	13-34	3.0-13	1.5-12	4.5-5.5	0
	34-58	3.4-11	2.1-8.3	4.5-5.5	0
	58-80	5.8-16	4.5-14	4.5-5.5	0
73143:					
Courtois----------	0-7	8.3-24	3.5-20	5.1-7.3	0
	7-15	9.6-19	7.6-16	5.1-6.0	0
	15-32	12-21	8.5-18	5.1-6.0	0
	32-80	24-42	17-37	5.1-7.3	0
73144:					
Courtois----------	0-7	8.3-24	3.5-20	5.1-7.3	0
	7-15	9.6-19	7.6-16	5.1-6.0	0
	15-32	12-21	8.5-18	5.1-6.0	0
	32-80	24-42	17-37	5.1-7.3	0
73147:					
Fourche----------	0-6	7.5-15	3.3-16	5.6-7.3	0
	6-30	9.3-18	6.3-16	4.5-6.0	0
	30-54	9.7-18	7.4-15	4.5-5.5	0
	54-66	15-36	11-30	5.1-7.3	0
73155:					
Gasconade----------	0-4	37-53	---	6.1-7.8	0
	4-13	27-46	---	6.1-7.8	0
	13-80	---	---	---	---
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	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
73159:					
Yelton----------	0-3	3.0-12	2.0-9.0	3.5-6.5	0
	3-8	3.0-12	2.0-9.0	3.5-6.5	0
	8-19	8.0-20	5.0-16	3.5-5.5	0
	19-38	5.0-15	3.0-10	3.5-5.5	0
	38-65	8.0-20	5.0-18	3.5-5.5	0
73176:					
Bendavis----------	0-5	3.0-10	2.0-8.0	4.5-6.0	0
	5-9	3.0-10	2.0-8.0	4.5-6.0	0
	9-25	8.0-16	3.0-12	3.5-5.5	0
	25-80	---	---	---	---
Poynor----------	0-5	3.0-12	3.0-10	4.5-6.5	0
	5-11	4.0-12	3.0-10	4.5-6.0	0
	11-17	7.0-15	5.0-15	3.5-6.0	0
	17-80	20-35	15-30	3.5-5.5	0
73197:					
Viburnum----------	0-6	8.0-18	3.0-9.0	4.5-6.5	0
	6-18	4.0-10	3.0-10	4.5-5.5	0
	18-35	5.0-15	3.0-12	3.5-5.5	0
	35-80	15-25	10-20	3.5-5.5	0
73220:					
Poynor----------	0-4	8.0-18	3.0-9.0	4.5-7.3	0
	4-10	4.0-10	3.0-10	4.5-6.5	0
	10-28	5.0-15	3.0-12	4.5-6.5	0
	28-80	15-25	10-20	4.5-6.5	0
73221:					
Poynor----------	0-4	5.0-12	2.0-8.0	4.5-6.5	0
	4-10	2.0-8.0	2.0-8.0	3.5-6.0	0
	10-28	3.0-10	3.0-12	3.5-6.0	0
	28-80	15-25	12-25	3.5-5.5	0
73222:					
Splitlimb----------	0-10	8.0-12	4.0-12	4.5-6.5	0
	10-20	8.0-17	5.0-14	4.5-6.5	0
	20-29	7.0-17	4.0-13	4.5-5.5	0
	29-80	7.0-16	4.0-12	3.5-5.5	0
73223:					
Coulstone----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-4	3.0-12	2.0-9.0	4.5-6.0	0
	4-11	2.0-10	1.0-5.0	4.5-6.0	0
	11-31	3.0-18	1.0-9.0	4.5-6.0	0
	31-39	3.0-18	1.0-9.0	4.5-6.0	0
	39-80	4.0-18	1.0-9.0	3.5-6.0	0
Bender----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	4.0-18	2.0-8.0	4.5-6.0	0
	5-21	2.0-8.0	1.0-5.0	4.5-6.0	0
	21-31	2.0-15	1.0-10	3.5-6.0	0
	31-80	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
73236:					
Scholten----------	0-7	4.3-8.8	2.0-4.0	4.5-6.5	0
	7-21	4.6-10	2.5-7.1	4.5-5.5	0
	21-34	6.1-11	3.9-7.5	4.5-5.5	0
	34-80	6.8-21	6.1-16	3.5-5.5	0
Poynor----------	0-4	3.3-10	1.3-9.0	4.5-6.5	0
	4-10	3.3-10	1.3-9.0	4.5-6.5	0
	10-28	3.0-10	1.9-9.0	4.5-6.5	0
	28-80	7.4-28	5.0-23	3.5-5.5	0
73242:					
Fanchon----------	0-5	4.0-12	3.0-8.0	4.5-6.5	0
	5-10	4.0-12	3.0-12	4.5-6.5	0
	10-28	6.0-16	3.0-12	4.5-6.5	0
	28-47	8.0-16	5.0-15	4.5-6.5	0
	47-80	10-30	10-15	3.5-5.5	0
Tonti----------	0-6	5.0-9.0	3.0-8.0	4.5-6.5	0
	6-22	6.0-15	4.0-12	4.5-6.5	0
	22-35	5.0-18	4.0-12	4.5-5.5	0
	35-80	11-20	8.0-16	3.5-5.5	0
73269:					
Brussels----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-10	20-30	20-30	6.1-7.8	0
	10-49	20-30	20-30	6.1-8.4	0
	49-70	20-30	20-30	6.1-8.4	0
Gasconade----------	0-9	30-60	30-60	6.1-7.8	0
	9-14	30-60	30-60	6.1-7.8	0
	14-80	---	---	---	---
Rock outcrop.					
73295:					
Taterhill----------	0-9	5.0-16	2.0-16	4.5-7.3	0
	9-30	5.0-16	2.0-10	4.5-6.5	0
	30-80	5.0-16	2.0-12	4.5-5.5	0
73298:					
Tonti----------	0-8	5.0-15	4.0-10	4.5-6.5	0
	8-20	6.0-15	4.0-12	3.5-6.0	0
	20-34	5.0-14	5.0-15	3.5-5.5	0
	34-80	12-22	12-24	3.5-5.5	0
Hogcreek----------	0-5	8.0-18	3.0-13	4.5-6.5	0
	5-16	5.0-15	3.0-12	4.5-6.5	0
	16-22	5.0-20	3.0-18	4.5-5.5	0
	22-28	6.0-18	5.0-14	3.5-5.5	0
	28-80	---	---	---	---
73301:					
Tick----------	0-5	5.5-11	1.7-4.6	4.5-6.5	0
	5-10	4.0-5.9	1.7-2.9	3.5-5.5	0
	10-18	4.4-8.5	3.5-7.9	3.5-5.5	0
	18-42	4.9-19	3.8-15	3.5-5.5	0
	42-80	3.1-15	2.2-12	3.5-5.5	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
73308:					
Grandgulf----------	0-10	5.0-12	3.0-7.0	4.5-6.5	0
	10-48	5.0-15	3.0-7.0	4.5-6.5	0
	48-80	5.0-15	4.0-7.0	3.5-5.5	0
73309:					
Clarksville----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	8.0-17	3.0-13	4.5-6.5	0
	5-11	4.0-7.0	2.0-6.0	4.5-6.0	0
	11-42	5.0-9.0	2.0-7.0	4.5-6.0	0
	42-80	10-20	7.0-20	3.5-5.5	0
Bendavis----------	0-3	4.0-13	2.0-6.0	4.5-6.5	0
	3-14	3.0-8.0	2.0-7.0	4.5-6.0	0
	14-34	3.0-9.0	1.0-9.0	3.5-5.5	0
	34-80	---	---	---	---
73310:					
Scholten----------	0-7	4.3-8.8	2.0-4.0	4.5-6.5	0
	7-21	4.6-10	2.5-7.1	4.5-5.5	0
	21-34	6.1-11	3.9-7.5	4.5-5.5	0
	34-80	6.8-21	6.1-16	3.5-5.5	0
Bendavis----------	0-8	6.0-12	3.0-9.0	4.5-6.5	0
	8-10	3.0-8.0	3.0-6.0	4.5-6.0	0
	10-31	3.0-9.0	3.0-6.0	3.5-5.5	0
	31-80	---	---	---	---
Poynor----------	0-4	3.3-20	1.3-20	4.5-6.5	0
	4-10	3.3-18	1.3-15	3.5-6.0	0
	10-28	3.0-15	1.9-11	3.5-6.0	0
	28-80	7.4-28	5.0-23	3.5-5.5	0
73311:					
Scholten----------	0-7	4.3-8.8	2.0-4.0	4.5-6.5	0
	7-21	4.6-10	2.5-7.1	4.5-5.5	0
	21-34	6.1-11	3.9-7.5	4.5-5.5	0
	34-80	6.8-21	6.1-16	3.5-5.5	0
Bendavis----------	0-5	3.0-10	2.0-8.0	4.5-6.0	0
	5-9	3.0-10	2.0-8.0	4.5-6.0	0
	9-25	3.0-10	3.0-8.0	3.5-5.5	0
	25-80	---	---	---	---
Poynor----------	0-4	8.0-18	3.0-9.0	4.5-6.5	0
	4-10	4.0-10	3.0-10	4.5-6.5	0
	10-28	5.0-15	3.0-12	4.5-6.5	0
	28-80	15-25	10-20	3.5-5.5	0
73313:					
Fanchon----------	0-5	4.0-12	3.0-8.0	4.5-6.5	0
	5-10	4.0-12	3.0-12	4.5-6.5	0
	10-28	6.0-16	3.0-12	4.5-6.5	0
	28-47	8.0-16	5.0-15	4.5-6.5	0
	47-80	10-30	10-15	3.5-5.5	0
Tonti----------	0-8	5.0-15	4.0-10	4.5-6.5	0
	8-20	6.0-15	4.0-12	3.5-6.0	0
	20-34	5.0-14	5.0-15	3.5-5.5	0
	34-80	12-22	12-24	3.5-5.5	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
73333:					
Taterhill----------	0-11	5.0-14	2.0-12	4.5-7.3	0
	11-15	5.0-14	2.0-12	4.5-7.3	0
	15-28	6.0-15	3.0-12	4.5-6.5	0
	28-48	6.0-15	3.0-12	4.5-5.5	0
	48-80	8.0-18	4.0-15	4.5-5.5	0
73334:					
Horneybuck----------	0-6	8.0-20	5.0-15	5.1-7.3	0
	6-26	8.0-20	5.0-15	4.5-7.3	0
	26-37	8.0-20	5.0-15	4.5-5.5	0
	37-60	8.0-20	5.0-15	4.5-5.5	0
73335:					
Hobson----------	0-10	5.0-15	2.0-12	4.5-6.0	0
	10-16	5.0-15	2.0-12	4.5-6.0	0
	16-32	8.0-18	5.0-16	4.5-6.0	0
	32-42	5.0-15	2.0-12	4.5-5.5	0
	42-80	20-35	15-30	4.5-6.0	0
Rueter----------	0-4	6.8-23	2.8-10	4.5-6.0	0
	4-17	2.5-7.0	0.8-4.1	4.5-6.0	0
	17-32	2.9-11	1.7-7.2	4.5-5.5	0
	32-43	8.6-21	5.5-17	5.1-6.0	0
	43-71	12-42	9.3-36	5.1-6.5	0
73336:					
Rueter----------	0-5	6.8-23	2.8-10	4.5-6.0	0
	5-12	2.5-7.0	0.8-4.1	4.5-6.0	0
	12-24	2.9-11	1.7-7.2	4.5-5.5	0
	24-43	8.6-21	5.5-17	5.1-6.0	0
	43-80	12-42	9.3-36	5.1-6.5	0
Gepp----------	0-5	8.2-22	3.6-15	4.5-6.0	0
	5-10	7.7-22	3.6-15	4.5-6.0	0
	10-16	7.5-22	4.2-15	4.5-6.0	0
	16-76	10-37	6.5-33	5.1-6.0	0
73337:					
Tonti----------	0-10	5.0-15	4.0-10	4.5-6.5	0
	10-25	12-22	8.0-25	3.5-6.0	0
	25-36	5.0-14	5.0-15	3.5-5.5	0
	36-80	12-22	12-24	3.5-5.5	0
Portia----------	0-6	7.3-18	2.6-11	5.1-6.5	0
	6-16	4.6-9.0	2.8-6.2	4.5-6.0	0
	16-21	7.7-13	5.3-9.7	4.5-6.0	0
	21-31	9.7-25	7.0-20	4.5-6.0	0
	31-80	15-31	10-27	4.5-6.0	0
73338:					
Portia----------	0-6	7.3-18	2.6-11	5.1-6.5	0
	6-16	4.6-9.0	2.8-6.2	4.5-6.0	0
	16-21	7.7-13	5.3-9.7	4.5-6.0	0
	21-31	9.7-25	7.0-20	4.5-6.0	0
	31-80	15-31	10-27	4.5-6.0	0
Hobson----------	0-8	5.0-15	2.0-12	4.5-6.0	0
	8-13	5.0-15	2.0-12	4.5-6.0	0
	13-27	8.0-18	5.0-16	4.5-6.0	0
	27-36	5.0-15	2.0-12	4.5-5.5	0
	36-70	20-35	15-30	4.5-6.0	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
73339:					
Arkana----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-7	9.2-24	3.9-14	4.5-7.3	0
	7-12	9.0-28	6.0-22	4.5-7.3	0
	12-30	24-43	19-36	4.5-7.3	0
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Gepp----------	0-10	8.2-24	3.6-15	4.5-6.0	0
	10-19	7.5-22	4.2-15	4.5-6.0	0
	19-60	10-41	6.5-33	5.1-6.0	0
73340:					
Rueter----------	0-6	6.8-23	2.8-10	4.5-6.0	0
	6-10	2.5-7.0	0.8-4.1	4.5-6.0	0
	10-28	2.9-11	1.7-7.2	4.5-5.5	0
	28-42	8.6-21	5.5-17	5.1-6.0	0
	42-80	12-42	9.3-36	5.1-6.5	0
Gepp----------	0-4	8.2-22	3.6-15	4.5-6.0	0
	4-9	8.2-22	3.6-15	4.5-6.0	0
	9-17	7.5-22	4.2-15	4.5-6.0	0
	17-72	10-37	6.5-33	5.1-6.0	0
73341:					
Gepp----------	0-4	8.2-22	3.6-15	4.5-6.0	0
	4-15	7.5-22	4.2-15	4.5-6.0	0
	15-68	10-37	6.5-33	5.1-6.0	0
Arkana----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-9	9.2-24	3.9-14	4.5-7.3	0
	9-14	9.0-28	6.0-22	4.5-7.3	0
	14-29	24-43	19-36	4.5-7.3	0
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73342:					
Alred----------	0-8	4.4-19	2.3-11	4.5-6.0	0
	8-11	3.7-7.6	1.6-3.9	4.5-6.0	0
	11-24	3.2-9.7	1.7-6.4	4.5-5.5	0
	24-67	9.8-46	6.7-53	5.1-6.5	0
Arkana----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	9.2-24	3.9-14	4.5-7.3	0
	5-17	9.0-28	6.0-22	4.5-7.3	0
	17-25	24-43	19-36	4.5-7.3	0
	25-80	---	---	---	---
73361:					
Coulstone----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	3.0-12	2.0-9.0	4.5-6.0	0
	5-8	2.0-10	1.0-5.0	4.5-6.0	0
	8-23	2.0-10	1.0-5.0	4.5-6.0	0
	23-52	2.0-10	1.0-5.0	4.5-6.0	0
	52-80	4.0-18	1.0-9.0	3.5-5.5	0
Alred----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-7	4.4-19	2.3-11	4.5-6.0	0
	7-11	3.7-7.6	1.6-3.9	4.5-6.0	0
	11-30	3.2-9.7	1.7-6.4	4.5-5.5	0
	30-80	9.8-46	6.7-53	5.1-6.5	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
74627:					
Hartville----------	0-7	8.0-16	4.0-10	5.6-7.3	0
	7-11	8.0-16	5.0-12	5.6-7.3	0
	11-40	18-30	15-24	5.6-6.5	0
	40-80	12-25	10-25	5.6-6.5	0
74636:					
Lecoma----------	0-9	5.0-15	2.0-12	5.6-7.3	0
	9-31	10-15	8.0-15	5.1-7.3	0
	31-80	10-15	8.0-15	4.5-6.0	0
74637:					
Lecoma----------	0-7	5.0-15	2.0-10	5.6-7.3	0
	7-24	10-15	8.0-15	5.1-7.3	0
	24-80	10-15	8.0-15	4.5-6.0	0
74642:					
Cornwall----------	0-8	7.0-15	3.5-15	4.5-6.0	0
	8-31	7.0-19	6.2-19	4.5-5.5	0
	31-43	7.0-19	7.3-16	4.5-5.5	0
	43-80	7.0-20	7.2-18	4.5-5.5	0
74643:					
Lecoma----------	0-9	5.0-10	4.0-10	5.1-7.3	0
	9-24	7.0-12	4.0-10	5.1-7.3	0
	24-80	8.0-15	5.0-10	4.5-6.0	0
74644:					
Deible----------	0-7	7.2-14	4.4-13	5.1-7.3	0
	7-16	8.8-12	4.0-9.5	4.5-7.3	0
	16-40	12-33	9.3-29	4.5-7.8	0
	40-65	13-23	11-26	5.1-8.4	0
74648:					
Aslinger----------	0-4	8.3-15	3.3-8.8	4.5-6.5	0
	4-8	5.8-11	3.0-7.4	4.5-6.5	0
	8-21	10-17	6.8-14	4.5-6.0	0
	21-29	6.2-14	4.7-11	4.5-5.5	0
	29-55	5.2-12	4.0-9.3	4.5-5.5	0
	55-70	9.8-23	7.4-19	3.5-5.5	0
74651:					
Waben----------	0-4	5.0-15	4.0-12	5.1-6.5	0
	4-22	5.0-15	4.0-12	4.5-6.0	0
	22-47	5.0-15	4.0-12	4.5-5.5	0
	47-80	5.0-15	4.0-12	4.5-5.5	0
74658:					
Zanoni----------	0-7	3.0-12	0.0-10	4.5-7.3	0
	7-36	2.0-10	0.0-8.0	5.1-7.3	0
	36-50	2.0-10	0.0-8.0	5.1-7.3	0
	50-80	2.0-12	0.0-8.0	5.1-7.3	0
75381:					
Bearthicket----------	0-6	8.1-13	3.6-9.2	5.1-7.3	0
	6-19	7.9-12	4.0-8.0	5.1-7.3	0
	19-45	6.6-14	3.9-8.1	5.1-7.3	0
	45-64	5.9-12	5.4-10	5.1-7.3	0
	64-80	4.7-6.6	5.6-6.0	5.6-7.3	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
75390:					
Razort	0-7	6.0-25	6.0-27	6.1-7.3	0
	7-34	5.0-20	5.0-20	5.6-7.3	0
	34-80	5.0-20	5.0-20	5.6-7.3	0
75394:					
Relfe	0-6	6.4-12	3.9-10	5.1-7.3	0
	6-80	1.5-6.3	0.5-4.3	5.1-7.3	0
75395:					
Jamesfin	0-6	6.0-20	4.0-18	5.6-7.8	0
	6-15	6.0-20	4.0-18	5.6-7.8	0
	15-53	6.0-20	5.0-19	5.6-7.8	0
	53-62	6.0-20	5.0-19	5.6-7.8	0
75408:					
Secesh	0-4	9.3-11	4.4-7.1	5.1-6.0	0
	4-10	7.3-9.8	3.7-6.0	5.1-6.0	0
	10-26	6.9-14	3.5-11	4.5-6.0	0
	26-36	5.9-9.8	2.8-5.1	4.5-6.0	0
	36-80	5.1-8.6	3.0-4.8	4.5-6.0	0
75409:					
Relfe	0-7	5.4-12	5.4-10	5.6-7.3	0
	7-64	1.4-6.3	0.5-4.3	5.6-7.3	0
75411:					
Tilk	0-8	7.8-22	3.7-18	5.1-6.5	0
	8-16	4.7-7.1	1.8-3.8	4.5-6.0	0
	16-47	3.3-8.0	1.0-5.9	4.5-6.0	0
	47-70	2.4-8.6	0.5-6.2	5.1-6.0	0
75416:					
Gladden	0-5	7.5-11	0.0-9.8	5.6-7.3	0
	5-26	6.0-8.5	0.0-6.2	5.6-7.3	0
	26-58	2.9-12	0.0-12	5.6-7.3	0
	58-77	1.0-4.3	0.0-1.1	5.1-6.5	0
75417:					
Relfe	0-6	6.4-12	3.9-10	5.1-7.3	0
	6-80	1.5-6.3	0.5-4.3	5.1-7.3	0
Sandbur	0-8	4.0-10	2.0-10	5.6-7.3	0
	8-50	5.0-8.0	2.0-8.0	5.6-7.3	0
	50-80	2.0-10	0.5-5.0	5.1-6.5	0
75420:					
Secesh	0-8	10-16	8.0-14	5.6-7.3	0
	8-11	10-16	8.0-14	5.1-6.5	0
	11-27	12-18	8.0-14	5.1-6.0	0
	27-80	12-18	8.0-14	5.1-6.0	0
Tilk	0-8	7.0-11	1.0-10	5.1-6.5	0
	8-47	5.0-11	1.0-6.0	4.5-7.3	0
	47-80	5.0-14	0.5-6.2	5.1-7.3	0
75426:					
Gabriel	0-14	15-25	11-21	5.6-7.3	0
	14-46	15-25	10-20	5.1-7.3	0
	46-81	15-25	12-22	5.1-7.3	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
75430:					
Wideman----------	0-5	1.0-15	1.0-12	5.1-7.3	0
	5-13	1.0-15	1.0-12	5.1-7.3	0
	13-21	2.9-15	2.0-12	5.1-7.3	0
	21-49	1.0-10	1.0-10	5.1-7.3	0
	49-71	1.0-15	1.0-10	5.1-7.3	0
75433:					
Racket----------	0-7	8.0-17	0.0-10	6.1-7.3	0
	7-42	10-20	0.0-8.0	6.1-7.3	0
	42-80	2.0-8.0	0.0-8.0	6.1-7.3	0
75451:					
Gladden----------	0-5	10-20	5.0-10	5.6-7.3	0
	5-53	5.0-10	3.0-7.0	5.6-7.3	0
	53-80	5.0-10	3.0-7.0	5.1-6.5	0
75462:					
Huzzah----------	0-6	4.0-12	---	6.1-7.3	0
	6-23	4.0-12	---	6.1-7.3	0
	23-47	4.0-12	---	6.1-7.3	0
	47-60	1.0-10	---	6.1-7.3	0
75463:					
Huzzah----------	0-10	4.0-12	---	6.1-7.3	0
	10-24	4.0-12	---	6.1-7.3	0
	24-38	4.0-12	---	6.1-7.3	0
	38-60	1.0-10	---	6.1-7.3	0
75464:					
Cedargap----------	0-6	6.0-22	0.0-17	5.1-7.3	0
	6-20	6.0-22	0.0-17	5.1-7.3	0
	20-36	5.0-25	0.0-20	5.1-7.3	0
	36-60	4.0-23	0.0-19	6.6-7.8	0
75465:					
Raftville----------	0-9	5.5-12	2.9-5.4	4.5-6.0	0
	9-24	4.1-12	2.0-4.1	4.5-5.5	0
	24-39	6.5-17	4.5-13	5.0-7.3	0
	---	---	---	---	---
Gabriel----------	0-9	6.0-22	0.0-17	5.1-7.3	0
	9-19	15-25	10-21	5.1-7.3	0
	19-25	10-25	9.0-20	5.1-6.5	0
	25-63	15-25	11-22	5.1-6.5	0
75466:					
Midco----------	0-8	8.0-13	5.0-10	5.6-6.5	0
	8-26	3.0-15	2.0-10	5.1-7.3	0
	26-60	5.0-14	3.0-10	5.1-7.3	0
75470:					
Farewell----------	0-8	9.8-25	0.0-17	5.6-6.5	0
	8-18	8.2-18	0.0-20	6.1-7.3	0
	18-39	8.6-22	0.0-20	6.1-7.8	0
	39-80	7.2-23	0.0-19	6.6-7.8	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
77000:					
Killarney----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	7.5-10	2.6-7.6	4.5-6.0	0
	5-16	3.5-5.9	1.6-3.0	4.5-6.0	0
	16-32	4.2-11	2.3-8.0	4.5-5.5	0
	32-48	4.9-10	4.0-7.6	3.5-5.0	0
	48-80	6.3-12	4.3-10	4.5-5.5	0
Frenchmill----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-6	5.6-14	2.9-10	4.5-6.0	0
	6-19	3.7-8.1	2.1-3.9	4.5-5.5	0
	19-27	4.7-13	2.6-8.3	4.5-5.5	0
	27-58	6.2-25	4.2-23	4.5-5.5	0
	58-80	9.3-18	7.4-13	4.5-5.5	0
77003:					
Delassus----------	0-8	6.9-11	3.0-5.4	4.5-6.0	0
	8-13	6.0-15	3.0-5.0	4.5-6.0	0
	13-20	7.4-20	3.0-20	3.5-5.5	0
	20-59	6.0-13	3.0-13	3.5-5.5	0
	59-78	9.2-20	5.0-20	3.5-5.5	0
77004:					
Irondale----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-4	7.3-38	3.0-9.3	4.5-6.0	0
	4-9	4.8-21	2.6-5.3	3.5-6.0	0
	9-15	5.6-19	2.3-12	4.5-5.5	0
	15-22	5.6-19	3.6-12	4.5-5.5	0
	22-80	---	---	---	---
77007:					
Taumsauk----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	5.0-12	2.0-9.0	4.5-6.0	0
	5-17	7.0-18	4.0-15	3.5-5.5	0
	17-80	---	---	---	---
Irondale----------	0-1	10-40	5.0-30	3.5-6.5	0
	1-5	7.3-38	3.0-9.3	4.5-6.0	0
	5-10	4.8-21	2.6-7.0	3.5-6.0	0
	10-17	5.6-19	2.3-12	4.5-5.5	0
	17-35	5.6-19	3.6-12	4.5-5.5	0
	35-80	---	---	---	---
Rock outcrop.					
77011:					
Taumsauk----------	0-4	5.0-12	2.0-9.0	3.5-6.0	---
	4-15	7.0-18	4.0-15	3.5-5.5	---
	---	---	---	---	---
Irondale----------	0-3	7.3-20	3.6-9.3	4.5-6.0	0
	3-6	5.6-8.8	3.0-5.3	3.5-6.0	0
	6-13	6.2-14	3.5-12	4.5-5.5	0.0-1.9
	13-28	5.0-20	2.0-15	4.5-5.5	0.0-1.9
	28-80	---	---	---	---
Rock outcrop.					
99001. Water					
99013. Riverwash					

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	Hydro-logic 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
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
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	Occasional	---	None
		June	---	---	0.0-0.5	Brief	Rare	---	None
		July	---	---	0.0-0.5	Brief	Rare	---	None
		August	---	---	0.0-0.5	Brief	Rare	---	None
		September	---	---	0.0-0.5	Brief	Occasional	---	None
		October	---	---	0.0-0.5	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
73019:									
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73021:									
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73042:									
Niangua	C								
		Jan-Dec	---	---	---	---	None	---	None
Bardley	B								
		Jan-Dec	---	---	---	---	None	---	None
73053:									
Lily	B								
		Jan-Dec	---	---	---	---	None	---	None
Bender	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
73054:									
Viburnum	C								
		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
		December	1.5-1.8	2.9-3.7	---	---	None	---	None
73055:									
Alred	B								
		Jan-Dec	---	---	---	---	None	---	None
Rueter	B								
		Jan-Dec	---	---	---	---	None	---	None
73068:									
Tick	C								
		Jan-Dec	---	---	---	---	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
73080:									
Alred	B								
		Jan-Dec	---	---	---	---	None	---	None
Bardley	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									
73081:									
Bender	B								
		Jan-Dec	---	---	---	---	None	---	None
Alred	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									
73139:									
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
Clarksville	B								
		Jan-Dec	---	---	---	---	None	---	None
Scholten	C								
		December	1.0-2.4	1.2-2.5	---	---	None	---	None
		January	1.0-2.4	1.2-2.5	---	---	None	---	None
		February	1.0-2.4	1.2-2.5	---	---	None	---	None
		March	1.0-2.4	1.2-2.5	---	---	None	---	None
		April	1.0-2.4	1.2-2.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
73140:									
Clarksville	B								
		Jan-Dec	---	---	---	---	None	---	None
Scholten	C								
		January	1.2-2.9	1.3-3.0	---	---	None	---	None
		February	1.2-2.9	1.3-3.0	---	---	None	---	None
		March	1.2-2.9	1.3-3.0	---	---	None	---	None
		April	1.2-2.9	1.3-3.0	---	---	None	---	None
		December	1.2-2.9	1.3-3.0	---	---	None	---	None
73143:									
Courtois	B								
		Jan-Dec	---	---	---	---	None	---	None
73144:									
Courtois	B								
		Jan-Dec	---	---	---	---	None	---	None
73147:									
Fourche	B								
		December	2.0-3.0	>6.0	---	---	None	---	None
		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
73155:									
Gasconade	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									
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								
		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
		December	1.2-1.7	2.6-3.2	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: 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
73236:									
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
73242:									
Fanchon	B								
		Jan-Dec	---	---	---	---	None	---	None
Tonti	C								
		January	1.1-2.3	1.3-2.5	---	---	None	---	None
		February	1.1-2.3	1.3-2.5	---	---	None	---	None
		March	1.1-2.3	1.3-2.5	---	---	None	---	None
		April	1.1-2.3	1.3-2.5	---	---	None	---	None
		December	1.1-2.3	1.3-2.5	---	---	None	---	None
73269:									
Brussels	C								
		Jan-Dec	---	---	---	---	None	---	None
Gasconade	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
73295:									
Taterhill	B								
		Jan-Dec	---	---	---	---	None	---	None
73298:									
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
		April	1.5-2.5	2.0-3.0	---	---	None	---	None
		December	1.5-2.5	2.0-3.0	---	---	None	---	None
Hogcreek	C								
		January	1.3-2.7	1.5-2.8	---	---	None	---	None
		February	1.3-2.7	1.5-2.8	---	---	None	---	None
		March	1.3-2.7	1.5-2.8	---	---	None	---	None
		April	1.3-2.7	1.5-2.8	---	---	None	---	None
		December	1.3-2.7	1.5-2.8	---	---	None	---	None
73301:									
Tick	C								
		Jan-Dec	---	---	---	---	None	---	None
73308:									
Grandgulf	B								
		January	---	---	0.0-0.5	Very brief	Rare	---	None
		February	---	---	0.0-0.5	Very brief	Rare	---	None
		March	---	---	0.0-0.5	Very brief	Rare	---	None
		April	---	---	0.0-0.5	Very brief	Rare	---	None
		May	---	---	0.0-0.5	Very brief	Rare	---	None
		June	---	---	0.0-0.5	Very brief	Rare	---	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	Rare	---	None
		November	---	---	0.0-0.5	Very brief	Rare	---	None
		December	---	---	0.0-0.5	Very brief	Rare	---	None
73309:									
Clarksville	C								
		Jan-Dec	---	---	---	---	None	---	None
Bendavis	C								
		January	2.0-3.0	2.3-3.4	---	---	None	---	None
		February	2.0-3.0	2.3-3.4	---	---	None	---	None
		March	2.0-3.0	2.3-3.4	---	---	None	---	None
		April	2.0-3.0	2.3-3.4	---	---	None	---	None
		December	2.0-3.0	2.3-3.4	---	---	None	---	None
73310:									
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
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

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
73310:									
Poynor	B								
		Jan-Dec	---	---	---	---	None	---	None
73311:									
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
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
73313:									
Fanchon	B								
		Jan-Dec	---	---	---	---	None	---	None
Tonti	C								
		January	1.5-2.5	5.9-5.9	---	---	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
73333:									
Taterhill	B								
		Jan-Dec	---	---	---	---	None	---	None
73334:									
Horneybuck	C								
		January	1.5-2.5	1.7-5.7	---	---	None	---	None
		February	1.5-2.5	1.7-5.7	---	---	None	---	None
		March	1.5-2.5	1.7-5.7	---	---	None	---	None
		April	1.5-2.5	1.7-5.7	---	---	None	---	None
		May	1.5-2.5	1.7-5.7	---	---	None	---	None
		November	1.5-2.5	1.7-5.7	---	---	None	---	None
		December	1.5-2.5	1.7-5.7	---	---	None	---	None
73335:									
Hobson	C								
		December	1.5-2.5	2.0-3.0	---	---	None	---	None
		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
		April	1.5-2.5	2.0-3.0	---	---	None	---	None
Rueter	B								
		Jan-Dec	---	---	---	---	None	---	None
73336:									
Rueter	B								
		Jan-Dec	---	---	---	---	None	---	None
Gepp	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
73337:									
Tonti	C								
		December	1.5-2.5	2.0-3.0	---	---	None	---	None
		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
		April	1.5-2.5	2.0-3.0	---	---	None	---	None
Portia	C								
		Jan-Dec	---	---	---	---	None	---	None
73338:									
Portia	C								
		Jan-Dec	---	---	---	---	None	---	None
Hobson	C								
		December	1.5-2.5	2.0-3.0	---	---	None	---	None
		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
		April	1.5-2.5	2.0-3.0	---	---	None	---	None
73339:									
Arkana	C								
		Jan-Dec	---	---	---	---	None	---	None
Gepp	B								
		Jan-Dec	---	---	---	---	None	---	None
73340:									
Rueter	B								
		Jan-Dec	---	---	---	---	None	---	None
Gepp	B								
		Jan-Dec	---	---	---	---	None	---	None
73341:									
Gepp	B								
		Jan-Dec	---	---	---	---	None	---	None
Arkana	C								
		Jan-Dec	---	---	---	---	None	---	None
73342:									
Alred	B								
		Jan-Dec	---	---	---	---	None	---	None
Arkana	C								
		Jan-Dec	---	---	---	---	None	---	None
73361:									
Coulstone	B								
		Jan-Dec	---	---	---	---	None	---	None
Alred	B								

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: 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
74636:									
Lecoma	B								
		Jan-Dec	---	---	---	---	None	---	None
74637:									
Lecoma	B								
		Jan-Dec	---	---	---	---	None	---	None
74642:									
Cornwall	C								
		December	1.4-2.7	>6.0	---	Brief	Rare	---	None
		January	1.4-2.7	>6.0	---	Brief	Rare	---	None
		February	1.4-2.7	>6.0	---	Brief	Rare	---	None
		March	1.4-2.7	>6.0	---	Brief	Rare	---	None
		April	1.4-2.7	>6.0	---	Brief	Rare	---	None
74643:									
Lecoma	B								
		Jan-Dec	---	---	---	---	None	---	None
74644:									
Deible	D								
		December	0.0-1.0	1.5-3.0	---	---	None	---	None
		January	0.0-1.0	1.5-3.0	---	---	None	---	None
		February	0.0-1.0	1.5-3.0	---	---	None	---	None
		March	0.0-1.0	1.5-3.0	---	---	None	---	None
		April	0.0-1.0	1.5-3.0	---	---	None	---	None
74648:									
Aslinger	C								
		December	1.5-2.5	2.5-3.0	---	---	None	---	None
		January	1.5-2.5	2.5-3.0	---	---	None	---	None
		February	1.5-2.5	2.5-3.0	---	---	None	---	None
		March	1.5-2.5	2.5-3.0	---	---	None	---	None
		April	1.5-2.5	2.5-3.0	---	---	None	---	None
74651:									
Waben	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
74658:									
Zanoni----------	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
75381:									
Bearthicket----------	B								
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
		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
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
75394:									
Relfe----------	A								
		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	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
75395:									
Jamesfin	B								
		November	---	---	---	---	None	Very brief	Occasional
		December	4.0-6.0	>6.0	---	---	None	Very brief	Occasional
		January	4.0-6.0	>6.0	---	---	None	Very brief	Occasional
		February	4.0-6.0	>6.0	---	---	None	Very brief	Occasional
		March	4.0-6.0	>6.0	---	---	None	Very brief	Occasional
		April	4.0-6.0	>6.0	---	---	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
75408:									
Secesh	B								
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
		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
75409:									
Relfe	A								
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional
		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
75411:									
Tilk	A								
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
		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

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
75416:									
Gladden	B								
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional
		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
75417:									
Relfe	A								
		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
		December	---	---	---	---	None	Very brief	Frequent
Sandbur	A								
		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
		December	---	---	---	---	None	Very brief	Frequent
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	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: 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
75426:									
Gabriel	B/D								
		November	1.0-2.5	>6.0	---	---	None	Brief	Rare
		December	1.0-2.5	>6.0	---	---	None	Brief	Rare
		January	1.0-2.5	>6.0	---	---	None	Brief	Rare
		February	1.0-2.5	>6.0	---	---	None	Brief	Rare
		March	1.0-2.5	>6.0	---	---	None	Brief	Rare
		April	1.0-2.5	>6.0	---	---	None	Brief	Rare
		May	1.0-2.5	>6.0	---	---	None	Brief	Rare
		June	---	---	---	---	None	Brief	Very rare
		July	---	---	---	---	None	Brief	Very rare
		August	---	---	---	---	None	Brief	Very rare
		September	---	---	---	---	None	Brief	Very rare
		October	---	---	---	---	None	Brief	Very rare
75430:									
Wideman	A								
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional
		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
75433:									
Racket	B								
		January	---	---	---	---	None	Very brief	Occasional
		February	3.5-6.0	>6.0	---	---	None	Very brief	Occasional
		March	3.5-6.0	>6.0	---	---	None	Very brief	Occasional
		April	3.5-6.0	>6.0	---	---	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	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
75451:									
Gladden	B								
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional
		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
75462:									
Huzzah	B								
		November	---	---	---	---	None	Brief	Occasional
		December	---	---	---	---	None	Brief	Occasional
		January	---	---	---	---	None	Brief	Occasional
		February	---	---	---	---	None	Brief	Occasional
		March	---	---	---	---	None	Brief	Occasional
		April	---	---	---	---	None	Brief	Occasional
		May	---	---	---	---	None	Brief	Occasional
		June	---	---	---	---	None	Brief	Rare
		July	---	---	---	---	None	Brief	Rare
		August	---	---	---	---	None	Brief	Rare
		September	---	---	---	---	None	Brief	Rare
		October	---	---	---	---	None	Brief	Rare
75463:									
Huzzah	B								
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
		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
75464:									
Cedargap	B								
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
		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

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
75465:									
Raftville	B								
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
		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
Gabriel	B/D								
		November	1.0-2.5	>6.0	---	---	None	Brief	Rare
		December	1.0-2.5	>6.0	---	---	None	Brief	Rare
		January	1.0-2.5	>6.0	---	---	None	Brief	Rare
		February	1.0-2.5	>6.0	---	---	None	Brief	Rare
		March	1.0-2.5	>6.0	---	---	None	Brief	Rare
		April	1.0-2.5	>6.0	---	---	None	Brief	Rare
		May	1.0-2.5	>6.0	---	---	None	Brief	Rare
		June	---	---	---	---	None	Brief	Very rare
		July	---	---	---	---	None	Brief	Very rare
		August	---	---	---	---	None	Brief	Very rare
		September	---	---	---	---	None	Brief	Very rare
		October	---	---	---	---	None	Brief	Very rare
75466:									
Midco	A								
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional
		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
75470:									
Farewell	D								
		November	0.0-0.5	>6.0	---	---	None	Very brief	Rare
		December	0.0-0.5	>6.0	---	---	None	Very brief	Rare
		January	0.0-0.5	>6.0	---	---	None	Very brief	Rare
		February	0.0-0.5	>6.0	---	---	None	Very brief	Rare
		March	0.0-0.5	>6.0	---	---	None	Very brief	Rare
		April	0.0-0.5	>6.0	---	---	None	Very brief	Rare
		May	0.0-0.5	>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

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
77000:									
Killarney	C								
		December	2.0-3.0	2.5-3.5	---	---	None	---	None
		January	2.0-3.0	2.5-3.5	---	---	None	---	None
		February	2.0-3.0	2.5-3.5	---	---	None	---	None
		March	2.0-3.0	2.5-3.5	---	---	None	---	None
		April	2.0-3.0	2.5-3.5	---	---	None	---	None
Frenchmill	B								
		Jan-Dec	---	---	---	---	None	---	None
77003:									
Delassus	C								
		December	1.8-2.5	2.0-3.0	---	---	None	---	None
		January	1.8-2.5	2.0-3.0	---	---	None	---	None
		February	1.8-2.5	2.0-3.0	---	---	None	---	None
		March	1.8-2.5	2.0-3.0	---	---	None	---	None
		April	1.8-2.5	2.0-3.0	---	---	None	---	None
77004:									
Irondale	C								
		Jan-Dec	---	---	---	---	None	---	None
77007:									
Taumsauk	D								
		Jan-Dec	---	---	---	---	None	---	None
Irondale	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									
77011:									
Taumsauk	D								
		Jan-Dec	---	---	---	---	None	---	None
Irondale	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.									
99013:									
Riverwash	---								
		January	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		February	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		March	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		April	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		May	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		June	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		July	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		August	0.0-2.0	>6.0	---	---	None	Long	Frequent
		September	0.0-2.0	>6.0	---	---	None	Long	Frequent
		October	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		November	0.0-2.0	>6.0	---	---	None	Very long	Frequent
		December	0.0-2.0	>6.0	---	---	None	Very long	Frequent

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
70026:							
Tonti	Fragipan	13-25	10-36	Noncemented	Moderate	High	High
73013:							
Lowassie	---	---	---	---	Moderate	High	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
73042:							
Niangua	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	High
Bardley	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
73053:							
Lily	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
Bender	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
73054:							
Viburnum	---	---	---	---	Moderate	High	Moderate
73055:							
Alred	Strongly contrasting textural stratification	14-40	---	Noncemented	Moderate	Moderate	High
Rueter	---	---	---	---	Moderate	Moderate	Moderate
73068:							
Tick	Dense material	22-66	14-58	Noncemented	Moderate	High	High
73073:							
Scholten	Fragipan	14-31	6-29	Noncemented	Moderate	High	High
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	High	High
73080:							
Alred	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	High	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In				
73080:							
Bardley	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-4	---	Indurated	---	---	---
73081:							
Bender	Bedrock (lithic)	20-39	41-61	Indurated	Moderate	Low	High
Alred	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
Rock outcrop	Bedrock (lithic)	0-4	---	Indurated	None	---	---
73139:							
Poynor	Strongly contrasting textural stratification	14-40	---	Noncemented	Moderate	High	High
Clarksville	---	---	---	---	Moderate	Moderate	High
Scholten	Fragipan	14-30	6-35	Noncemented	Moderate	High	High
73140:							
Clarksville	---	---	---	---	Moderate	Moderate	High
Scholten	Fragipan	16-36	6-35	Noncemented	Moderate	High	High
73143:							
Courtois	---	---	---	---	Moderate	High	Moderate
73144:							
Courtois	---	---	---	---	Moderate	High	Moderate
73147:							
Fourche	---	---	---	---	High	Moderate	High
73155:							
Gasconade	Bedrock (lithic)	4-20	---	Indurated	Moderate	High	Low
Rock outcrop	Bedrock (lithic)	0-4	---	Indurated	None	---	---
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
73220:							
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High

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				
73221:							
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73222:							
Splitlimb	---	---	---	---	High	High	Moderate
73223:							
Coulstone	---	---	---	---	Moderate	Low	High
Bender	Bedrock (lithic)	20-39	41-61	Indurated	Moderate	Low	High
73236:							
Scholten	Fragipan	14-31	6-29	Noncemented	None	Moderate	High
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	None	Moderate	High
73242:							
Fanchon	---	---	---	---	Low	Moderate	Moderate
Tonti	Fragipan	16-28	10-25	Noncemented	None	High	High
73269:							
Brussels	---	---	---	---	Moderate	Moderate	Low
Gasconade	Bedrock (lithic)	4-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-4	---	Indurated	None	---	---
73295:							
Taterhill	---	---	---	---	Low	Moderate	Moderate
73298:							
Tonti	Fragipan	16-28	10-25	Noncemented	Moderate	High	High
Hogcreek	Fragipan	18-32	7-14	Noncemented	---	High	High
	Bedrock (lithic)	28-40	40-52	Indurated			
73301:							
Tick	Dense material	22-66	14-58	Noncemented	Moderate	High	High
73308:							
Grandgulf	---	---	---	---	None	Moderate	Moderate
73309:							
Clarksville	---	---	---	---	Moderate	Moderate	High
Bendavis	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High

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				
73310:							
Scholten	Fragipan	14-31	6-29	Noncemented	None	Moderate	High
Bendavis	Bedrock (lithic)	20-39	41-60	Indurated	Moderate	Moderate	High
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	None	Moderate	High
73311:							
Scholten	Fragipan	14-31	6-29	Noncemented	None	Moderate	High
Bendavis	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
Poynor	Strongly contrasting textural stratification	15-39	41-65	Noncemented	Moderate	Moderate	High
73313:							
Fanchon	---	---	---	---	Low	Moderate	Moderate
Tonti	Fragipan	13-25	10-36	Noncemented	Moderate	High	High
73333:							
Taterhill	---	---	---	---	None	Moderate	Moderate
73334:							
Horneybuck	---	---	---	---	Moderate	High	High
73335:							
Hobson	Fragipan	20-40	6-36	Noncemented	Moderate	Moderate	High
Rueter	---	---	---	---	Moderate	Low	High
73336:							
Rueter	---	---	---	---	Moderate	Moderate	High
Gepp	---	---	---	---	Moderate	High	High
73337:							
Tonti	Fragipan	16-28	10-25	Noncemented	Moderate	High	High
Portia	---	---	---	---	None	High	High
73338:							
Portia	---	---	---	---	None	High	High
Hobson	Fragipan	18-27	6-24	Noncemented	Moderate	Moderate	High
73339:							
Arkana	Bedrock (lithic)	20-40	---	Indurated	Moderate	High	Moderate
Gepp	---	---	---	---	Moderate	High	High
73340:							
Rueter	---	---	---	---	Moderate	Moderate	High
Gepp	---	---	---	---	Moderate	High	High

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				
73341:							
Gepp	---	---	---	---	Moderate	High	High
Arkana	Bedrock (lithic)	20-40	---	Indurated	Moderate	High	Moderate
73342:							
Alred	Strongly contrasting textural stratification	16-42	---	Noncemented	Moderate	Moderate	High
Arkana	Bedrock (lithic)	20-40	---	Indurated	Moderate	High	Moderate
73361:							
Coulstone	---	---	---	---	Moderate	Low	High
Alred	Strongly contrasting textural stratification	14-40	---	Noncemented	Moderate	Moderate	High
74627:							
Hartville	---	---	---	---	Moderate	High	Moderate
74636:							
Lecoma	---	---	---	---	Moderate	Moderate	High
74637:							
Lecoma	---	---	---	---	Moderate	Moderate	High
74642:							
Cornwall	---	---	---	---	High	Moderate	High
74643:							
Lecoma	---	---	---	---	Moderate	Moderate	High
74644:							
Deible	Abrupt textural change	8-22	---	Noncemented	High	High	Moderate
74648:							
Aslinger	---	---	---	---	High	High	High
74651:							
Waben	---	---	---	---	Moderate	Low	Moderate
74658:							
Zanoni	---	---	---	---	Moderate	Low	Low
75381:							
Bearthicket	---	---	---	---	High	Low	Low
75390:							
Razort	---	---	---	---	None	Low	Low
75394:							
Relfe	---	---	---	---	Low	Low	Moderate
75395:							
Jamesfin	---	---	---	---	High	Low	Moderate
75408:							
Secesh	---	---	---	---	Moderate	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				
75409:							
Relfe	---	---	---	---	Low	Low	Moderate
75411:							
Tilk	---	---	---	---	Moderate	Moderate	High
75416:							
Gladden	---	---	---	---	Moderate	Low	Moderate
75417:							
Relfe	---	---	---	---	Low	Low	Moderate
Sandbur	---	---	---	---	Moderate	Low	Low
75420:							
Secesh	---	---	---	---	Moderate	Low	Moderate
Tilk	---	---	---	---	Moderate	Low	Moderate
75426:							
Gabriel	---	---	---	---	High	High	Moderate
75430:							
Wideman	---	---	---	---	Low	Low	Low
75433:							
Racket	---	---	---	---	Moderate	Moderate	Low
75451:							
Gladden	---	---	---	---	Moderate	High	High
75462:							
Huzzah	---	---	---	---	Moderate	Low	Moderate
75463:							
Huzzah	---	---	---	---	Moderate	Moderate	Low
75464:							
Cedargap	---	---	---	---	Moderate	Low	Low
75465:							
Raftville	Bedrock (lithic)	20-40	40-60	Indurated	Moderate	Low	Moderate
Gabriel	---	---	---	---	High	High	Moderate
75466:							
Midco	---	---	---	---	Moderate	Low	Moderate
75470:							
Farewell	---	---	---	---	None	High	Moderate
77000:							
Killarney	Fragipan	26-34	12-48	Noncemented	Moderate	Moderate	High
Frenchmill	---	---	---	---	Moderate	Moderate	High
77003:							
Delassus	Fragipan	20-36	20-48	Noncemented	Moderate	High	High
	Bedrock (lithic)	60-80	---	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				
77004:							
Irondale	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
77007:							
Taumsauk	Bedrock (lithic)	4-20	---	Indurated	Moderate	High	High
Irondale	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	High
Rock outcrop	Bedrock (lithic)	0-4	---	Indurated	None	---	---
77011:							
Taumsauk	Bedrock (lithic)	4-26	---	Indurated	Moderate	High	High
Irondale	Bedrock (lithic)	20-40	---	Indurated	Moderate	High	High
Rock outcrop	Bedrock (lithic)	0-4	---	Indurated	None	---	---
99001.							
Water							
99013.							
Riverwash							

Table 22.--Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series.)

Soil name	Family or higher taxonomic class
Alred	Loamy-skeletal over clayey, siliceous, semiactive, mesic Typic Paleudalfs
Arkana	Very fine, mixed, active, mesic Mollic Hapludalfs
Aslinger	Fine-loamy, mixed, active, mesic Fragiaquic Paleudults
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
*Brussels	Clayey-skeletal, mixed, superactive, mesic Pachic Argiudolls
Cedargap	Loamy-skeletal, mixed, superactive, mesic Cumulic Hapludolls
Clarksville	Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults
Cornwall	Fine-silty, mixed, active, mesic Fragiaquic Paleudults
Coulstone	Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults
Courtois	Fine, mixed, active, mesic Typic Paleudalfs
Deible	Fine, mixed, active, mesic Typic Albaqualfs
Delassus	Fine-loamy, mixed, active, mesic Typic Fragiudults
Fanchon	Fine-loamy, siliceous, semiactive, mesic Typic Paleudults
Farewell	Fine-loamy, siliceous, active, mesic Typic Argiaquolls
Fourche	Fine-silty, mixed, active, mesic Glossaquic Paleudalfs
Frenchmill	Loamy-skeletal, mixed, active, mesic Typic Paleudults
Gabriel	Fine-silty, mixed, superactive, mesic Typic Argiaquolls
Gasconade	Clayey-skeletal, mixed, superactive, mesic Lithic Hapludolls
Gepp	Very fine, mixed, semiactive, mesic Typic Paleudalfs
Gladden	Coarse-loamy, siliceous, superactive, mesic Dystric Fluventic Eutrudepts
Grandgulf	Fine-silty, mixed, active, mesic Typic Paleudults
Hartville	Fine, mixed, active, mesic Aquic Hapludalfs
Hobson	Fine-loamy, siliceous, active, mesic Oxyaquic Fragiudalfs
Hogcreek	Fine-loamy, siliceous, active, mesic Typic Fragiudults
Horneybuck	Fine-loamy, mixed, active, mesic Aquic Paleudults
Huzzah	Coarse-loamy, siliceous, superactive, mesic Cumulic Hapludolls
Irondale	Loamy-skeletal, mixed, active, mesic Typic Hapludults
Jamesfin	Fine-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts
Killarney	Loamy-skeletal, mixed, active, mesic Typic Fragiudults
Lecoma	Fine-loamy, siliceous, active, mesic Typic Paleudalfs
Lily	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Lowassie	Fine, smectitic, mesic Vertic Epiaquults
Midco	Loamy-skeletal, siliceous, superactive, nonacid, mesic Typic Udifluvents
Niangua	Very-fine, mixed, active, mesic Typic Hapludalfs
Portia	Fine-loamy, siliceous, semiactive, mesic Typic Paleudalfs
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 Hapludalfs
Razort	Fine-loamy, mixed, active, mesic Mollic Hapludalfs
Relfe	Sandy-skeletal, siliceous, mesic Mollic Udifluvents
Rueter	Loamy-skeletal, siliceous, active, mesic Typic Paleudalfs
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
Taterhill	Fine-loamy, siliceous, semiactive, mesic Typic Paleudults
Taumsauk	Loamy-skeletal, mixed, active, mesic Lithic Hapludults
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
*Waben	Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults
Wideman	Sandy, siliceous, mesic Typic Udifluvents
Yelton	Fine-loamy, siliceous, active, mesic Typic Fragiudults
Zanoni	Coarse-loamy, siliceous, active, mesic Ultic Hapludalfs

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