United States
Department of
Agriculture

Natural
Resources
Conservation
Service

In cooperation with
Minnesota Agricultural
Experiment Station and
Board of Water and Soil
Resources

Soil Survey of Rock County, Minnesota

Where To Get Updated Information

The soil properties and interpretations included in this survey were current as of May 2004. The most current information is available through the NRCS Soil Data Mart Website at http://soildatamart.nrcs.usda.gov/

Additional information is available from the Natural Resources Conservation Service (NRCS) Field Office Technical Guide at Luverne, Minnesota, or online at www.nrcs.usda.gov/technical/efotg. The data in the Field Office Technical Guide are updated periodically.

Additional information about soils and about NRCS is available through the Minnesota NRCS Web page at www.mn.nrcs.usda.gov.

For further information, please contact:

USDA, Natural Resources Conservation Service
Luverne Field Office
311 West Gabrielson, Suite 3
Luverne, MN 56156-2250
Phone: 507-283-9146

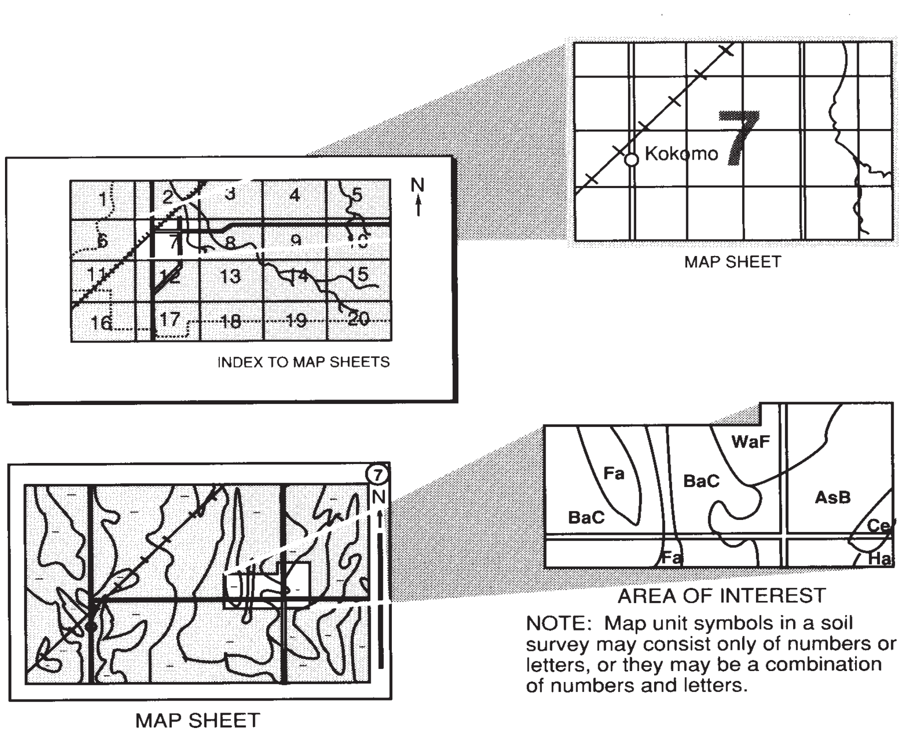
How To Use This Soil Survey

This publication consists of a manuscript and a set of soil maps. The information provided 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 map unit symbols and names also appear as bookmarks, which link directly to the appropriate page in the publication.

The **Contents** shows which table has data on a specific land use for each soil map unit. Also see the **Contents** for other 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 June 2001. Soil names and descriptions were approved in February 2002. This survey was made cooperatively by the Natural Resources Conservation Service, the Minnesota Agricultural Experiment Station, and the Board of Water and Soil Resources. It is part of the technical assistance furnished to the Rock County Soil and Water Conservation District. Other assistance was provided by Rock County.

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.

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

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Issued 2005

NRCS Accessibility Statement

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Foreword

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

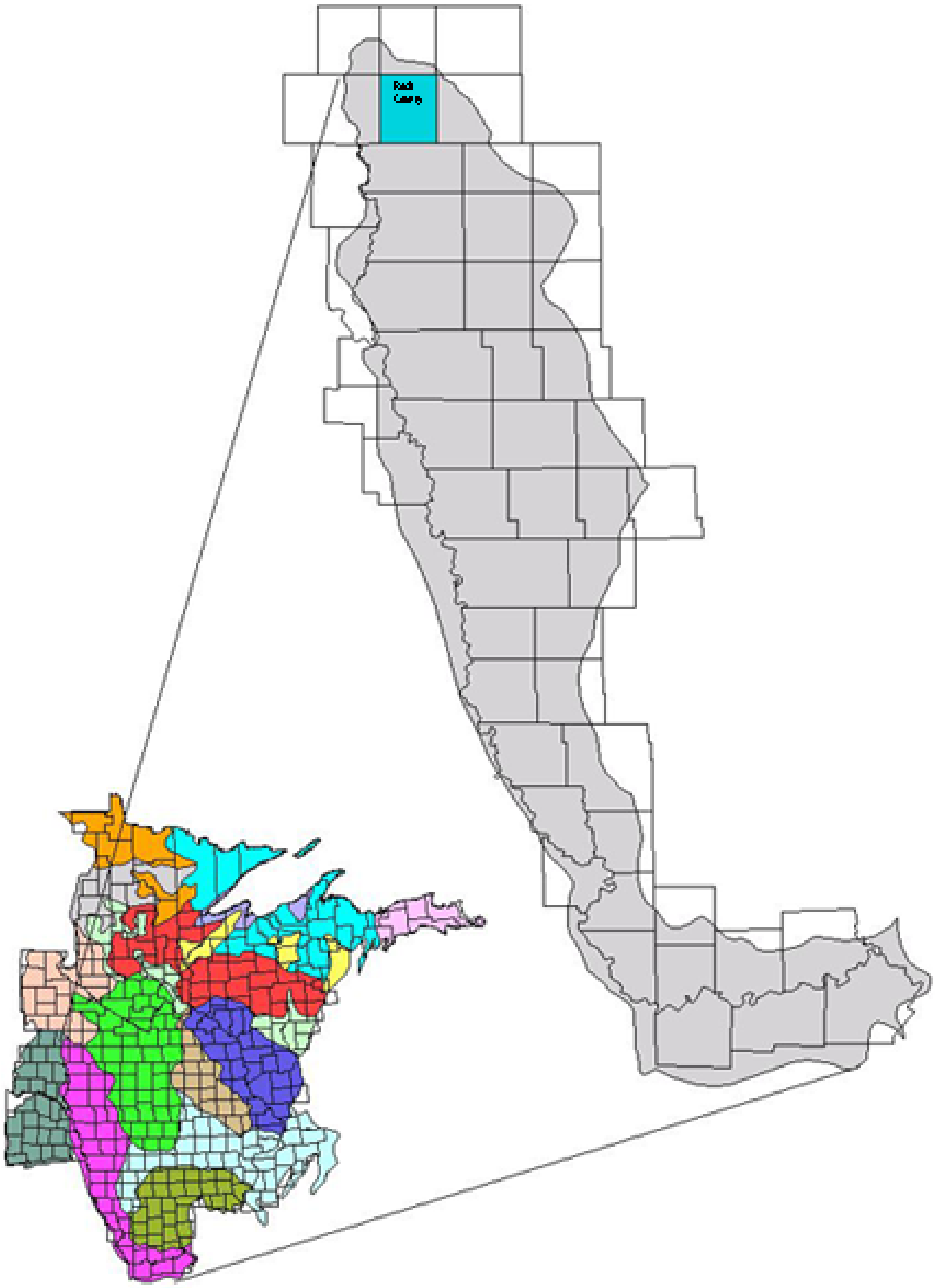
This soil survey is designed for many different users. Farmers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey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

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

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

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

William Hunt
State Conservationist
Natural Resources Conservation Service



Location of Rock County and MLRA 107 in Region 10.

Soil Survey of Rock County, Minnesota

By Ray Genrich, Natural Resources Conservation Service

Fieldwork by Ray Genrich, Trudy Pink, and Joe Kristoff, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with the Minnesota Agricultural Experiment Station and the Board of Water and Soil Resources

How This Survey Was Made

This survey was made to provide updated information about the soils and miscellaneous areas in the survey area, which is in Region 10 and in Major Land Resource Area 107. Region 10 is an administrative division of the Natural Resources Conservation Service. Major land resource areas (MLRAs) are geographically associated land resource units that share a common land use, elevation and topography, climate, water, soils, and vegetation (USDA, 1981). The Rock County survey area is a subset of MLRA 107. Map unit design and the soil descriptions are based on the occurrence of each soil throughout the MLRA. In some cases a soil may be referred to that was not mapped in the Rock County subset but that is representative of the MLRA.

This survey updates the information in previous surveys published for this area (USDA, 1949; Diers, 1988). The current survey provides additional information and modern interpretations.

The information includes a description of the soils and miscellaneous areas and their location and a discussion of their properties and the subsequent effects on 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 landscape or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or model, of how the soils were formed. Thus, during mapping, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

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

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, soil 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. Interpretations are modified as necessary 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 zone in which the soil moisture status is wet within certain depths in most years, but they cannot predict that this zone 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 may not fully agree with those 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.

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 1 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 Mollisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aquoll (*Aqu,* meaning water, plus *oll,* from Mollisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Endoaquolls (*Endo,* meaning within, plus *aquoll,* the suborder of the Mollisols that has an aquic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other known kind of soil. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Endoaquolls.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-silty, mixed, superactive, calcareous, mesic Typic Endoaquolls.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series. The soils of the Spicer series are fine-silty, mixed, superactive, calcareous, mesic Typic Endoaquolls.

The Official Soil Series Descriptions (OSDs) provide the most current information about the series mapped in Rock County. These descriptions are available on the Web at http://soils.usda.gov.

Table 1.--Classification of the Soils

Soil name	Family or higher taxonomic class
Albolls	Albolls
Allendorf	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
Annieville	Fine-silty, mixed, superactive, mesic Typic Hapludolls
Biscay	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Endoaquolls
Bluemound	Fine-silty, mixed, superactive, mesic Lithic Haplustolls
Calco	Fine-silty, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Colo	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls
Comfrey	Fine-loamy, mixed, superactive, mesic Cumulic Endoaquolls
Crofton	Fine-silty, mixed, superactive, calcareous, mesic Typic Ustorthents
Cylinder	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Aquic Hapludolls
Dempster	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Udic Haplustolls
Everly	Fine-loamy, mixed, superactive, mesic Typic Hapludolls
Fairhaven	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
Flandreau	Fine-loamy, mixed, superactive, mesic Udic Haplustolls
Galva	Fine-silty, mixed, superactive, mesic Typic Hapludolls
Graceville	Fine-silty, mixed, superactive, mesic Pachic Haplustolls
Grovena	Fine-loamy, mixed, superactive, mesic Udic Haplustolls
Havelock	Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Henkin	Coarse-loamy, mixed, superactive, mesic Udic Haplustolls
Ihlen	Fine-silty, mixed, superactive, mesic Udic Haplustolls
Judson	Fine-silty, mixed, superactive, mesic Cumulic Hapludolls
Kanaranzi	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
Kato	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Endoaquolls
Marcus	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Moneta	Fine-loamy, mixed, superactive, mesic Entic Hapludolls
Moody	Fine-silty, mixed, superactive, mesic Udic Haplustolls
Nora	Fine-silty, mixed, superactive, mesic Udic Haplustolls
Primghar	Fine-silty, mixed, superactive, mesic Aquic Hapludolls
Ransom	Fine-silty, mixed, superactive, mesic Aquic Hapludolls
Rosedell	Fine, smectitic, mesic Vertic Endoaquolls
Rushmore	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Sac	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludolls
Shindler	Fine-loamy, mixed, superactive, mesic Udorthentic Haplustolls
Spicer	Fine-silty, mixed, superactive, calcareous, mesic Typic Endoaquolls
Spillco	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
Splitrock	Fine-silty, mixed, superactive, mesic Oxyaquic Haplustolls
Talcot	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, calcareous, mesic Typic Endoaquolls
Talmo	Sandy-skeletal, mixed, mesic Udorthentic Haplustolls
Thurman	Sandy, mixed, mesic Udorthentic Haplustolls
Udipsamments	Udipsamments
Wakonda	Fine-silty, mixed, superactive, mesic Aeric Calciaquolls
Whitewood	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls
Wilmonton	Fine-loamy, mixed, superactive, mesic Aquic Hapludolls

Soil Map Unit Descriptions

In this section, arranged in numerical order, are the soil map unit descriptions for the soil series mapped in Rock County.

Characteristics of the soil and the material in which it formed are identified for each soil series. A brief description of the soil profile is provided in the map unit descriptions. For more information about a soil series, the official series description can be viewed or downloaded from the Web. The detailed descriptions follow standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in “Keys to Soil Taxonomy” (Soil Survey Staff, 1998).

The map units on the soil maps in this survey represent the soils or miscellaneous areas in the survey area. These soils or miscellaneous areas are listed as individual components in the map unit descriptions. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is provided in the tables (see Contents).

A map unit delineation on the soil maps represents an area on the landscape. It is identified by differences in the properties and taxonomic classification of components and by the percentage of each component in the map unit.

Components that are dissimilar, or contrasting, are identified in the map unit description. Dissimilar components are those that have properties and behavioral characteristics divergent enough from those of the major components to affect use or to require different management. 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.

Components that are similar to the major components (noncontrasting) are not identified in the map unit description. Similar components are those that have properties and behavioral characteristics similar enough to those of the major components that they do not affect use or require different management.

The presence of multiple 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 segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol is used for each map unit on the soil maps. This symbol precedes the map unit name in the map unit descriptions. Each description includes general information about the unit. The map unit descriptions include representative values in feet and the months in which a wet zone (a zone in which the soil moisture status is wet) is highest and lowest in the soil profile and ponding is shallowest and deepest on the soil surface. The descriptions also include the frequency of flooding (if it occurs) and the months in which flooding is most frequent and least frequent. Table 20 provides a complete display of this data for every month of the year. The available water capacity given in each map unit description is calculated for all horizons in the upper 60 inches of the soil profile. The organic matter content displayed in each map unit description is calculated for all horizons in the upper 10 inches of the soil profile. Table 18 provides a complete display of available water capacity and organic matter content by horizon.

The principal hazards and limitations to be considered in planning for specific uses are described in other sections of this survey.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer or of the underlying layers, 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 or of the underlying layers. They also can differ in slope, stoniness, salinity, wetness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. The name of a soil phase commonly indicates a feature that affects use or management. For example, Sac silty clay loam, 2 to 5 percent slopes, is a phase of the Sac series.

A map unit is named for the component or components that make up a dominant percentage of the map unit. Many map units consist of one dominant component. These map units are consociations. Marcus silty clay loam, 0 to 2 percent slopes, is an example.

Some map units are made up of two or more dominant components. These map units are called complexes. A *complex* consists of two or more components in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. Attempting to delineate the individual components of a complex would result in excessive clutter that could make the map illegible. The pattern and proportion of the components in a complex are somewhat similar in all areas. Nora-Crofton complex, 6 to 12 percent slopes, eroded, is an example.

This survey includes miscellaneous areas. Such areas have little or no soil material and support little or no vegetation. The Pits component of Pits, gravel-Udipsamments complex is an example.

Table 2 gives the acreage and proportionate extent of each map unit. Other tables (see Contents) 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.

GP—Pits, gravel-Udipsamments complex

Component Description

Pits, gravel

Extent: 50 to 100 percent of the unit
Geomorphic setting: Moraines, outwash plains, stream terraces
Parent material: Sandy and gravelly outwash
General description: Gravel pits are areas that have been mined for gravel or sand. They are actively being mined or are abandoned pits. Because of the variability of this component, interpretations for specific uses are not available. Onsite investigation is needed.

Udipsamments

Extent: 15 to 30 percent of the unit
Geomorphic setting: Stream terraces, outwash plains, moraines
Parent material: Outwash
General description: Udipsamments are areas of soil that support plant growth. They are mapped as areas of the pits that have been reclaimed or abandoned. Because of the variability of this component, interpretations for specific uses are not available. Onsite investigation is needed.

M-W—Water, miscellaneous

• This map unit consists of constructed bodies of water. These areas include sewage lagoons, stormwater sediment basins with a permanent pool of water, and aquaculture ponds.

P3A—Biscay silty clay loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Biscay and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Outwash
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1—0 to 16 inches; silty clay loam
A2—16 to 21 inches; clay loam
Bg—21 to 31 inches; clay loam
2Cg—31 to 60 inches; coarse sand

Cylinder soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium over outwash

Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 1.3 feet (April)
Deepest depth to wet zone: 3 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
Ap,A1,A2—0 to 18 inches; loam
Bw1,Bw2—18 to 28 inches; loam
2BC—28 to 39 inches; gravelly sand
2C1,2C2—39 to 60 inches; gravelly sand

Talcot soils

Extent: 0 to 10 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium over outwash
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 22 inches; silty clay loam
Bg—22 to 33 inches; silty clay loam
2Cg—33 to 60 inches; coarse sand

P4A—Calco silty clay loam, 0 to 2 percent slopes, frequently flooded

Component Description

Calco, frequently flooded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 36 inches; silty clay loam
Cg—36 to 60 inches; silty clay loam

Calco soils that are occasionally flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1-A3—0 to 36 inches; silty clay loam
Bg—36 to 44 inches; silty clay loam
Cg—44 to 60 inches; silty clay loam

Havelock soils that are frequently flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained

Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 32 inches; clay loam
Cg—32 to 60 inches; clay loam

Spillco soils that are frequently flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 15 inches; silt loam
A2,C1,C2—15 to 60 inches; loam

P5A—Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Calco, occasionally flooded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1-A3—0 to 36 inches; silty clay loam
Bg—36 to 44 inches; silty clay loam
Cg—44 to 60 inches; silty clay loam

Calco soils that are frequently flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 36 inches; silty clay loam
Cg—36 to 60 inches; silty clay loam

Colo soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained

Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.4 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1-A3—0 to 34 inches; silty clay loam
BA,Bg—34 to 52 inches; silty clay loam
Cg—52 to 60 inches; silt loam

Havelock soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 32 inches; clay loam
Bg—32 to 60 inches; clay loam

Spillco soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 10 inches; silt loam
A2—10 to 22 inches; silt loam
A3,A4,C—22 to 60 inches; loam

P6A—Colo silty clay loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Colo, occasionally flooded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.4 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1-A3—0 to 34 inches; silty clay loam
BA,Bg—34 to 52 inches; silty clay loam
Cg—52 to 60 inches; silt loam

Calco soils that are frequently flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 36 inches; silty clay loam
Cg—36 to 60 inches; silty clay loam

Calco soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1-A3—0 to 36 inches; silty clay loam
Bg—36 to 44 inches; silty clay loam
Cg—44 to 60 inches; silty clay loam

Comfrey soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 26 inches; clay loam
Bg—26 to 35 inches; clay loam
BCg,Cg—35 to 60 inches; clay loam

Spillco soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 10 inches; silt loam
A2—10 to 22 inches; silt loam
A3,A4,C—22 to 60 inches; loam

P7A—Comfrey clay loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Comfrey, occasionally flooded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Flats on flood plains

Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 26 inches; clay loam
Bg—26 to 35 inches; clay loam
BCg,Cg—35 to 60 inches; clay loam

Colo soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.4 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1-A3—0 to 34 inches; silty clay loam
BA,Bg—34 to 52 inches; silty clay loam
Cg—52 to 60 inches; silt loam

Havelock soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 32 inches; clay loam
Bg—32 to 60 inches; clay loam

Havelock soils that are frequently flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 32 inches; clay loam
Cg—32 to 60 inches; clay loam

Spillco soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium

Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 10 inches; silt loam
A2—10 to 22 inches; silt loam
A3,A4,C—22 to 60 inches; loam

P8A—Cylinder loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Cylinder, occasionally flooded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium over outwash
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 1.3 feet (April)
Deepest depth to wet zone: 3 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
Ap,A1,A2—0 to 18 inches; loam
Bw1,Bw2—18 to 28 inches; loam
2BC—28 to 39 inches; gravelly sand
2C1,2C2—39 to 60 inches; gravelly sand

Fairhaven soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 8 inches; silt loam
A—8 to 13 inches; loam
Bw1,Bw2—13 to 36 inches; loam
2C—36 to 60 inches; gravelly sand

Spillco soils that are occasionally flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 10 inches; silt loam
A2—10 to 22 inches; silt loam
A3,A4,C—22 to 60 inches; loam

P11A—Dempster silt loam, 0 to 2 percent slopes

Component Description

Dempster and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent

Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 10 inches; silt loam
Bw1,Bw2—10 to 29 inches; silty clay loam
Bk—29 to 36 inches; loam
2C—36 to 60 inches; gravelly sand

Graceville soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 20 inches; silty clay loam
Bw1-Bw3—20 to 53 inches; silty clay loam
2C—53 to 60 inches; gravelly sand

P11B—Dempster silt loam, 2 to 6 percent slopes

Component Description

Dempster and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 12 inches; silt loam
Bw1,Bw2—12 to 27 inches; silty clay loam
2C—27 to 60 inches; gravelly sand

Graceville soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 20 inches; silty clay loam
Bw1-Bw3—20 to 53 inches; silty clay loam
2C—53 to 60 inches; gravelly sand

P12B—Everly silty clay loam, 2 to 6 percent slopes

Component Description

Everly and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 4 feet (April)

Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 10 inches; silty clay loam
Bw—10 to 18 inches; silty clay loam
2Bk,2BC—18 to 80 inches; clay loam

Sac soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1—11 to 28 inches; silty clay loam
2Bw2—28 to 33 inches; clay loam
2BCk,2BC—33 to 60 inches; clay loam

Ransom soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 16 inches; silty clay loam
Bw1-Bw3—16 to 33 inches; silty clay loam
2BCk,2BC—33 to 80 inches; clay loam

Wilmonton soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 15 inches; silty clay loam
Bw—15 to 20 inches; loam
2Bw—20 to 25 inches; clay loam
2Bk—25 to 55 inches; clay loam
2BC1,2BC2—55 to 80 inches; clay loam

P12C2—Everly silty clay loam, 6 to 12 percent slopes, eroded

Component Description

Everly, eroded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 6 to 12 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 4 feet (April)

Deepest depth to wet zone: More than 6.7 feet (January, February, March, May, June, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.1 percent
Typical profile:
Ap—0 to 7 inches; silty clay loam
Bw—7 to 16 inches; silty clay loam
2Bk,2BC—16 to 80 inches; clay loam

Everly soils that are slightly eroded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 4 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, May, June, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 10 inches; silty clay loam
Bw—10 to 18 inches; silty clay loam
2Bk,2BC—18 to 80 inches; clay loam

Moneta soils

Extent: 0 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders
Slope range: 8 to 15 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A—0 to 9 inches; clay loam
BA—9 to 13 inches; clay loam
Bk1-Bk3,BC1—13 to 53 inches; clay loam
BC2—53 to 80 inches; clay loam

Wilmonton soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 15 inches; silty clay loam
Bw—15 to 20 inches; loam
2Bw—20 to 25 inches; clay loam
2Bk—25 to 55 inches; clay loam
2BC1,2BC2—55 to 80 inches; clay loam

P13A—Fairhaven silt loam, 0 to 2 percent slopes

Component Description

Fairhaven and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches

Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 8 inches; silt loam
A—8 to 13 inches; loam
Bw1,Bw2—13 to 36 inches; loam
2C—36 to 60 inches; gravelly sand

Cylinder soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium over outwash
Flooding: None
Shallowest depth to wet zone: 1.3 feet (April)
Deepest depth to wet zone: 3 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
Ap,A1,A2—0 to 18 inches; loam
Bw1,Bw2—18 to 28 inches; loam
2BC—28 to 39 inches; gravelly sand
2C1,2C2—39 to 60 inches; gravelly sand

Dempster soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 10 inches; silt loam
Bw1,Bw2—10 to 29 inches; silty clay loam
Bk—29 to 36 inches; loam
2C—36 to 60 inches; gravelly sand

Flandreau soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
Ap—0 to 8 inches; silt loam
AB,Bw—8 to 30 inches; silt loam
2BC—30 to 47 inches; sandy loam
2C—47 to 60 inches; loamy sand

P13B—Fairhaven silt loam, 2 to 6 percent slopes

Component Description

Fairhaven and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 7 inches; silt loam
A—7 to 12 inches; loam
Bw1,Bw2—12 to 27 inches; loam
2C—27 to 60 inches; gravelly sand

Cylinder soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium over outwash
Flooding: None
Shallowest depth to wet zone: 1.3 feet (April)
Deepest depth to wet zone: 3 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
Ap,A1,A2—0 to 18 inches; loam
Bw1,Bw2—18 to 28 inches; loam
2BC—28 to 39 inches; gravelly sand
2C1,2C2—39 to 60 inches; gravelly sand

Dempster soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 12 inches; silt loam
Bw1,Bw2—12 to 27 inches; silty clay loam
2C—27 to 60 inches; gravelly sand

Flandreau soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
Ap—0 to 8 inches; silt loam
AB,Bw1,Bw2—8 to 30 inches; silt loam
2BC—30 to 36 inches; loamy sand
2C—36 to 60 inches; loamy sand

Kanaranzi soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
Ap—0 to 7 inches; loam
BA,Bw—7 to 20 inches; loam
2C1-2C3—20 to 80 inches; gravelly coarse sand

P14A—Flandreau silt loam, 0 to 2 percent slopes

Component Description

Flandreau and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained

Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
Ap—0 to 8 inches; silt loam
AB,Bw—8 to 30 inches; silt loam
2BC—30 to 47 inches; sandy loam
2C—47 to 60 inches; loamy sand

Grovena soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
Ap—0 to 8 inches; loam
Bw1-Bw4—8 to 35 inches; loam
Bk—35 to 42 inches; silt loam
C—42 to 60 inches; loam

P14B—Flandreau silt loam, 2 to 6 percent slopes

Component Description

Flandreau and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
Ap—0 to 8 inches; silt loam
AB,Bw1,Bw2—8 to 30 inches; silt loam
2BC—30 to 36 inches; loamy sand
2C—36 to 60 inches; loamy sand

Grovena soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 2 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
Ap—0 to 8 inches; loam
Bw1-Bw4—8 to 35 inches; loam
Bk—35 to 42 inches; silt loam
C—42 to 60 inches; loam

Thurman soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material: Outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
Ap,A—0 to 13 inches; sandy loam

AC—13 to 18 inches; sandy loam
C1,C2—18 to 60 inches; sand

P15B—Galva silty clay loam, 2 to 5 percent slopes

Component Description

Galva and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1,Bw2—11 to 31 inches; silty clay loam
BC—31 to 45 inches; silt loam
C—45 to 60 inches; silt loam

Primghar soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Annieville soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 4 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A,AB—0 to 11 inches; silty clay loam
Bw1-Bw3—11 to 52 inches; silty clay loam
2BC1—52 to 57 inches; sandy loam
2BC2,2BC3—57 to 80 inches; clay loam

Sac soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1—11 to 28 inches; silty clay loam
2Bw2—28 to 33 inches; clay loam
2BCk,2BC—33 to 60 inches; clay loam

P15C2—Galva silty clay loam, 5 to 9 percent slopes, eroded

Component Description

Galva, eroded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw1,Bw2—8 to 34 inches; silty clay loam
C—34 to 60 inches; silt loam

Galva soils that are slightly eroded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1,Bw2—11 to 31 inches; silty clay loam
BC—31 to 45 inches; silt loam
C—45 to 60 inches; silt loam

Sac soils that are eroded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 10 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, May, June, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw—8 to 26 inches; silty clay loam
2BCk—26 to 60 inches; clay loam

Judson soils

Extent: 1 to 5 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 36 inches; silt loam
Bw1,Bw2—36 to 56 inches; silty clay loam
C—56 to 60 inches; silty clay loam

Primghar soils

Extent: 1 to 5 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

P16A—Graceville silty clay loam, 0 to 2 percent slopes

Component Description

Graceville and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 20 inches; silty clay loam
Bw1-Bw3—20 to 53 inches; silty clay loam
2C—53 to 60 inches; gravelly sand

Dempster soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 10 inches; silt loam
Bw1,Bw2—10 to 29 inches; silty clay loam
Bk—29 to 36 inches; loam
2C—36 to 60 inches; gravelly sand

P16B—Graceville silty clay loam, 2 to 6 percent slopes

Component Description

Graceville and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 20 inches; silty clay loam
Bw1-Bw3—20 to 53 inches; silty clay loam
2C—53 to 60 inches; gravelly sand

Dempster soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 12 inches; silt loam
Bw1,Bw2—12 to 27 inches; silty clay loam
2C—27 to 60 inches; gravelly sand

P17A—Ihlen silty clay loam, 0 to 2 percent slopes

Component Description

Ihlen and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 3.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A—0 to 12 inches; silty clay loam
Bw1,Bw2—12 to 38 inches; silty clay loam
R—38 to 80 inches; unweathered bedrock

Bluemound soils

Extent: 1 to 5 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 3 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 1.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A—0 to 14 inches; silt loam
2R—14 to 80 inches; unweathered bedrock

Soils that are deep to bedrock

Extent: 1 to 5 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 40 to 59 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 3.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A—0 to 12 inches; silty clay loam
Bw1,Bw2—12 to 47 inches; silty clay loam
R—47 to 80 inches; unweathered bedrock

Rock outcrop

Extent: 0 to 2 percent of the unit

P17B—Ihlen silty clay loam, 2 to 6 percent slopes

Component Description

Ihlen and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled bedrock
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 2.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6 inches
Content of organic matter in the upper 10 inches: 3.8 percent

Typical profile:
A—0 to 8 inches; silty clay loam
Bw1,Bw2—8 to 23 inches; silty clay loam
BC,C—23 to 31 inches; silt loam
R—31 to 80 inches; unweathered bedrock

Bluemound soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 3 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 1.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A—0 to 14 inches; silt loam
2R—14 to 80 inches; unweathered bedrock

Soils that are deep to bedrock

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 2 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 40 to 59 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 3.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A—0 to 12 inches; silty clay loam
Bw1,Bw2—12 to 47 inches; silty clay loam
R—47 to 80 inches; unweathered bedrock

Rock outcrop

Extent: 1 to 10 percent of the unit

P18B—Ihlen-Rock outcrop complex, 0 to 4 percent slopes

Component Description

Ihlen and similar soils

Extent: 50 to 60 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock and on bedrock
Slope range: 0 to 4 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 2.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A—0 to 11 inches; silty clay loam
Bw1,Bw2—11 to 32 inches; silty clay loam
R—32 to 80 inches; unweathered bedrock

Rock outcrop

Extent: 20 to 30 percent of the unit

Bluemound soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 3 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 1.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A—0 to 14 inches; silt loam
2R—14 to 80 inches; unweathered bedrock

Soils that are deep to bedrock

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 4 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 40 to 59 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 3.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A—0 to 12 inches; silty clay loam
Bw1,Bw2—12 to 47 inches; silty clay loam
R—47 to 80 inches; unweathered bedrock

P18C—Ihlen-Rock outcrop complex, 4 to 35 percent slopes

Component Description

Ihlen and similar soils

Extent: 40 to 50 percent of the unit
Geomorphic setting: Hills on loess-mantled bedrock and on bedrock
Position on the landform: Summits, shoulders, backslopes
Slope range: 4 to 35 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 2.3 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A1,A2—0 to 14 inches; silty clay loam
Bw1,Bw2—14 to 27 inches; silty clay loam
R—27 to 80 inches; unweathered bedrock

Rock outcrop

Extent: 35 to 45 percent of the unit

Bluemound soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 3 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 1.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A—0 to 14 inches; silt loam
2R—14 to 80 inches; unweathered bedrock

Soils that are deep to bedrock

Extent: 1 to 5 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 4 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 40 to 59 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 3.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A—0 to 12 inches; silty clay loam
Bw1,Bw2—12 to 47 inches; silty clay loam
R—47 to 80 inches; unweathered bedrock

Spillco soils that are occasionally flooded

Extent: 0 to 5 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December

Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 10 inches; silt loam
A2—10 to 22 inches; silt loam
A3,A4,C—22 to 60 inches; loam

P19A—Judson silty clay loam, 1 to 3 percent slopes

Component Description

Judson and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Shallowest depth to wet zone: 3.9 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 22 inches; silty clay loam
AB,Bw—22 to 35 inches; silty clay loam
BC,C—35 to 60 inches; silty clay loam

Whitewood soils that have overwash

Extent: 10 to 20 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 48 inches; silty clay loam
Bkg—48 to 70 inches; silty clay loam
Cg—70 to 80 inches; silty clay loam

Primghar soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

P20B—Judson silt loam, 3 to 8 percent slopes

Component Description

Judson and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 36 inches; silt loam
Bw1,Bw2—36 to 56 inches; silty clay loam
C—56 to 60 inches; silty clay loam

Primghar soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Galva soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1,Bw2—11 to 31 inches; silty clay loam
BC—31 to 45 inches; silt loam
C—45 to 60 inches; silt loam

Whitewood soils that have overwash

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 48 inches; silty clay loam
Bkg—48 to 70 inches; silty clay loam
Cg—70 to 80 inches; silty clay loam

P21A—Marcus silty clay loam, 0 to 2 percent slopes

Component Description

Marcus and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 17 inches; silty clay loam
BA,Bg1-Bg3—17 to 44 inches; silty clay loam

Cg1—44 to 57 inches; silt loam
2Cg2—57 to 60 inches; loam

Whitewood soils that are frequently flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, March, July, August, September, October, November, December
Highest frequency of flooding: Frequent (April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,Bw—0 to 25 inches; silty clay loam
Bg1,Bg2—25 to 43 inches; silty clay loam
Bkg—43 to 60 inches; silty clay loam

Primghar soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Spicer soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 17 inches; silty clay loam
Bg1,Bg2—17 to 35 inches; silty clay loam
Cg—35 to 60 inches; silty clay loam

P22A—Havelock clay loam, 0 to 2 percent slopes, frequently flooded

Component Description

Havelock, frequently flooded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 32 inches; clay loam
Cg—32 to 60 inches; clay loam

Havelock soils that are occasionally flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 32 inches; clay loam
Bg—32 to 60 inches; clay loam

Calco soils that are frequently flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 36 inches; silty clay loam
Cg—36 to 60 inches; silty clay loam

Spillco soils that are frequently flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 15 inches; silt loam
A2,C1,C2—15 to 60 inches; loam

P23A—Havelock clay loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Havelock, occasionally flooded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 32 inches; clay loam
Bg—32 to 60 inches; clay loam

Havelock soils that are frequently flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 32 inches; clay loam
Cg—32 to 60 inches; clay loam

Spillco soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 10 inches; silt loam
A2—10 to 22 inches; silt loam
A3,A4,C—22 to 60 inches; loam

Comfrey soils that are occasionally flooded

Extent: 1 to 5 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 26 inches; clay loam
Bg—26 to 35 inches; clay loam
BCg,Cg—35 to 60 inches; clay loam

Calco soils that are occasionally flooded

Extent: 1 to 5 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1-A3—0 to 36 inches; silty clay loam
Bg—36 to 44 inches; silty clay loam
Cg—44 to 60 inches; silty clay loam

P24B—Moody silty clay loam, 2 to 5 percent slopes

Component Description

Moody and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 10 inches; silty clay loam
Bw1-Bw3—10 to 35 inches; silty clay loam
Bk—35 to 48 inches; silt loam
C—48 to 60 inches; silt loam

Primghar soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Nora soils that are eroded

Extent: 1 to 5 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 4 to 10 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bw1,Bw2—8 to 24 inches; silt loam
Bk—24 to 33 inches; silt loam
C1,C2—33 to 60 inches; silt loam

Splitrock soils

Extent: 0 to 5 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
Ap—0 to 9 inches; silty clay loam
Bw1,Bw2—9 to 34 inches; silty clay loam
2Bk,2BC—34 to 60 inches; clay loam

P24C2—Moody silty clay loam, 5 to 9 percent slopes, eroded

Component Description

Moody, eroded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw1,Bw2—8 to 34 inches; silty clay loam
Bk—34 to 50 inches; silt loam
C—50 to 60 inches; silt loam

Moody soils that are slightly eroded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 10 inches; silty clay loam
Bw1-Bw3—10 to 35 inches; silty clay loam
Bk—35 to 48 inches; silt loam
C—48 to 60 inches; silt loam

Nora soils that are eroded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 4 to 10 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bw1,Bw2—8 to 24 inches; silt loam
Bk—24 to 33 inches; silt loam
C1,C2—33 to 60 inches; silt loam

Splitrock soils that are eroded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
Ap—0 to 9 inches; silty clay loam
Bw1,Bw2—9 to 34 inches; silty clay loam
2Bk,2BC—34 to 60 inches; clay loam

Primghar soils

Extent: 1 to 5 percent of the unit

Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Crofton soils that are eroded

Extent: 1 to 5 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Shoulders
Slope range: 6 to 12 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bk—8 to 14 inches; silt loam
C1,C2—14 to 60 inches; silt loam

P25C2—Nora silt loam, 4 to 10 percent slopes, eroded

Component Description

Nora, eroded, and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 4 to 10 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bw1,Bw2—8 to 24 inches; silt loam
Bk—24 to 33 inches; silt loam
C1,C2—33 to 60 inches; silt loam

Crofton soils that are eroded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Shoulders
Slope range: 6 to 12 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bk—8 to 14 inches; silt loam
C1,C2—14 to 60 inches; silt loam

Judson soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 36 inches; silt loam
Bw1,Bw2—36 to 56 inches; silty clay loam
C—56 to 60 inches; silty clay loam

Moody soils that are eroded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw1,Bw2—8 to 34 inches; silty clay loam
Bk—34 to 50 inches; silt loam
C—50 to 60 inches; silt loam

P25D2—Nora silt loam, 10 to 18 percent slopes, eroded

Component Description

Nora, eroded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 10 to 18 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bw1,Bw2—8 to 32 inches; silt loam
Bk—32 to 40 inches; silt loam
C—40 to 60 inches; silt loam

Crofton soils that are eroded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders
Slope range: 12 to 18 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap—0 to 6 inches; silt loam
Bk1,Bk2—6 to 20 inches; silt loam
C—20 to 60 inches; silt loam

Judson soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 36 inches; silt loam
Bw1,Bw2—36 to 56 inches; silty clay loam
C—56 to 60 inches; silty clay loam

Moody soils that are eroded

Extent: 1 to 10 percent of the unit

Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw1,Bw2—8 to 34 inches; silty clay loam
Bk—34 to 50 inches; silt loam
C—50 to 60 inches; silt loam

P26C2—Nora-Crofton complex, 6 to 12 percent slopes, eroded

Component Description

Nora, eroded, and similar soils

Extent: 40 to 60 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, backslopes
Slope range: 6 to 12 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bw1,Bw2—8 to 22 inches; silt loam
Bk—22 to 30 inches; silt loam
C—30 to 60 inches; silt loam

Crofton, eroded, and similar soils

Extent: 20 to 40 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Shoulders
Slope range: 6 to 12 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bk—8 to 14 inches; silt loam
C1,C2—14 to 60 inches; silt loam

Judson soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 36 inches; silt loam
Bw1,Bw2—36 to 56 inches; silty clay loam
C—56 to 60 inches; silty clay loam

Moody soils that are eroded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw1,Bw2—8 to 34 inches; silty clay loam
Bk—34 to 50 inches; silt loam
C—50 to 60 inches; silt loam

P26D2—Nora-Crofton complex, 12 to 18 percent slopes, eroded

Component Description

Nora, eroded, and similar soils

Extent: 40 to 50 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, backslopes
Slope range: 12 to 18 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silt loam
Bw1,Bw2—8 to 30 inches; silt loam
Bk—30 to 38 inches; silt loam
C—38 to 60 inches; silt loam

Crofton, eroded, and similar soils

Extent: 30 to 40 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders
Slope range: 12 to 18 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap—0 to 6 inches; silt loam
Bk1,Bk2—6 to 20 inches; silt loam
C—20 to 60 inches; silt loam

Judson soils

Extent: 10 to 20 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 36 inches; silt loam
Bw1,Bw2—36 to 56 inches; silty clay loam
C—56 to 60 inches; silty clay loam

Moody soils that are eroded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw1,Bw2—8 to 34 inches; silty clay loam
Bk—34 to 50 inches; silt loam
C—50 to 60 inches; silt loam

P27A—Primghar silty clay loam, 1 to 3 percent slopes

Component Description

Primghar and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Galva soils

Extent: 5 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1,Bw2—11 to 31 inches; silty clay loam
BC—31 to 45 inches; silt loam
C—45 to 60 inches; silt loam

Marcus soils

Extent: 5 to 10 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 17 inches; silty clay loam
BA,Bg1-Bg3—17 to 44 inches; silty clay loam
Cg1—44 to 57 inches; silt loam
2Cg2—57 to 60 inches; loam

Judson soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Shallowest depth to wet zone: 3.9 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 22 inches; silty clay loam
AB,Bw—22 to 35 inches; silty clay loam
BC,C—35 to 60 inches; silty clay loam

P28A—Ransom silty clay loam, 1 to 3 percent slopes

Component Description

Ransom and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains

Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 16 inches; silty clay loam
Bw1-Bw3—16 to 33 inches; silty clay loam
2BCk,2BC—33 to 80 inches; clay loam

Rushmore soils

Extent: 5 to 10 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 18 inches; silty clay loam
Bg1,Bg2—18 to 24 inches; silty clay loam
BCg—24 to 32 inches; silty clay loam
2BCkg,2BCg—32 to 80 inches; clay loam

Sac soils

Extent: 5 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1—11 to 28 inches; silty clay loam
2Bw2—28 to 33 inches; clay loam
2BCk,2C—33 to 60 inches; clay loam

Primghar soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

P29A—Rushmore silty clay loam, 0 to 2 percent slopes

Component Description

Rushmore and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on till plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained

Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 18 inches; silty clay loam
Bg1,Bg2—18 to 24 inches; silty clay loam
BCg—24 to 32 inches; silty clay loam
2BCkg,2BCg—32 to 80 inches; clay loam

Ransom soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 16 inches; silty clay loam
Bw1-Bw3—16 to 33 inches; silty clay loam
2BCk,2BC—33 to 80 inches; clay loam

Whitewood soils that are frequently flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, March, July, August, September, October, November, December
Highest frequency of flooding: Frequent (April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,Bw—0 to 25 inches; silty clay loam
Bg1,Bg2—25 to 43 inches; silty clay loam
Bkg—43 to 60 inches; silty clay loam

P30B—Sac silty clay loam, 2 to 5 percent slopes

Component Description

Sac and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1—11 to 28 inches; silty clay loam
2Bw2—28 to 33 inches; clay loam
2BCk,2BC—33 to 60 inches; clay loam

Annieville soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained

Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 4 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A,AB—0 to 11 inches; silty clay loam
Bw1-Bw3—11 to 52 inches; silty clay loam
2BC1—52 to 57 inches; sandy loam
2BC2,2BC3—57 to 80 inches; clay loam

Primghar soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Ransom soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 16 inches; silty clay loam
Bw1-Bw3—16 to 33 inches; silty clay loam
2BCk,2BC—33 to 80 inches; clay loam

P30C2—Sac silty clay loam, 5 to 10 percent slopes, eroded

Component Description

Sac, eroded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 10 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, May, June, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw—8 to 26 inches; silty clay loam
2BCk—26 to 60 inches; clay loam

Annieville soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None

Shallowest depth to wet zone: 4 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, May, June, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A,AB—0 to 11 inches; silty clay loam
Bw1-Bw3—11 to 52 inches; silty clay loam
2BC1—52 to 57 inches; sandy loam
2BC2,2BC3—57 to 80 inches; clay loam

Sac soils that are slightly eroded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1—11 to 28 inches; silty clay loam
2Bw2—28 to 33 inches; clay loam
2BCk,2C—33 to 60 inches; clay loam

Primghar soils

Extent: 1 to 5 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Ransom soils

Extent: 1 to 5 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 16 inches; silty clay loam
Bw1-Bw3—16 to 33 inches; silty clay loam
2BCk,2BC—33 to 80 inches; clay loam

P31A—Spicer silty clay loam, 0 to 2 percent slopes

Component Description

Spicer and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)

Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 17 inches; silty clay loam
Bg1,Bg2—17 to 35 inches; silty clay loam
Cg—35 to 60 inches; silty clay loam

Marcus soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 17 inches; silty clay loam
BA,Bg1-Bg3—17 to 44 inches; silty clay loam
Cg1—44 to 57 inches; silt loam
2Cg2—57 to 60 inches; loam

Whitewood soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,Bw—0 to 25 inches; silty clay loam
Bg1,Bg2—25 to 43 inches; silty clay loam
Bkg—43 to 60 inches; silty clay loam

P32A—Spillco silt loam, 0 to 2 percent slopes, frequently flooded

Component Description

Spillco, frequently flooded, and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 15 inches; silt loam
A2,C1,C2—15 to 60 inches; loam

Spillco soils that are occasionally flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches

Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 10 inches; silt loam
A2—10 to 22 inches; silt loam
A3,A4,C—22 to 60 inches; loam

Havelock soils that are frequently flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 32 inches; clay loam
Cg—32 to 60 inches; clay loam

P33A—Spillco silt loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Spillco, occasionally flooded, and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 10 inches; silt loam
A2—10 to 22 inches; silt loam
A3,A4,C—22 to 60 inches; loam

Spillco soils that are frequently flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Frequent (March, April, May, June)
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1—0 to 15 inches; silt loam
A2,C1,C2—15 to 60 inches; loam

Comfrey soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)

Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1,A2—0 to 26 inches; clay loam
Bg—26 to 35 inches; clay loam
BCg,Cg—35 to 60 inches; clay loam

P34B—Splitrock silty clay loam, 2 to 5 percent slopes

Component Description

Splitrock and similar soils

Extent: 75 to 90 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 10 inches; silty clay loam
Bw1,Bw2—10 to 30 inches; silty clay loam
2Bk,2BC—30 to 80 inches; clay loam

Primghar soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Soils that are deep to till

Extent: 5 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
Ap—0 to 9 inches; silty clay loam
Bw1,Bw2—9 to 50 inches; silty clay loam
2Bk,2BC—50 to 60 inches; clay loam

P34C2—Splitrock silty clay loam, 5 to 9 percent slopes, eroded

Component Description

Splitrock, eroded, and similar soils

Extent: 75 to 85 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None

Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, May, June, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
Ap—0 to 8 inches; silty clay loam
Bw—8 to 26 inches; silty clay loam
2Bk,2BCk—26 to 60 inches; clay loam

Splitrock soils that are slightly eroded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
Ap—0 to 9 inches; silty clay loam
Bw1,Bw2—9 to 34 inches; silty clay loam
2Bk,2BC—34 to 60 inches; clay loam

Soils that are deep to till

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 5 to 9 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, May, June, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
Ap—0 to 9 inches; silty clay loam
Bw1,Bw2—9 to 50 inches; silty clay loam
2Bk,2BC—50 to 60 inches; clay loam

Primghar soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

P36A—Talcot silty clay loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Talcot, occasionally flooded, and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium over outwash
Months in which flooding does not occur: January, February, September, October, November, December

Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 22 inches; silty clay loam
Bg—22 to 33 inches; silty clay loam
2Cg—33 to 60 inches; coarse sand

Biscay soils that are occasionally flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on flood plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Outwash
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1—0 to 16 inches; silty clay loam
A2—16 to 21 inches; clay loam
Bg—21 to 31 inches; clay loam
2Cg—31 to 60 inches; coarse sand

Cylinder soils that are occasionally flooded

Extent: 1 to 10 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium over outwash
Months in which flooding does not occur: January, February, September, October, November, December
Highest frequency of flooding: Occasional (March, April, May, June, July, August)
Shallowest depth to wet zone: 1.3 feet (April)
Deepest depth to wet zone: 3 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
Ap,A1,A2—0 to 18 inches; loam
Bw1,Bw2—18 to 28 inches; loam
2BC—28 to 39 inches; gravelly sand
2C1,2C2—39 to 60 inches; gravelly sand

P37B—Talmo gravelly sandy loam, 2 to 6 percent slopes

Component Description

Talmo and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Gravelly sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material: Outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
A—0 to 7 inches; gravelly sandy loam
AC—7 to 10 inches; gravelly loamy sand
C1,C2—10 to 60 inches; very gravelly coarse sand

Kanaranzi soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
Ap—0 to 7 inches; loam
BA,Bw—7 to 20 inches; loam
2C1-2C3—20 to 80 inches; gravelly coarse sand

Thurman soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material: Outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
Ap,A—0 to 13 inches; sandy loam
AC—13 to 18 inches; sandy loam
C1,C2—18 to 60 inches; sand

P37D—Talmo gravelly sandy loam, 6 to 35 percent slopes

Component Description

Talmo and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 6 to 35 percent
Texture of the surface layer: Gravelly sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material: Outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.5 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A—0 to 9 inches; gravelly sandy loam
AC—9 to 12 inches; gravelly loamy sand
C1,C2—12 to 60 inches; very gravelly sand

Kanaranzi soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 6 to 12 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
Ap—0 to 7 inches; loam
BA,Bw—7 to 20 inches; loam
2C1-2C3—20 to 80 inches; gravelly coarse sand

Thurman soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 6 to 12 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material: Outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
Ap,A—0 to 10 inches; sandy loam

AC—10 to 20 inches; sandy loam
C1,C2—20 to 60 inches; sand

P38B—Thurman sandy loam, 2 to 6 percent slopes

Component Description

Thurman and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material: Outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
Ap,A—0 to 13 inches; sandy loam
AC—13 to 18 inches; sandy loam
C1,C2—18 to 60 inches; sand

Henkin soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
Ap—0 to 5 inches; loam
Bw1,Bw2—5 to 21 inches; sandy loam
Bk1,Bk2—21 to 48 inches; sandy loam
C—48 to 60 inches; stratified loamy sand

P38C—Thurman sandy loam, 6 to 12 percent slopes

Component Description

Thurman and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 6 to 12 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material: Outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
Ap,A—0 to 10 inches; sandy loam
AC—10 to 20 inches; sandy loam
C1,C2—20 to 60 inches; sand

Henkin soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 6 to 9 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
Ap—0 to 5 inches; loam
Bw1,Bw2—5 to 21 inches; sandy loam

Bk1,Bk2—21 to 48 inches; sandy loam
C—48 to 60 inches; loamy sand

P40A—Bluemound silt loam, 0 to 3 percent slopes

Component Description

Bluemound and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 3 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 1.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A—0 to 14 inches; silt loam
2R—14 to 80 inches; unweathered bedrock

Ihlen soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on loess-mantled bedrock
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Parent material: Loess over bedrock
Flooding: None
Depth to wet zone: More than 3.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A—0 to 12 inches; silty clay loam
Bw1,Bw2—12 to 38 inches; silty clay loam
R—38 to 80 inches; unweathered bedrock

Rock outcrop

Extent: 1 to 10 percent of the unit

P41A—Rosedell silty clay loam, 0 to 2 percent slopes

Component Description

Rosedell and similar soils

Extent: 90 to 98 percent of the unit
Geomorphic setting: Flats on lake plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Lacustrine deposits and/or till
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap—0 to 10 inches; silty clay loam
Bg—10 to 30 inches; clay loam
2Bkg—30 to 44 inches; silty clay
2Cg—44 to 80 inches; clay

Spicer soils

Extent: 1 to 5 percent of the unit
Geomorphic setting: Flats on lake plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 17 inches; silty clay loam
Bg1,Bg2—17 to 35 inches; silty clay loam
Cg—35 to 60 inches; silty clay loam

Albolls

Extent: 1 to 5 percent of the unit

Geomorphic setting: Flats on lake plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Lacustrine deposits and/or till
Flooding: None
Shallowest depth to wet zone: At the surface (March, April)
Deepest depth to wet zone: 2 feet (February, August)
Months in which ponding does not occur: January, February, May, June, July, August, September, October, November, December
Deepest ponding: 1 foot (April)
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap—0 to 10 inches; silty clay loam
E—10 to 16 inches; clay loam
Btg—16 to 22 inches; clay loam
Bg—22 to 30 inches; clay loam
2Bkg—30 to 44 inches; silty clay
2Cg—44 to 80 inches; clay

P42A—Whitewood silty clay loam, 0 to 2 percent slopes

Component Description

Whitewood and similar soils

Extent: 65 to 80 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,Bw—0 to 25 inches; silty clay loam
Bg1,Bg2—25 to 43 inches; silty clay loam
Bkg—43 to 60 inches; silty clay loam

Whitewood soils that are frequently flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, March, July, August, September, October, November, December
Highest frequency of flooding: Frequent (April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,Bw—0 to 25 inches; silty clay loam
Bg1,Bg2—25 to 43 inches; silty clay loam
Bkg—43 to 60 inches; silty clay loam

Whitewood soils that have overwash

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 48 inches; silty clay loam
Bkg—48 to 70 inches; silty clay loam
Cg—70 to 80 inches; silty clay loam

Primghar soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes

Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 21 inches; silty clay loam
Bw1-Bw3—21 to 42 inches; silty clay loam
C—42 to 60 inches; silty clay loam

Wakonda soils

Extent: 0 to 3 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 0 to 3 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
Ap—0 to 9 inches; silt loam
Bky1-Bky3—9 to 35 inches; silt loam
Cgy1—35 to 62 inches; silt loam
2Cgy2—62 to 80 inches; loam

P43A—Wilmonton silty clay loam, 1 to 3 percent slopes

Component Description

Wilmonton and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 15 inches; silty clay loam
Bw—15 to 20 inches; loam
2Bw—20 to 25 inches; clay loam
2Bk—25 to 55 inches; clay loam
2BC1,2BC2—55 to 80 inches; clay loam

Everly soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 4 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap—0 to 10 inches; silty clay loam
Bw—10 to 18 inches; silty clay loam
2Bk,2BC—18 to 80 inches; clay loam

Ransom soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 16 inches; silty clay loam
Bw1-Bw3—16 to 33 inches; silty clay loam
2BCk,2BC—33 to 80 inches; clay loam

Rushmore soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 18 inches; silty clay loam
Bg1,Bg2—18 to 24 inches; silty clay loam
BCg—24 to 32 inches; silty clay loam
2BCkg,2BCg—32 to 80 inches; clay loam

P44E—Shindler clay loam, 15 to 45 percent slopes

Component Description

Shindler and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders
Slope range: 15 to 45 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
A—0 to 7 inches; clay loam
Bw—7 to 11 inches; clay loam
Bk1,Bk2—11 to 35 inches; clay loam
BC—35 to 60 inches; clay loam

Judson soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 36 inches; silt loam
Bw1,Bw2—36 to 56 inches; silty clay loam
C—56 to 60 inches; silty clay loam

Soils that are moderately deep to carbonates

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders
Slope range: 15 to 45 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
A—0 to 7 inches; clay loam

Bw—7 to 20 inches; clay loam
Bk1,Bk2—20 to 35 inches; clay loam
C—35 to 60 inches; clay loam

P45E—Moneta clay loam, 15 to 45 percent slopes

Component Description

Moneta and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders
Slope range: 15 to 45 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A—0 to 9 inches; clay loam
BA—9 to 13 inches; clay loam
Bk1-Bk3,BC1—13 to 53 inches; clay loam
BC2—53 to 80 inches; clay loam

Judson soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A—0 to 36 inches; silt loam
Bw1,Bw2—36 to 56 inches; silty clay loam
C—56 to 60 inches; silty clay loam

Soils that are moderately deep to carbonates

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders
Slope range: 15 to 45 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A—0 to 9 inches; clay loam
BA—9 to 20 inches; clay loam
Bk1-Bk3,BC—20 to 53 inches; clay loam
C—53 to 80 inches; clay loam

P47A—Whitewood silty clay loam, overwash, 0 to 2 percent slopes

Component Description

Whitewood, overwash, and similar soils

Extent: 75 to 90 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Alluvium
Flooding: None
Shallowest depth to wet zone: 1.5 feet (April)
Deepest depth to wet zone: 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 48 inches; silty clay loam
Bkg—48 to 70 inches; silty clay loam
Cg—70 to 80 inches; silty clay loam

Judson soils

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Footslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium
Flooding: None
Shallowest depth to wet zone: 3.9 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A1,A2—0 to 22 inches; silty clay loam
AB,Bw—22 to 35 inches; silty clay loam
BC,C—35 to 60 inches; silty clay loam

Whitewood soils that are frequently flooded

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on till plains
Position on the landform: Toeslopes
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Months in which flooding does not occur: January, February, March, July, August, September, October, November, December
Highest frequency of flooding: Frequent (April, May, June)
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,Bw—0 to 25 inches; silty clay loam
Bg1,Bg2—25 to 43 inches; silty clay loam
Bkg—43 to 60 inches; silty clay loam

P48A—Allendorf silty clay loam, 0 to 2 percent slopes

Component Description

Allendorf and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 14 inches; silty clay loam
Bw1-Bw3—14 to 34 inches; silty clay loam
2BC,2C—34 to 60 inches; very gravelly loamy coarse sand

Kanaranzi soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
Ap—0 to 7 inches; loam
BA,Bw—7 to 20 inches; loam
2C1-2C3—20 to 80 inches; gravelly coarse sand

Moderately well drained soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over outwash
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 13 inches; silty clay loam
Bw1-Bw3—13 to 34 inches; silty clay loam
2BC,2C—34 to 60 inches; very gravelly loamy coarse sand

Sac soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1—11 to 28 inches; silty clay loam
2Bw2—28 to 33 inches; clay loam
2BCk,2BC—33 to 60 inches; clay loam

P48B—Allendorf silty clay loam, 2 to 6 percent slopes

Component Description

Allendorf and similar soils

Extent: 80 to 90 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 13 inches; silty clay loam
Bw1-Bw3—13 to 34 inches; silty clay loam
2BC,2C—34 to 60 inches; very gravelly loamy coarse sand

Kanaranzi soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loess over outwash
Flooding: None
Depth to wet zone: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 3.7 percent

Typical profile:
Ap—0 to 7 inches; loam
BA,Bw—7 to 20 inches; loam
2C1-2C3—20 to 80 inches; gravelly coarse sand

Moderately well drained soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over outwash
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 13 inches; silty clay loam
Bw1-Bw3—13 to 34 inches; silty clay loam
2BC,2C—34 to 60 inches; very gravelly loamy coarse sand

Sac soils

Extent: 1 to 10 percent of the unit
Geomorphic setting: Hills on loess-mantled till plains
Position on the landform: Summits, shoulders, backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Loess over till
Flooding: None
Shallowest depth to wet zone: 2.5 feet (April)
Deepest depth to wet zone: More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A—0 to 11 inches; silty clay loam
BA,Bw1—11 to 28 inches; silty clay loam
2Bw2—28 to 33 inches; clay loam
2BCk,2BC—33 to 60 inches; clay loam

P55A—Kato silty clay loam, 0 to 2 percent slopes

Component Description

Kato and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Loess over outwash
Flooding: None
Shallowest depth to wet zone: 0.5 foot (April)
Deepest depth to wet zone: 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 21 inches; silty clay loam
Bg1,Bg2—21 to 31 inches; silty clay loam
2BCg—31 to 35 inches; sandy loam
2Cg1,2Cg2—35 to 60 inches; coarse sand

Somewhat poorly drained soils

Extent: 5 to 15 percent of the unit
Geomorphic setting: Flats on outwash plains
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Loess over outwash
Flooding: None
Shallowest depth to wet zone: 1.3 feet (April)

Deepest depth to wet zone: 3 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
Ap,A,AB—0 to 21 inches; silty clay loam
Bg1,Bg2—21 to 31 inches; silty clay loam
2BCg—31 to 35 inches; sandy loam
2Cg1,2Cg2—35 to 60 inches; coarse sand

W—Water

• This map unit consists of naturally occurring bodies of water or water that has been impounded by structures in natural waterways.

Table 2.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
GP	Pits, gravel-Udipsamments complex	793	0.3
M-W	Water, miscellaneous	111	*
P3A	Biscay silty clay loam, 0 to 2 percent slopes, occasionally flooded	251	*
P4A	Calco silty clay loam, 0 to 2 percent slopes, frequently flooded	4,937	1.6
P5A	Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded	4,352	1.4
P6A	Colo silty clay loam, 0 to 2 percent slopes, occasionally flooded	2,147	0.7
P7A	Comfrey clay loam, 0 to 2 percent slopes, occasionally flooded	2,004	0.6
P8A	Cylinder loam, 0 to 2 percent slopes, occasionally flooded	1,223	0.4
P11A	Dempster silt loam, 0 to 2 percent slopes	2,891	0.9
P11B	Dempster silt loam, 2 to 6 percent slopes	1,717	0.6
P12B	Everly silty clay loam, 2 to 6 percent slopes	3,911	1.3
P12C2	Everly silty clay loam, 6 to 12 percent slopes, eroded	622	0.2
P13A	Fairhaven silt loam, 0 to 2 percent slopes	2,438	0.8
P13B	Fairhaven silt loam, 2 to 6 percent slopes	926	0.3
P14A	Flandreau silt loam, 0 to 2 percent slopes	1,491	0.5
P14B	Flandreau silt loam, 2 to 6 percent slopes	6,394	2.1
P15B	Galva silty clay loam, 2 to 5 percent slopes	9,083	2.9
P15C2	Galva silty clay loam, 5 to 9 percent slopes, eroded	229	*
P16A	Graceville silty clay loam, 0 to 2 percent slopes	10,958	3.5
P16B	Graceville silty clay loam, 2 to 6 percent slopes	3,019	1.0
P17A	Ihlen silty clay loam, 0 to 2 percent slopes	3,715	1.2
P17B	Ihlen silty clay loam, 2 to 6 percent slopes	3,969	1.3
P18B	Ihlen-Rock outcrop complex, 0 to 4 percent slopes	3,735	1.2
P18C	Ihlen-Rock outcrop complex, 4 to 35 percent slopes	1,774	0.6
P19A	Judson silty clay loam, 1 to 3 percent slopes	3,803	1.2
P20B	Judson silt loam, 3 to 8 percent slopes	1,158	0.4
P21A	Marcus silty clay loam, 0 to 2 percent slopes	16,504	5.3
P22A	Havelock clay loam, 0 to 2 percent slopes, frequently flooded	4,037	1.3
P23A	Havelock clay loam, 0 to 2 percent slopes, occasionally flooded	3,169	1.0
P24B	Moody silty clay loam, 2 to 5 percent slopes	35,246	11.4
P24C2	Moody silty clay loam, 5 to 9 percent slopes, eroded	1,815	0.6
P25C2	Nora silt loam, 4 to 10 percent slopes, eroded	7,553	2.4
P25D2	Nora silt loam, 10 to 18 percent slopes, eroded	59	*
P26C2	Nora-Crofton complex, 6 to 12 percent slopes, eroded	2,749	0.9
P26D2	Nora-Crofton complex, 12 to 18 percent slopes, eroded	281	*
P27A	Primghar silty clay loam, 1 to 3 percent slopes	46,460	15.0
P28A	Ransom silty clay loam, 1 to 3 percent slopes	2,988	1.0
P29A	Rushmore silty clay loam, 0 to 2 percent slopes	2,334	0.8
P30B	Sac silty clay loam, 2 to 5 percent slopes	13,531	4.4
P30C2	Sac silty clay loam, 5 to 10 percent slopes, eroded	157	*
P31A	Spicer silty clay loam, 0 to 2 percent slopes	918	0.3
P32A	Spillco silt loam, 0 to 2 percent slopes, frequently flooded	6,740	2.2
P33A	Spillco silt loam, 0 to 2 percent slopes, occasionally flooded	8,130	2.6
P34B	Splitrock silty clay loam, 2 to 5 percent slopes	32,354	10.5
P34C2	Splitrock silty clay loam, 5 to 9 percent slopes, eroded	3,040	1.0
P36A	Talcot silty clay loam, 0 to 2 percent slopes, occasionally flooded	2,002	0.6

See footnote at end of table.

Table 2.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
P37B	Talmo gravelly sandy loam, 2 to 6 percent slopes	552	0.2
P37D	Talmo gravelly sandy loam, 6 to 35 percent slopes	1,075	0.3
P38B	Thurman sandy loam, 2 to 6 percent slopes	1,375	0.4
P38C	Thurman sandy loam, 6 to 12 percent slopes	1,653	0.5
P40A	Bluemound silt loam, 0 to 3 percent slopes	723	0.2
P41A	Rosedell silty clay loam, 0 to 2 percent slopes	2,280	0.7
P42A	Whitewood silty clay loam, 0 to 2 percent slopes	24,053	7.8
P43A	Wilmonton silty clay loam, 1 to 3 percent slopes	441	0.1
P44E	Shindler clay loam, 15 to 45 percent slopes	358	0.1
P45E	Moneta clay loam, 15 to 45 percent slopes	357	0.1
P47A	Whitewood silty clay loam, overwash, 0 to 2 percent slopes	3,323	1.1
P48A	Allendorf silty clay loam, 0 to 2 percent slopes	2,570	0.8
P48B	Allendorf silty clay loam, 2 to 6 percent slopes	1,976	0.6
P55A	Kato silty clay loam, 0 to 2 percent slopes	580	0.2
W	Water	66	*
	Total	309,100	100.0

* Less than 0.1 percent.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

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

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

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

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

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and for hay and pasture is suggested in this section. Climate information for the survey area is provided, the estimated yields of the main crops and hay and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described. Planners of management systems for individual fields or farms should consider obtaining specific information from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Climate

Table 3 gives data on temperature and precipitation for the survey area as recorded at Luverne during the period from 1971 to 2000. Table 4 shows probable dates of the first freeze in fall and the last freeze in spring. Table 5 provides data on length of the growing season.

In winter, the average temperature is about 18 degrees F and the average daily minimum temperature is 8.5 degrees. The lowest temperature during the period of record was -35 degrees. In summer, the average temperature is about 71 degrees and the average daily maximum temperature is about 83 degrees. The highest temperature during the period of record was 106 degrees.

Growing degree days are shown in table 3. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 28 inches. Most of the rainfall occurs between April and September. The average total annual snowfall is about 44 inches.

Cropland Management Considerations

The management concerns affecting the use of the soil map units in the survey area for crops are shown in table 6. The main concerns in managing nonirrigated cropland are conserving moisture, controlling wind erosion and water erosion, and maintaining soil fertility.

Conserving moisture consists primarily of reducing the evaporation and runoff rates and increasing the water infiltration rate. Applying conservation tillage and conservation cropping systems, farming on the contour, stripcropping, establishing field windbreaks, and leaving crop residue on the surface conserve moisture.

Generally, a combination of several practices is needed to control *wind erosion* and *water erosion.* Conservation tillage, stripcropping, field windbreaks, contour farming, conservation cropping systems, crop residue management, terraces, diversions, and grassed waterways help to prevent excessive soil loss.

Measures that are effective in maintaining *soil fertility* include applying fertilizer, both organic and inorganic, including manure; incorporating crop residue or green manure crops into the soil; and using proper crop rotations. Controlling erosion helps to prevent the loss of organic matter and plant nutrients and thus helps to maintain productivity, although the level of fertility can be reduced even in areas where erosion is controlled. All soils used for nonirrigated crops respond well to applications of fertilizer.

Some of the considerations shown in the table cannot be easily overcome. These are channels, flooding, gullies, and ponding.

Additional considerations are as follows:

Lime content, limited available water capacity, limited content of organic matter, potential poor tilth and compaction, and *restricted permeability.*—These limitations can be minimized by incorporating green manure crops, manure, or crop residue into the soil; applying a system of conservation tillage; and using conservation cropping systems. Also, crops may respond well to additions of phosphate fertilizer to soils that have a high content of lime.

Potential for ground-water contamination.—The proper use of nutrients and pesticides can reduce the risk of ground-water contamination.

Potential for surface-water contamination.—The risk of surface-water contamination can be reduced by the proper use of nutrients and pesticides and by conservation farming practices that reduce the runoff rate.

Surface crusting.—This limitation retards seedling development after periods of heavy rainfall.

Surface rock fragments.—This limitation causes rapid wear of tillage equipment. It cannot be easily overcome.

Surface stones.—Stones or boulders on or near the surface can hinder normal tillage unless they are removed.

Salt content.—In areas where this is a limitation, only salt-tolerant crops should be grown.

On irrigated soils the main management concerns are efficient water use, nutrient management, control of erosion, pest and weed control, and timely planting and harvesting for a successful crop. An irrigation system that provides optimum control and distribution of water at minimum cost is needed. Overirrigation wastes water, leaches plant nutrients, and causes erosion. Also, it can increase wetness and soil salinity.

Explanation of Criteria

Acid soil.—The pH is less than 6.1.

Channeled.—The word “channeled” is included in the map unit name.

Dense layer.—The bulk density is 1.80 g/cc or greater within the soil profile.

Depth to rock.—The depth to bedrock is less than 40 inches.

Eroded.—The word “eroded” is included in the map unit name.

Excessive permeability.—Saturated hydraulic conductivity is 42 micrometers per second or more within the soil profile.

Flooding.—Flooding is occasional, frequent, or very frequent.

Gullied.—The word “gullied” is included in the map unit name.

High content of organic matter.—The surface layer has more than 20 percent organic matter.

Lime content.—The pH is 7.4 or more in the surface layer, or the wind erodibility group is 4L.

Limited available water capacity.—The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 6 inches or less.

Limited content of organic matter.—The content of organic matter is 2 percent or less in the surface layer.

Ponding.—Ponding duration is assigned to the soil. Water is above the surface.

Potential poor tilth and compaction.—The content of clay is 27 percent or more in the surface layer.

Potential for ground-water contamination (by nutrients or pesticides).—The depth to a zone in which the soil moisture status is wet is 4 feet or less, the saturated hydraulic conductivity of any layer is more than 42 micrometers per second, or the depth to bedrock is less than 60 inches.

Potential for surface-water contamination (by nutrients or pesticides).—The soil is occasionally, frequently, or very frequently flooded, is subject to ponding, is assigned to hydrologic group C or D and has a slope of more than 2 percent, is assigned to hydrologic group A and has a slope of more than 6 percent, or is assigned to hydrologic group B, has a slope of 3 percent or more, and has a K factor of more than 0.17.

Previously eroded.—The word “eroded” is included in the map unit name.

Restricted permeability.—Saturated hydraulic conductivity is less than 0.42 micrometer per second within the soil profile.

Salt content.—The electrical conductivity is 4 or more in the surface layer or 8 or more within a depth of 30 inches.

Slope (equipment limitation).—The slope is more than 15 percent.

Surface crusting.—The content of clay is 27 percent or more and the content of organic matter is 2 percent or less in the surface layer.

Surface rock fragments (equipment limitation).—The terms describing the texture of the surface layer include any rock fragment modifier, except for gravelly, channery, stony, very stony, extremely stony, bouldery, very bouldery, and extremely bouldery.

Surface stones (equipment limitation).—The word “stony” or “bouldery” is included in the description of the surface layer, or 0.01 percent or more of the surface is covered by boulders.

Water erosion.—Either the slope is 6 percent or more, or the slope is more than 3 percent and less than 6 percent and the surface layer is not sandy.

Wet soil moisture status.—A zone in which the soil moisture status is wet is within 2.5 feet of the surface.

Wind erosion.—The wind erodibility group is 1, 2, 3, or 4L.

Hydrologic groups are described under the heading “Water Features.” Erosion factors (e.g., K factor) and wind erodibility groups are described under the heading “Physical and Chemical Properties.”

Crop Yield Estimates

The average yields per acre that can be expected of the principal crops and hay and pasture plants under a high level of management are shown in table 7. 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 the soils 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 the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Pasture and Hayland Interpretations

Soils are assigned to forage suitability groups according to their suitability for the production of forage vegetation. The soils in each group are similar enough to be suited to the same species of grasses or legumes, have similar limitations and hazards, require similar management, and have similar productivity levels and other responses to management. The forage suitability groups of the soils in the survey area are listed in table 8. Detailed descriptions of forage suitability groups are available at local offices of the Natural Resources Conservation Service.

Under good management, proper grazing is essential for the production of high-quality forage, stand survival, and erosion control. Proper grazing helps plants to maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation also are important management practices.

Yield estimates are often provided in animal unit months (AUM), or the amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about forage yields other than those shown in table 7.

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 take into account 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 woodland or for engineering purposes.

In the capability system, soils generally are grouped at three levels—capability class, subclass, and unit (USDA, 1961). These categories indicate the degree and kinds of limitations affecting mechanized farming systems that produce the more commonly grown field crops, such as corn, small grain, cotton, hay, and field-grown vegetables. Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use.

If properly managed, soils in classes 1, 2, 3, and 4 are suitable for the mechanized production of commonly grown field crops and for pasture and woodland. The degree of the soil limitations affecting the production of cultivated crops increases progressively from class 1 to class 4. The limitations can affect levels of production and the risk of permanent soil deterioration caused by erosion and other factors.

Soils in classes 5, 6, and 7 are generally not suited to the mechanized production of commonly grown field crops without special management, but they are suitable for plants that provide a permanent cover, such as grasses and trees. The severity of the soil limitations affecting crops increases progressively from class 5 to class 7.

Areas in class 8 are generally not suitable for crops, pasture, or woodland without a level of management that is impractical. These areas may have potential for other uses, such as recreational facilities and wildlife habitat.

Capability subclasses identify the dominant kind of limitation in the 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 a close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

There are no subclasses in class 1 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 mainly to pasture, woodland, wildlife habitat, or recreation.

The capability classification of the soils in the survey area is given in table 7.

Prime Farmland

Prime farmland is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation’s prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to food, feed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods. An adequate moisture supply and a sufficiently long growing season are required. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources, and farming these soils results in the least damage to the environment.

Prime farmland soils may presently be used as cropland, pasture, or woodland or for other purposes. They either are used for food and fiber or are available for these uses. Urban or built-up land, public land, and water areas cannot be considered prime farmland. Urban or built-up land is any contiguous unit of land 10 acres or more in size that is used for such purposes as housing, industrial, and commercial sites, sites for institutions or public buildings, small parks, golf courses, cemeteries, railroad yards, airports, sanitary landfills, sewage treatment plants, and water-control structures. Public land is land not available for farming in National forests, National parks, military reservations, and State parks.

Prime farmland soils commonly receive an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable, and the level of acidity or alkalinity and the content of salts and sodium are acceptable. The soils have few, if any, rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods, and they are not frequently flooded during the growing season or are protected from flooding. Slopes range mainly from 0 to 6 percent.

Soils in which a zone with a wet soil moisture status is high in the profile or soils that are subject to flooding may qualify as prime farmland where these limitations are overcome by drainage measures or flood control. Onsite evaluation is necessary to determine the effectiveness of corrective measures. More information about the criteria for prime farmland can be obtained at the local office of the Natural Resources Conservation Service.

A recent trend in land use has been the conversion of prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on lands that are less productive than prime farmland.

The map units in the survey area that meet the requirements for prime farmland are listed in table 9. This list does not constitute a recommendation for a particular land use. On some soils included in the table, measures that overcome limitations are needed. The need for these measures is indicated in parentheses after the map unit name. The location of each map unit is shown on the soil maps. The soil qualities that affect use and management are described in the section “Soil Map Unit Descriptions.”

Windbreaks and Environmental Plantings

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

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

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

Windbreaks are often planted on land that did not originally support trees. Knowledge of how trees perform on such land can be gained only by observing and recording the performance of trees that have been planted and have survived. Many popular windbreak species are not indigenous to the areas in which they are planted.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters, a tree or shrub may grow well or grow poorly, depending on the characteristics of the soil. Each tree or shrub has definable potential heights in a given physiographic area and under a given climate. Accurate definitions of potential heights are necessary when a windbreak is planned and designed.

Table 10 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in this 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 local offices of the Natural Resources Conservation Service or the Cooperative Extension Service or from a nursery.

Windbreak Suitability Groups

Windbreak suitability groups consist of soils in which the kinds and degrees of the hazards and limitations that affect the survival and growth of trees and shrubs in windbreaks are about the same. The windbreak suitability groups assigned to the soils in the survey area are listed in table 11. Descriptions of the groups are provided in the “Field Office Technical Guide,” which is available in local offices of the Natural Resources Conservation Service.

Recreation

The soils of the survey area are rated in tables 12a and 12b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses.

Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

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

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

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

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

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a zone in which the soil moisture status is wet, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

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

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a zone in which the soil moisture status is wet, 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 slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a zone in which the soil moisture status is wet, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a zone in which the soil moisture status is wet, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a zone in which the soil moisture status is wet; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a zone in which the soil moisture status is wet, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. If food, cover, or water is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area.

If the soils have potential for habitat development, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants.

In table 13, 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 potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

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

Grain and seed crops are domestic grains and seed-producing herbaceous plants used by wildlife. Examples are corn, soybeans, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes planted for wildlife food and cover. Examples are bromegrass, timothy, orchardgrass, clover, alfalfa, and wheatgrass.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds, that provide food and cover for wildlife. Examples are bluestems, indiangrass, blueberry, goldenrod, lambsquarters, dandelions, blackberry, ragweed, and wheatgrass.

The major soil properties affecting the growth of grain and forage crops and wild herbaceous plants are depth of the root zone, texture of the surface layer, the amount of water available to plants, wetness, salinity, and flooding. The length of the growing season also is important.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage that wildlife eat. Examples are oak, poplar, hickory, birch, maple, green ash, willow, and American elm.

Coniferous plants are cone-bearing trees, shrubs, or ground cover that provide habitat or supply food in the form of browse, seed, or fruit-like cones. Examples are pine, spruce, cedar, and tamarack.

The major soil properties affecting the growth of hardwood and coniferous trees and shrubs are depth of the root zone, the amount of water available to plants, and wetness.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Wetland plants produce food or cover for wetland wildlife. Examples of these plants are smartweeds, wild millet, rushes, sedges, bulrushes, wild rice, arrowhead, waterplantain, cattail, prairie cordgrass, bluejoint grass, asters, and beggarticks.

The major soil properties affecting wetland plants are texture of the surface layer, wetness, acidity or alkalinity, and slope.

Shallow water areas have an average depth of less than 5 feet. They are useful as habitat for some wildlife species. They are naturally wet areas or are created by dams, levees, or water-control measures in marshes or streams. Examples are waterfowl feeding areas, wildlife watering developments, beaver ponds, and other wildlife ponds.

The major soil properties affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, and shrubs. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The wildlife attracted to these areas include Hungarian partridge, ring-necked pheasant, bobwhite quail, sharp-tailed grouse, meadowlark, field sparrow, killdeer, cottontail rabbit, and red fox.

Habitat for woodland wildlife consists of areas of hardwoods or conifers or a mixture of these and associated grasses, legumes, and wild herbaceous plants. The wildlife attracted to this habitat include wild turkey, ruffed grouse, thrushes, woodpeckers, owls, tree squirrels, porcupine, raccoon, and white-tailed deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas, bogs, or flood plains that support water-tolerant plants. The wildlife attracted to this habitat include ducks, geese, herons, bitterns, rails, kingfishers, muskrat, otter, mink, and beaver.

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, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading “Soil Properties.”

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

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

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

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a zone in which the soil moisture status is wet, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, linear extensibility, 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; 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. Tables 14a and 14b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

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 building site development.

Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

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

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

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

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a zone in which the soil moisture status is wet, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a zone in which the soil moisture status is wet, 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, depth to a zone in which the soil moisture status is wet, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a zone in which the soil moisture status is wet, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to a zone in which the soil moisture status is wet, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to a zone in which the soil moisture status is wet, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

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; depth to a zone in which the soil moisture status is wet; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a zone in which the soil moisture status is wet, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Construction Materials

Tables 15a and 15b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

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 table 15a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

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

The soils are rated *good, fair,* or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, or topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In table 15b, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a zone in which the soil moisture status is wet, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a zone in which the soil moisture status is wet, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a zone in which the soil moisture status is wet, 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.

Water Management

Table 16 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses.

Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

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

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

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

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

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

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

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent zone in which the soil moisture status is wet. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent zone in which the soil moisture status is wet, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Table 3.--Temperature and Precipitation

(Recorded in the period 1971-2000 at Luverne, Minnesota)

Month	Temperature: Average daily maximum	Temperature: Average daily minimum	Temperature: Average	Temperature: 2 years in 10 will have-- Maximum temperature higher than--	Temperature: 2 years in 10 will have-- Minimum temperature lower than--	Temperature: Average number of growing degree days*	Precipitation: Average	Precipitation: 2 years in 10 will have-- Less than--	Precipitation: 2 years in 10 will have-- More than--	Precipitation: Average number of days with 0.10 inch or more	Precipitation: Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January----	24.2	4.4	14.3	51	-26	0	0.62	0.16	0.99	2	9.7
February---	31.1	11.3	21.2	59	-24	3	.70	.34	1.04	2	6.5
March------	43.7	23.3	33.5	76	-9	52	2.13	.88	3.32	4	8.4
April------	59.3	34.4	46.8	87	12	245	2.63	1.30	3.90	6	2.3
May--------	71.8	46.3	59.1	91	27	589	3.31	1.78	4.67	7	.0
June-------	81.3	56.6	68.9	98	38	866	4.23	2.22	6.03	6	.0
July-------	84.7	60.8	72.7	100	44	1,014	3.58	1.57	5.34	5	.0
August-----	82.5	58.5	70.5	98	42	943	3.28	1.52	4.89	5	.0
September--	74.6	48.5	61.5	94	26	643	2.57	1.02	3.96	4	.0
October----	61.8	36.2	49.0	84	14	303	2.24	.61	3.67	3	.8
November---	41.3	22.2	31.8	69	-7	42	1.72	.36	3.11	3	8.1
December---	28.3	9.8	19.1	53	-20	2	.81	.18	1.35	2	7.9
Yearly:											
Average---	57.0	34.4	45.7	---	---	---	---	---	---	---	---
Extreme---	106	-35	---	101	-28	---	---	---	---	---	---
Total-----	---	---	---	---	---	4,703	27.82	20.64	33.10	49	43.8

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

Table 4.--Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Luverne, Minnesota)

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--	May 6	May 14	May 24
2 years in 10 later than--	Apr. 29	May 9	May 18
5 years in 10 later than--	Apr. 17	Apr. 28	May 8
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 28	Sept. 21	Sept. 13
2 years in 10 earlier than--	Oct. 3	Sept. 25	Sept. 17
5 years in 10 earlier than--	Oct. 14	Oct. 4	Sept. 25

Table 5.--Growing Season

(Recorded in the period 1971-2000 at Luverne, Minnesota)

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	162	139	125
8 years in 10	169	147	132
5 years in 10	183	161	144
2 years in 10	197	176	157
1 year in 10	204	184	163

Table 6.--Cropland Management Considerations

(See text for a description of the considerations listed in this table)

Map symbol and component name	Pct. of map unit	Cropland management considerations
GP:		
Pits, gravel	80	Not applicable
Udipsamments	20	Not applicable
M-W:		
Water, miscellaneous	100	Not applicable
P3A:		
Biscay	85	Flooding Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Cylinder	10	Flooding Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Talcot	5	Flooding Excessive permeability Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
P4A:		
Calco, frequently flooded	80	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Calco, occasionally flooded	10	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Havelock, frequently flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Spillco, frequently flooded	5	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P5A:		
Calco, occasionally flooded	80	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Calco, frequently flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Colo, occasionally flooded	5	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Havelock, occasionally flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Spillco, occasionally flooded	5	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P6A:		
Colo, occasionally flooded	80	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Calco, frequently flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Calco, occasionally flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P6A:		
Comfrey, occasionally flooded	5	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Spillco, occasionally flooded	5	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P7A:		
Comfrey, occasionally flooded	80	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Colo, occasionally flooded	5	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Havelock, occasionally flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Havelock, frequently flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Spillco, occasionally flooded	5	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P8A:		
Cylinder, occasionally flooded	80	Flooding Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Fairhaven	10	Excessive permeability Potential for ground-water contamination
Spillco, occasionally flooded	10	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P11A:		
Dempster	90	Excessive permeability Potential for ground-water contamination
Graceville	10	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination
P11B:		
Dempster	90	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
Graceville	10	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion
P12B:		
Everly	80	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion
Sac	10	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
Ransom	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Wilmonton	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
P12C2:		
Everly, eroded	80	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Everly, slightly eroded	10	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Moneta	5	Lime content Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Wilmonton	5	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P13A:		
Fairhaven	85	Excessive permeability Potential for ground-water contamination
Cylinder	5	Excessive permeability Potential for ground-water contamination Wet soil moisture status
Dempster	5	Excessive permeability Potential for ground-water contamination
Flandreau	5	Excessive permeability Potential for ground-water contamination
P13B:		
Fairhaven	80	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
Cylinder	5	Excessive permeability Potential for ground-water contamination Wet soil moisture status
Dempster	5	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
Flandreau	5	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
Kanaranzi	5	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion
P14A:		
Flandreau	90	Excessive permeability Potential for ground-water contamination
Grovena	10	No major considerations
P14B:		
Flandreau	80	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
Grovena	10	Potential for surface-water contamination Water erosion
Thurman	10	Excessive permeability Limited available water capacity Potential for ground-water contamination Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P15B:		
Galva	80	Potential poor tilth and compaction Potential for surface-water contamination Water erosion
Primghar	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Annieville	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion
Sac	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
P15C2:		
Galva, eroded	80	Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion
Galva, slightly eroded	10	Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion
Sac, eroded	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
Judson	3	Potential for surface-water contamination Previously eroded Water erosion
Primghar	2	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status
P16A:		
Graceville	90	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination
Dempster	10	Excessive permeability Potential for ground-water contamination
P16B:		
Graceville	90	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P16B:		
Dempster	10	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
P17A:		
Ihlen	93	Depth to rock Limited available water capacity Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability
Bluemound	3	Depth to rock Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Restricted permeability
Soils that are deep to bedrock	3	Depth to rock Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability
Rock outcrop	1	Not applicable
P17B:		
Ihlen	80	Depth to rock Limited available water capacity Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion
Bluemound	10	Depth to rock Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Restricted permeability
Soils that are deep to bedrock	5	Depth to rock Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion
Rock outcrop	5	Not applicable
P18B:		
Ihlen	55	Depth to rock Limited available water capacity Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Water erosion
Rock outcrop	25	Not applicable

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P18B:		
Bluemound	10	Depth to rock Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Restricted permeability
Soils that are deep to bedrock	10	Depth to rock Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Water erosion
P18C:		
Ihlen	45	Slope Depth to rock Limited available water capacity Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion
Rock outcrop	40	Not applicable
Bluemound	10	Depth to rock Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Restricted permeability
Soils that are deep to bedrock	3	Depth to rock Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Water erosion
Spillco, occasionally flooded	2	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P19A:		
Judson	80	Potential poor tilth and compaction Potential for ground-water contamination
Whitewood, overwash	14	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Primghar	6	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
P20B:		
Judson	80	Potential for surface-water contamination Water erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P20B:		
Primghar	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Galva	5	Potential poor tilth and compaction Potential for surface-water contamination Water erosion
Whitewood, overwash	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
P21A:		
Marcus	80	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Whitewood, frequently flooded	10	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Primghar	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Spicer	5	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
P22A:		
Havelock, frequently flooded	80	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Havelock, occasionally flooded	10	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Calco, frequently flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Spillco, frequently flooded	5	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P23A:		
Havelock, occasionally flooded	80	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Havelock, frequently flooded	10	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Spillco, occasionally flooded	5	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Comfrey, occasionally flooded	3	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Calco, occasionally flooded	2	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
P24B:		
Moody	85	Potential poor tilth and compaction Potential for surface-water contamination Water erosion
Primghar	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Nora, eroded	3	Potential for surface-water contamination Water erosion
Splitrock	2	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status
P24C2:		
Moody, eroded	80	Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P24C2:		
Moody, slightly eroded	5	Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion
Nora, eroded	5	Potential for surface-water contamination Previously eroded Water erosion
Splitrock, eroded	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Restricted permeability Water erosion Wet soil moisture status
Primghar	3	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status
Crofton, eroded	2	Lime content Potential for surface-water contamination Previously eroded Water erosion Wind erosion
P25C2:		
Nora, eroded	85	Potential for surface-water contamination Previously eroded Water erosion
Crofton, eroded	5	Lime content Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Judson	5	Potential for surface-water contamination Previously eroded Water erosion
Moody, eroded	5	Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion
P25D2:		
Nora, eroded	80	Slope Potential for surface-water contamination Previously eroded Water erosion
Crofton, eroded	10	Slope Lime content Potential for surface-water contamination Previously eroded Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P25D2:		
Judson	5	Potential for surface-water contamination Previously eroded Water erosion
Moody, eroded	5	Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion
P26C2:		
Nora, eroded	50	Potential for surface-water contamination Previously eroded Water erosion
Crofton, eroded	30	Lime content Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Judson	10	Potential for surface-water contamination Previously eroded Water erosion
Moody, eroded	10	Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion
P26D2:		
Nora, eroded	45	Slope Potential for surface-water contamination Previously eroded Water erosion
Crofton, eroded	35	Slope Lime content Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Judson	14	Potential for surface-water contamination Previously eroded Water erosion
Moody, eroded	6	Potential poor tilth and compaction Potential for surface-water contamination Previously eroded Water erosion
P27A:		
Primghar	80	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Galva	8	Potential poor tilth and compaction Potential for surface-water contamination Water erosion
Marcus	8	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P27A:		
Judson	4	Potential poor tilth and compaction Potential for ground-water contamination
P28A:		
Ransom	80	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Rushmore	8	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Sac	8	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
Primghar	4	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
P29A:		
Rushmore	80	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Ransom	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Whitewood, frequently flooded	10	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P30B:		
Sac	80	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
Annieville	10	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion
Primghar	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Ransom	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P30C2:		
Sac, eroded	80	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
Annieville	10	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Sac, slightly eroded	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
Primghar	3	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status
Ransom	2	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status
P31A:		
Spicer	85	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Marcus	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Whitewood	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
P32A:		
Spillco, frequently flooded	85	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Spillco, occasionally flooded	10	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Havelock, frequently flooded	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P33A:		
Spillco, occasionally flooded	85	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Spillco, frequently flooded	10	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Comfrey, occasionally flooded	5	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P34B:		
Splitrock	82	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status
Primghar	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Soils that are deep to till	8	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status
P34C2:		
Splitrock, eroded	80	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Restricted permeability Water erosion Wet soil moisture status
Splitrock, slightly eroded	10	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Restricted permeability Water erosion Wet soil moisture status
Soils that are deep to till	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Restricted permeability Water erosion Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P34C2:		
Primghar	5	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status
P36A:		
Talcot, occasionally flooded	85	Flooding Excessive permeability Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Biscay, occasionally flooded	10	Flooding Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Cylinder, occasionally flooded	5	Flooding Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P37B:		
Talmo	90	Excessive permeability Limited available water capacity Potential for ground-water contamination
Kanaranzi	5	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion
Thurman	5	Excessive permeability Limited available water capacity Potential for ground-water contamination Water erosion Wind erosion
P37D:		
Talmo	90	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion
Kanaranzi	5	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P37D:		
Thurman	5	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
P38B:		
Thurman	90	Excessive permeability Limited available water capacity Potential for ground-water contamination Water erosion Wind erosion
Henkin	10	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
P38C:		
Thurman	90	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Henkin	10	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
P40A:		
Bluemound	85	Depth to rock Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Restricted permeability
Ihlen	10	Depth to rock Limited available water capacity Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability
Rock outcrop	5	Not applicable
P41A:		
Rosedell	95	Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Wet soil moisture status
Spicer	3	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P41A:		
Albolls	2	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P42A:		
Whitewood	70	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Whitewood, frequently flooded	10	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Whitewood, overwash	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Primghar	9	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Wakonda	1	Lime content Potential for ground-water contamination Wet soil moisture status Wind erosion
P43A:		
Wilmonton	85	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Everly	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion
Ransom	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Rushmore	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
P44E:		
Shindler	85	Slope Lime content Potential poor tilth and compaction Potential for surface-water contamination Restricted permeability Water erosion Wind erosion
Judson	10	Potential for surface-water contamination Water erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P44E:		
Soils that are moderately deep to carbonates	5	Slope Potential poor tilth and compaction Potential for surface-water contamination Restricted permeability Water erosion
P45E:		
Moneta	85	Slope Lime content Potential poor tilth and compaction Potential for surface-water contamination Water erosion Wind erosion
Judson	10	Potential for surface-water contamination Water erosion
Soils that are moderately deep to carbonates	5	Slope Potential poor tilth and compaction Potential for surface-water contamination Water erosion
P47A:		
Whitewood, overwash	80	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Judson	10	Potential poor tilth and compaction Potential for ground-water contamination
Whitewood, frequently flooded	10	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
P48A:		
Allendorf	85	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination
Kanaranzi	5	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion
Moderately well drained soils	5	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Sac	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
P48B:		
Allendorf	85	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion
Kanaranzi	5	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion
Moderately well drained soils	5	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Sac	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
P55A:		
Kato	90	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Somewhat poorly drained soils	10	Excessive permeability Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
W:		
Water	100	Not applicable

Table 7.--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 component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
GP:							
Pits, gravel	80	---	---	---	---	---	---
Udipsamments	20	---	---	---	---	---	---
M-W:							
Water, miscellaneous	100	---	---	---	---	---	---
P3A:							
Biscay	85	2w	3.6	120	70	38	50
Cylinder	10	2s	3.6	110	66	35	50
Talcot	5	2w	3.5	115	69	37	49
P4A:							
Calco, frequently flooded	80	5w	---	---	---	---	---
Calco, occasionally flooded	10	2w	---	---	---	---	---
Havelock, frequently flooded	5	5w	---	---	---	---	---
Spillco, frequently flooded	5	5w	---	---	---	---	---
P5A:							
Calco, occasionally flooded	80	2w	3.8	125	70	40	50
Calco, frequently flooded	5	5w	---	---	---	---	---
Colo, occasionally flooded	5	2w	3.8	125	70	40	50
Havelock, occasionally flooded	5	2w	3.8	125	70	40	50
Spillco, occasionally flooded	5	1	5.1	155	87	49	62
P6A:							
Colo, occasionally flooded	80	2w	3.8	125	70	40	50
Calco, frequently flooded	5	5w	---	---	---	---	---
Calco, occasionally flooded	5	2w	3.8	125	70	40	50
Comfrey, occasionally flooded	5	2w	3.8	125	70	40	50

Table 7.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
P6A:							
Spillco, occasionally flooded	5	1	5.1	155	87	49	62
P7A:							
Comfrey, occasionally flooded	80	2w	3.8	125	70	40	50
Colo, occasionally flooded	5	2w	3.8	125	70	40	50
Havelock, occasionally flooded	5	2w	3.8	125	70	40	50
Havelock, frequently flooded	5	5w	---	---	---	---	---
Spillco, occasionally flooded	5	1	5.1	155	87	49	62
P8A:							
Cylinder, occasionally flooded	80	2s	3.6	110	66	35	50
Fairhaven	10	2s	3.8	115	69	38	52
Spillco, occasionally flooded	10	1	5.1	155	87	49	62
P11A:							
Dempster	90	2s	3.8	115	69	37	52
Graceville	10	1	5.0	150	84	47	60
P11B:							
Dempster	90	2e	3.6	110	66	35	50
Graceville	10	2e	4.8	145	81	46	58
P12B:							
Everly	80	2e	5.1	155	87	49	62
Sac	10	2e	5.1	155	87	49	62
Ransom	5	1	5.3	160	90	50	64
Wilmonton	5	1	5.3	160	90	50	64
P12C2:							
Everly, eroded	80	3e	4.5	135	76	43	54
Everly, slightly eroded	10	2e	4.5	136	77	43	55
Moneta	5	4e	4.0	120	70	38	48
Wilmonton	5	1	5.3	160	90	50	64
P13A:							
Fairhaven	85	2s	3.8	115	69	38	52
Cylinder	5	2s	3.6	110	66	35	50

Table 7.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
P13A:							
Dempster	5	2s	3.8	115	69	37	52
Flandreau	5	2s	3.8	115	69	38	52
P13B:							
Fairhaven	80	2e	3.6	110	66	35	50
Cylinder	5	2s	3.6	110	66	35	50
Dempster	5	2e	3.6	110	66	35	50
Flandreau	5	2e	3.6	110	66	35	50
Kanaranzi	5	2e	3.0	86	60	31	40
P14A:							
Flandreau	90	2s	3.8	115	69	37	52
Grovena	10	2s	3.9	118	70	38	54
P14B:							
Flandreau	80	2e	3.6	110	66	35	50
Grovena	10	2e	3.9	118	70	38	54
Thurman	10	3e	3.0	90	54	29	41
P15B:							
Galva	80	2e	5.1	155	87	49	62
Primghar	10	1	5.3	160	90	50	64
Annieville	5	2e	5.1	155	87	49	62
Sac	5	2e	5.1	155	87	49	62
P15C2:							
Galva, eroded	80	3e	4.5	135	76	43	54
Galva, slightly eroded	10	2e	4.5	136	77	43	55
Sac, eroded	5	3e	4.5	135	76	43	54
Judson	3	2e	5.1	155	87	49	62
Primghar	2	1	5.3	160	90	50	64
P16A:							
Graceville	90	1	5.0	150	84	47	60
Dempster	10	2s	3.8	115	69	37	52
P16B:							
Graceville	90	2e	4.8	145	81	46	58
Dempster	10	2e	3.6	110	66	35	50
P17A:							
Ihlen	93	2s	3.8	115	69	37	46
Bluemound	3	6s	---	---	---	---	---

Table 7.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
P17A:							
Soils that are deep to bedrock	3	2s	3.9	118	70	38	48
Rock outcrop	1	---	---	---	---	---	---
P17B:							
Ihlen	80	2e	3.6	110	66	35	44
Bluemound	10	6s	---	---	---	---	---
Soils that are deep to bedrock	5	2s	3.7	112	68	36	45
Rock outcrop	5	---	---	---	---	---	---
P18B:							
Ihlen	55	6e	---	---	---	---	---
Rock outcrop	25	---	---	---	---	---	---
Bluemound	10	6s	---	---	---	---	---
Soils that are deep to bedrock	10	2s	---	---	---	---	---
P18C:							
Ihlen	45	7e	---	---	---	---	---
Rock outcrop	40	---	---	---	---	---	---
Bluemound	10	6s	---	---	---	---	---
Soils that are deep to bedrock	3	2s	---	---	---	---	---
Spillco, occasionally flooded	2	1	---	---	---	---	---
P19A:							
Judson	80	1	5.3	160	90	50	64
Whitewood, overwash	14	2w	5.0	150	84	47	60
Primghar	6	1	5.3	160	90	50	64
P20B:							
Judson	80	2e	5.1	155	87	49	62
Primghar	10	1	5.3	160	90	50	64
Galva	5	2e	5.1	155	87	49	62
Whitewood, overwash	5	2w	5.0	150	84	47	60
P21A:							
Marcus	80	2w	4.4	145	81	46	58
Whitewood, frequently flooded	10	2w	4.0	140	78	44	55
Primghar	5	1	5.3	160	90	50	64
Spicer	5	2w	4.2	140	78	44	56

Table 7.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
P22A:							
Havelock, frequently flooded----------------	80	5w	---	---	---	---	---
Havelock, occasionally flooded----------------	10	2w	---	---	---	---	---
Calco, frequently flooded----------------	5	5w	---	---	---	---	---
Spillco, frequently flooded----------------	5	5w	---	---	---	---	---
P23A:							
Havelock, occasionally flooded----------------	80	2w	3.8	125	70	40	50
Havelock, frequently flooded----------------	10	5w	---	---	---	---	---
Spillco, occasionally flooded----------------	5	1	5.1	155	87	49	62
Comfrey, occasionally flooded----------------	3	2w	3.8	125	70	40	50
Calco, occasionally flooded----------------	2	2w	3.8	125	70	40	50
P24B:							
Moody-------------------	85	2e	5.0	150	84	47	60
Primghar----------------	10	1	5.3	160	90	50	64
Nora, eroded------------	3	3e	4.3	130	73	41	52
Splitrock---------------	2	2e	5.0	150	84	47	60
P24C2:							
Moody, eroded-----------	80	3e	4.5	135	76	43	54
Moody, slightly eroded--	5	2e	5.0	150	84	47	60
Nora, eroded------------	5	3e	4.3	130	73	41	52
Splitrock, eroded-------	5	2e	4.3	130	73	41	52
Primghar----------------	3	1	5.3	160	90	50	64
Crofton, eroded---------	2	3e	3.9	120	67	38	48
P25C2:							
Nora, eroded------------	85	3e	4.3	130	73	41	52
Crofton, eroded---------	5	3e	3.9	120	67	38	48
Judson------------------	5	2e	5.1	155	87	49	62
Moody, eroded-----------	5	3e	4.5	135	76	43	54
P25D2:							
Nora, eroded------------	80	4e	3.1	95	53	31	38
Crofton, eroded---------	10	4e	2.9	85	47	27	34

Table 7.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
P25D2:							
Judson------------------	5	2e	5.1	155	87	49	62
Moody, eroded-----------	5	3e	4.5	135	76	43	54
P26C2:							
Nora, eroded------------	50	3e	4.3	130	73	41	52
Crofton, eroded---------	30	3e	3.9	120	67	38	48
Judson------------------	10	2e	5.1	155	87	49	62
Moody, eroded-----------	10	3e	4.5	135	76	43	54
P26D2:							
Nora, eroded------------	45	4e	3.1	95	53	31	38
Crofton, eroded---------	35	4e	2.9	85	47	27	34
Judson------------------	14	2e	5.1	155	87	49	62
Moody, eroded-----------	6	3e	4.5	135	76	43	54
P27A:							
Primghar----------------	80	1	5.3	160	90	50	64
Galva-------------------	8	2e	5.1	155	87	49	62
Marcus------------------	8	2w	4.4	145	81	46	58
Judson------------------	4	1	5.3	160	90	50	64
P28A:							
Ransom------------------	80	1	5.3	160	90	50	64
Rushmore----------------	8	2w	4.4	145	81	46	58
Sac---------------------	8	2e	5.1	155	87	49	62
Primghar----------------	4	1	5.3	160	90	50	64
P29A:							
Rushmore----------------	80	2w	4.4	145	81	46	58
Ransom------------------	10	1	5.3	160	90	50	64
Whitewood, frequently flooded----------------	10	2w	4.0	140	78	44	55
P30B:							
Sac---------------------	80	2e	5.1	155	87	49	62
Annieville--------------	10	2e	5.1	155	87	49	62
Primghar----------------	5	1	5.3	160	90	50	64
Ransom------------------	5	1	5.3	160	90	50	64
P30C2:							
Sac, eroded-------------	80	3e	4.5	135	76	43	54
Annieville--------------	10	3e	4.5	136	77	44	55

Table 7.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
P30C2:							
Sac, slightly eroded----	5	2e	4.5	136	77	44	55
Primghar----------------	3	1	5.3	160	90	50	64
Ransom------------------	2	1	5.3	160	90	50	64
P31A:							
Spicer------------------	85	2w	4.2	140	78	44	56
Marcus------------------	10	2w	4.4	145	81	46	58
Whitewood---------------	5	2w	4.4	145	81	46	58
P32A:							
Spillco, frequently flooded----------------	85	5w	---	---	---	---	---
Spillco, occasionally flooded----------------	10	1	---	---	---	---	---
Havelock, frequently flooded----------------	5	5w	---	---	---	---	---
P33A:							
Spillco, occasionally flooded----------------	85	1	5.1	155	87	49	62
Spillco, frequently flooded----------------	10	5w	---	---	---	---	---
Comfrey, occasionally flooded----------------	5	2w	3.8	125	70	40	50
P34B:							
Splitrock---------------	82	2e	5.0	150	84	47	60
Primghar----------------	10	1	5.3	160	90	50	64
Soils that are deep to till-------------------	8	2e	5.1	155	87	49	62
P34C2:							
Splitrock, eroded-------	80	3e	4.3	130	73	41	52
Splitrock, slightly eroded-----------------	10	2e	4.4	133	75	42	54
Soils that are deep to till-------------------	5	3e	4.4	133	75	42	54
Primghar----------------	5	1	5.3	160	90	50	64
P36A:							
Talcot, occasionally flooded----------------	85	2w	3.5	115	69	37	49
Biscay, occasionally flooded----------------	10	2w	3.6	120	70	38	50
Cylinder, occasionally flooded----------------	5	2s	3.6	110	66	35	50

Table 7.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
P37B:							
Talmo-------------------	90	4s	1.5	45	30	16	20
Kanaranzi---------------	5	3e	3.0	84	60	31	40
Thurman-----------------	5	3e	3.0	90	54	29	41
P37D:							
Talmo-------------------	90	7s	---	---	---	---	---
Kanaranzi---------------	5	4e	---	---	---	---	---
Thurman-----------------	5	4e	---	---	---	---	---
P38B:							
Thurman-----------------	90	3e	3.0	90	54	29	41
Henkin------------------	10	2e	3.2	95	56	31	44
P38C:							
Thurman-----------------	90	4e	2.5	75	45	25	34
Henkin------------------	10	3e	2.7	80	47	26	36
P40A:							
Bluemound---------------	85	6s	---	---	---	---	---
Ihlen-------------------	10	2s	---	---	---	---	---
Rock outcrop------------	5	---	---	---	---	---	---
P41A:							
Rosedell----------------	95	3w	3.6	120	67	38	48
Spicer------------------	3	2w	4.2	140	78	44	56
Albolls-----------------	2	3w	3.5	115	66	37	46
P42A:							
Whitewood---------------	70	2w	4.4	145	81	46	58
Whitewood, frequently flooded----------------	10	2w	4.0	140	78	44	55
Whitewood, overwash-----	10	2w	5.0	150	84	47	60
Primghar----------------	9	1	5.3	160	90	50	64
Wakonda-----------------	1	1	4.2	140	78	44	56
P43A:							
Wilmonton---------------	85	1	5.3	160	90	50	64
Everly------------------	5	2e	5.1	155	87	49	62
Ransom------------------	5	1	5.3	160	90	50	64
Rushmore----------------	5	2w	4.4	145	81	46	58
P44E:							
Shindler----------------	85	7e	---	---	---	---	---
Judson------------------	10	2e	---	---	---	---	---

Table 7.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass-alfalfa hay	Corn	Oats	Soybeans	Spring wheat
			Tons	Bu	Bu	Bu	Bu
P44E:							
Soils that are moderately deep to carbonates	5	7e	---	---	---	---	---
P45E:							
Moneta	85	7e	---	---	---	---	---
Judson	10	2e	---	---	---	---	---
Soils that are moderately deep to carbonates	5	7e	---	---	---	---	---
P47A:							
Whitewood, overwash	80	2w	5.0	150	84	47	60
Judson	10	1	5.3	160	90	50	64
Whitewood, frequently flooded	10	2w	4.0	120	67	38	48
P48A:							
Allendorf	85	2s	3.8	115	69	38	52
Kanaranzi	5	2e	3.0	87	60	32	40
Moderately well drained soils	5	1	4.0	120	72	40	55
Sac	5	2e	5.1	155	87	49	62
P48B:							
Allendorf	85	2e	3.6	110	66	35	50
Kanaranzi	5	2e	3.0	86	60	31	40
Moderately well drained soils	5	1	4.0	120	72	40	55
Sac	5	2e	5.1	155	87	49	62
P55A:							
Kato	90	2w	3.6	120	70	38	50
Somewhat poorly drained soils	10	1	3.7	122	71	40	50
W:							
Water	100	---	---	---	---	---	---

Table 8.--Forage Suitability Groups

(See text for an explanation of forage suitability groups)

Map symbol and component name	Pct. of map unit	Forage suitability group
GP:		
Pits, gravel	80	---
Udipsamments	20	---
M-W:		
Water, miscellaneous	100	---
P3A:		
Biscay	85	01
Cylinder	10	02
Talcot	5	09
P4A:		
Calco, frequently flooded	80	16
Calco, occasionally flooded	10	09
Havelock, frequently flooded	5	16
Spillco, frequently flooded	5	15
P5A:		
Calco, occasionally flooded	80	09
Calco, frequently flooded	5	16
Colo, occasionally flooded	5	01
Havelock, occasionally flooded	5	09
Spillco, occasionally flooded	5	02
P6A:		
Colo, occasionally flooded	80	01
Calco, frequently flooded	5	16
Calco, occasionally flooded	5	09
Comfrey, occasionally flooded	5	01
Spillco, occasionally flooded	5	02

Table 8.--Forage Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Forage suitability group
P7A:		
Comfrey, occasionally flooded	80	01
Colo, occasionally flooded	5	01
Havelock, occasionally flooded	5	09
Havelock, frequently flooded	5	16
Spillco, occasionally flooded	5	02
P8A:		
Cylinder, occasionally flooded	80	02
Fairhaven	10	02
Spillco, occasionally flooded	10	02
P11A:		
Dempster	90	02
Graceville	10	02
P11B:		
Dempster	90	02
Graceville	10	02
P12B:		
Everly	80	02
Sac	10	02
Ransom	5	02
Wilmonton	5	02
P12C2:		
Everly, eroded	80	02
Everly, slightly eroded	10	02
Moneta	5	17
Wilmonton	5	02
P13A:		
Fairhaven	85	02
Cylinder	5	02
Dempster	5	02
Flandreau	5	02

Table 8.--Forage Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Forage suitability group
P13B:		
Fairhaven	80	02
Cylinder	5	02
Dempster	5	02
Flandreau	5	02
Kanaranzi	5	02
P14A:		
Flandreau	90	02
Grovena	10	02
P14B:		
Flandreau	80	02
Grovena	10	02
Thurman	10	22
P15B:		
Galva	80	02
Primghar	10	02
Annieville	5	02
Sac	5	02
P15C2:		
Galva, eroded	80	02
Galva, slightly eroded	10	02
Sac, eroded	5	02
Judson	3	02
Primghar	2	02
P16A:		
Graceville	90	02
Dempster	10	02
P16B:		
Graceville	90	02
Dempster	10	02
P17A:		
Ihlen	93	04
Bluemound	3	22
Soils that are deep to bedrock	3	04
Rock outcrop	1	24

Table 8.--Forage Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Forage suitability group
P17B:		
Ihlen	80	04
Bluemound	10	22
Soils that are deep to bedrock	5	04
Rock outcrop	5	24
P18B:		
Ihlen	55	19
Rock outcrop	25	24
Bluemound	10	22
Soils that are deep to bedrock	10	04
P18C:		
Ihlen	45	19
Rock outcrop	40	24
Bluemound	10	22
Soils that are deep to bedrock	3	04
Spillco, occasionally flooded	2	02
P19A:		
Judson	80	02
Whitewood, overwash	14	01
Primghar	6	02
P20B:		
Judson	80	02
Primghar	10	02
Galva	5	02
Whitewood, overwash	5	01
P21A:		
Marcus	80	01
Whitewood, frequently flooded	10	01
Primghar	5	02
Spicer	5	09

Table 8.--Forage Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Forage suitability group
P22A:		
Havelock, frequently flooded	80	16
Havelock, occasionally flooded	10	09
Calco, frequently flooded	5	16
Spillco, frequently flooded	5	15
P23A:		
Havelock, occasionally flooded	80	09
Havelock, frequently flooded	10	16
Spillco, occasionally flooded	5	02
Comfrey, occasionally flooded	3	01
Calco, occasionally flooded	2	09
P24B:		
Moody	85	02
Primghar	10	02
Nora, eroded	3	02
Splitrock	2	02
P24C2:		
Moody, eroded	80	02
Moody, slightly eroded	5	02
Nora, eroded	5	02
Splitrock, eroded	5	02
Primghar	3	02
Crofton, eroded	2	10
P25C2:		
Nora, eroded	85	02
Crofton, eroded	5	10
Judson	5	02
Moody, eroded	5	02

Table 8.--Forage Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Forage suitability group
P25D2:		
Nora, eroded	80	23
Crofton, eroded	10	23
Judson	5	02
Moody, eroded	5	02
P26C2:		
Nora, eroded	50	02
Crofton, eroded	30	10
Judson	10	02
Moody, eroded	10	02
P26D2:		
Nora, eroded	45	23
Crofton, eroded	35	23
Judson	14	02
Moody, eroded	6	02
P27A:		
Primghar	80	02
Galva	8	02
Marcus	8	01
Judson	4	02
P28A:		
Ransom	80	02
Rushmore	8	01
Sac	8	02
Primghar	4	02
P29A:		
Rushmore	80	01
Ransom	10	02
Whitewood, frequently flooded	10	01
P30B:		
Sac	80	02
Annieville	10	02
Primghar	5	02
Ransom	5	02

Table 8.--Forage Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Forage suitability group
P30C2:		
Sac, eroded	80	02
Annieville	10	02
Sac, slightly eroded	5	02
Primghar	3	02
Ransom	2	02
P31A:		
Spicer	85	09
Marcus	10	01
Whitewood	5	01
P32A:		
Spillco, frequently flooded	85	15
Spillco, occasionally flooded	10	02
Havelock, frequently flooded	5	16
P33A:		
Spillco, occasionally flooded	85	02
Spillco, frequently flooded	10	15
Comfrey, occasionally flooded	5	01
P34B:		
Splitrock	82	02
Primghar	10	02
Soils that are deep to till	8	02
P34C2:		
Splitrock, eroded	80	02
Splitrock, slightly eroded	10	02
Soils that are deep to till	5	02
Primghar	5	02
P36A:		
Talcot, occasionally flooded	85	09
Biscay, occasionally flooded	10	01

Table 8.--Forage Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Forage suitability group
P36A:		
Cylinder, occasionally flooded	5	02
P37B:		
Talmo	90	22
Kanaranzi	5	02
Thurman	5	22
P37D:		
Talmo	90	22
Kanaranzi	5	02
Thurman	5	22
P38B:		
Thurman	90	22
Henkin	10	02
P38C:		
Thurman	90	22
Henkin	10	02
P40A:		
Bluemound	85	22
Ihlen	10	04
Rock outcrop	5	24
P41A:		
Rosedell	95	01
Spicer	3	09
Albolls	2	01
P42A:		
Whitewood	70	01
Whitewood, frequently flooded	10	01
Whitewood, overwash	10	01
Primghar	9	02
Wakonda	1	02
P43A:		
Wilmonton	85	02
Everly	5	02
Ransom	5	02
Rushmore	5	01

Table 8.--Forage Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Forage suitability group
P44E:		
Shindler	85	17
Judson	10	02
Soils that are moderately deep to carbonates	5	17
P45E:		
Moneta	85	17
Judson	10	02
Soils that are moderately deep to carbonates	5	17
P47A:		
Whitewood, overwash	80	01
Judson	10	02
Whitewood, frequently flooded	10	01
P48A:		
Allendorf	85	02
Kanaranzi	5	02
Moderately well drained soils	5	02
Sac	5	02
P48B:		
Allendorf	85	02
Kanaranzi	5	02
Moderately well drained soils	5	02
Sac	5	02
P55A:		
Kato	90	01
Somewhat poorly drained soils	10	01
W:		
Water	100	---

Table 9.--Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
P3A	Biscay silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
P5A	Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
P6A	Colo silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
P7A	Comfrey clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
P8A	Cylinder loam, 0 to 2 percent slopes, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
P11A	Dempster silt loam, 0 to 2 percent slopes
P11B	Dempster silt loam, 2 to 6 percent slopes
P12B	Everly silty clay loam, 2 to 6 percent slopes
P13A	Fairhaven silt loam, 0 to 2 percent slopes
P13B	Fairhaven silt loam, 2 to 6 percent slopes
P14A	Flandreau silt loam, 0 to 2 percent slopes
P14B	Flandreau silt loam, 2 to 6 percent slopes
P15B	Galva silty clay loam, 2 to 5 percent slopes
P16A	Graceville silty clay loam, 0 to 2 percent slopes
P16B	Graceville silty clay loam, 2 to 6 percent slopes
P17A	Ihlen silty clay loam, 0 to 2 percent slopes
P17B	Ihlen silty clay loam, 2 to 6 percent slopes
P19A	Judson silty clay loam, 1 to 3 percent slopes
P21A	Marcus silty clay loam, 0 to 2 percent slopes (where drained)
P23A	Havelock clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
P24B	Moody silty clay loam, 2 to 5 percent slopes
P27A	Primghar silty clay loam, 1 to 3 percent slopes
P28A	Ransom silty clay loam, 1 to 3 percent slopes
P29A	Rushmore silty clay loam, 0 to 2 percent slopes (where drained)
P30B	Sac silty clay loam, 2 to 5 percent slopes
P31A	Spicer silty clay loam, 0 to 2 percent slopes (where drained)
P33A	Spillco silt loam, 0 to 2 percent slopes, occasionally flooded
P34B	Splitrock silty clay loam, 2 to 5 percent slopes
P36A	Talcot silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
P41A	Rosedell silty clay loam, 0 to 2 percent slopes (where drained)
P42A	Whitewood silty clay loam, 0 to 2 percent slopes (where drained)
P43A	Wilmonton silty clay loam, 1 to 3 percent slopes
P47A	Whitewood silty clay loam, overwash, 0 to 2 percent slopes (where drained)
P48A	Allendorf silty clay loam, 0 to 2 percent slopes
P48B	Allendorf silty clay loam, 2 to 6 percent slopes
P55A	Kato silty clay loam, 0 to 2 percent slopes (where drained)

Table 10.--Windbreaks and Environmental Plantings

(Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
GP:						
Pits, gravel	80	---	---	---	---	---
Udipsamments	20	---	---	---	---	---
M-W:						
Water, miscellaneous	100	---	---	---	---	---
P3A:						
Biscay	85	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Cylinder	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Talcot	5	Redosier dogwood, sargent crabapple	Common chokecherry	Black Hills spruce, eastern redcedar, blue spruce, ponderosa pine	Russian-olive, green ash	Golden willow, Siouxland cottonwood
P4A:						
Calco, frequently flooded	80	---	---	---	---	---
Calco, occasionally flooded	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Havelock, frequently flooded	5	---	---	---	---	---
Spillco, frequently flooded	5	---	---	---	---	---

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P5A:						
Calco, occasionally flooded	80	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Calco, frequently flooded	5	---	---	---	---	---
Colo, occasionally flooded	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Havelock, occasionally flooded	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Spillco, occasionally flooded	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P6A:						
Colo, occasionally flooded	80	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Calco, frequently flooded	5	---	---	---	---	---
Calco, occasionally flooded	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P6A:						
Comfrey, occasionally flooded	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Spillco, occasionally flooded	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P7A:						
Comfrey, occasionally flooded	80	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Colo, occasionally flooded	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Havelock, occasionally flooded	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Havelock, frequently flooded	5	---	---	---	---	---
Spillco, occasionally flooded	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P8A:						
Cylinder, occasionally flooded	80	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Fairhaven	10	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Spillco, occasionally flooded	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P11A:						
Dempster	90	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Graceville	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
P11B:						
Dempster	90	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Graceville	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P12B:						
Everly	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Sac	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Ransom	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Wilmonton	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P12C2:						
Everly, eroded	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Everly, slightly eroded	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Moneta	5	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---
Wilmonton	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P13A:						
Fairhaven	85	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Cylinder	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Dempster	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Flandreau	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
P13B:						
Fairhaven	80	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Cylinder	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Dempster	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Flandreau	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P13B:						
Kanaranzi	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
P14A:						
Flandreau	90	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Grovena	10	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
P14B:						
Flandreau	80	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Grovena	10	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Thurman	10	Siberian peashrub, common lilac, sargent crabapple	Common chokecherry	Black Hills spruce, Russian-olive, blue spruce, eastern redcedar, ponderosa pine, silver maple, green ash	Eastern cottonwood	---
P15B:						
Galva	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P15B:						
Primghar	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Annieville	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Sac	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
P15C2:						
Galva, eroded	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Galva, slightly eroded	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Sac, eroded	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Judson	3	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	2	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P16A:						
Graceville	90	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Dempster	10	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
P16B:						
Graceville	90	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Dempster	10	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
P17A:						
Ihlen	93	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
Bluemound	3	---	---	---	---	---
Soils that are deep to bedrock	3	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
Rock outcrop	1	---	---	---	---	---

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P17B:						
Ihlen	80	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
Bluemound	10	---	---	---	---	---
Soils that are deep to bedrock	5	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
Rock outcrop	5	---	---	---	---	---
P18B:						
Ihlen	55	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
Rock outcrop	25	---	---	---	---	---
Bluemound	10	---	---	---	---	---
Soils that are deep to bedrock	10	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
P18C:						
Ihlen	45	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
Rock outcrop	40	---	---	---	---	---
Bluemound	10	---	---	---	---	---

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P18C:						
Soils that are deep to bedrock	3	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
Spillco, occasionally flooded	2	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P19A:						
Judson	80	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Whitewood, overwash	14	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Primghar	6	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P20B:						
Judson	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Galva	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P20B:						
Whitewood, overwash-----	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash-----------	Golden willow, eastern cottonwood
P21A:						
Marcus------------------	80	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash-----------	Golden willow, eastern cottonwood
Whitewood, frequently flooded----------------	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash-----------	Golden willow, eastern cottonwood
Primghar----------------	5	Sargent crabapple---	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow-------	Eastern cottonwood
Spicer------------------	5	Redosier dogwood, sargent crabapple	Common chokecherry	Black Hills spruce, eastern redcedar, blue spruce, ponderosa pine	Russian-olive, green ash	Golden willow, Siouxland cottonwood
P22A:						
Havelock, frequently flooded----------------	80	---	---	---	---	---
Havelock, occasionally flooded----------------	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash-----------	Golden willow, eastern cottonwood
Calco, frequently flooded----------------	5	---	---	---	---	---
Spillco, frequently flooded----------------	5	---	---	---	---	---

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P23A:						
Havelock, occasionally flooded	80	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Havelock, frequently flooded	10	---	---	---	---	---
Spillco, occasionally flooded	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Comfrey, occasionally flooded	3	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Calco, occasionally flooded	2	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
P24B:						
Moody	85	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P24B:						
Nora, eroded	3	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Splitrock	2	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
P24C2:						
Moody, eroded	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Moody, slightly eroded	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Nora, eroded	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Splitrock, eroded	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	3	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Crofton, eroded	2	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P25C2:						
Nora, eroded	85	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Crofton, eroded	5	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---
Judson	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Moody, eroded	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
P25D2:						
Nora, eroded	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Crofton, eroded	10	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---
Judson	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Moody, eroded	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P26C2:						
Nora, eroded	50	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Crofton, eroded	30	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---
Judson	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Moody, eroded	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
P26D2:						
Nora, eroded	45	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Crofton, eroded	35	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---
Judson	14	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Moody, eroded	6	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P27A:						
Primghar	80	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Galva	8	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Marcus	8	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Judson	4	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P28A:						
Ransom	80	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Rushmore	8	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Sac	8	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	4	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P29A:						
Rushmore	80	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Ransom	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Whitewood, frequently flooded	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
P30B:						
Sac	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Annieville	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Ransom	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P30C2:						
Sac, eroded	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Annieville	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Sac, slightly eroded	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	3	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Ransom	2	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P31A:						
Spicer	85	Redosier dogwood, sargent crabapple	Common chokecherry	Black Hills spruce, eastern redcedar, blue spruce, ponderosa pine	Russian-olive, green ash	Golden willow, Siouxland cottonwood
Marcus	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Whitewood	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P32A:						
Spillco, frequently flooded	85	---	---	---	---	---
Spillco, occasionally flooded	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Havelock, frequently flooded	5	---	---	---	---	---
P33A:						
Spillco, occasionally flooded	85	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Spillco, frequently flooded	10	---	---	---	---	---
Comfrey, occasionally flooded	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
P34B:						
Splitrock	82	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Soils that are deep to till	8	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P34C2:						
Splitrock, eroded	80	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Splitrock, slightly eroded	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Soils that are deep to till	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Primghar	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P36A:						
Talcot, occasionally flooded	85	Redosier dogwood, sargent crabapple	Common chokecherry	Black Hills spruce, eastern redcedar, blue spruce, ponderosa pine	Russian-olive, green ash	Golden willow, Siouxland cottonwood
Biscay, occasionally flooded	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Cylinder, occasionally flooded	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P37B:						
Talmo-------------------	90	Siberian peashrub, common lilac, sargent crabapple	Common chokecherry	Black Hills spruce, Russian-olive, blue spruce, eastern redcedar, ponderosa pine, silver maple, green ash	Eastern cottonwood	---
Kanaranzi---------------	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Thurman-----------------	5	Siberian peashrub, common lilac, sargent crabapple	Common chokecherry	Black Hills spruce, Russian-olive, blue spruce, eastern redcedar, ponderosa pine, silver maple, green ash	Eastern cottonwood	---
P37D:						
Talmo-------------------	90	Siberian peashrub, common lilac, sargent crabapple	Common chokecherry	Black Hills spruce, Russian-olive, blue spruce, eastern redcedar, ponderosa pine, silver maple, green ash	Eastern cottonwood	---
Kanaranzi---------------	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Thurman-----------------	5	Siberian peashrub, common lilac, sargent crabapple	Common chokecherry	Black Hills spruce, Russian-olive, blue spruce, eastern redcedar, ponderosa pine, silver maple, green ash	Eastern cottonwood	---

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P38B:						
Thurman	90	Siberian peashrub, common lilac, sargent crabapple	Common chokecherry	Black Hills spruce, Russian-olive, blue spruce, eastern redcedar, ponderosa pine, silver maple, green ash	Eastern cottonwood	---
Henkin	10	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
P38C:						
Thurman	90	Siberian peashrub, common lilac, sargent crabapple	Common chokecherry	Black Hills spruce, Russian-olive, blue spruce, eastern redcedar, ponderosa pine, silver maple, green ash	Eastern cottonwood	---
Henkin	10	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
P40A:						
Bluemound	85	---	---	---	---	---
Ihlen	10	Siberian peashrub, sargent crabapple	American plum, common chokecherry, eastern redcedar	Black Hills spruce, blue spruce, bur oak, green ash, Russian-olive, ponderosa pine	Silver maple	---
Rock outcrop	5	---	---	---	---	---
P41A:						
Rosedell	95	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P41A:						
Spicer	3	Redosier dogwood, sargent crabapple	Common chokecherry	Black Hills spruce, eastern redcedar, blue spruce, ponderosa pine	Russian-olive, green ash	Golden willow, Siouxland cottonwood
Albolls	2	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
P42A:						
Whitewood	70	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Whitewood, frequently flooded	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Whitewood, overwash	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Primghar	9	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Wakonda	1	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
P43A:						
Wilmonton	85	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
P43A:						
Everly	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Ransom	5	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Rushmore	5	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
P44E:						
Shindler	85	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---
Judson	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Soils that are moderately deep to carbonates	5	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---
P45E:						
Moneta	85	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P45E:						
Judson	10	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
Soils that are moderately deep to carbonates	5	American plum, Siberian peashrub, common lilac, silver buffaloberry	Black Hills spruce, blue spruce, eastern redcedar	Russian-olive, bur oak, green ash, ponderosa pine	Eastern cottonwood	---
P47A:						
Whitewood, overwash	80	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
Judson	10	Sargent crabapple	American plum, common chokecherry, redosier dogwood, eastern redcedar	Black Hills spruce, blue spruce, bur oak, Russian-olive, ponderosa pine	Golden willow	Eastern cottonwood
Whitewood, frequently flooded	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
P48A:						
Allendorf	85	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Kanaranzi	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P48A:						
Moderately well drained soils	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Sac	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
P48B:						
Allendorf	85	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Kanaranzi	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Moderately well drained soils	5	American plum, sargent crabapple	Siberian peashrub, bur oak, eastern redcedar	Blue spruce, common chokecherry, ponderosa pine, Russian-olive, green ash	Black Hills spruce	Eastern cottonwood
Sac	5	Redosier dogwood, sargent crabapple	American plum, common chokecherry	Black Hills spruce, bur oak, eastern redcedar, Russian-olive, blue spruce, ponderosa pine	Green ash	Eastern cottonwood
P55A:						
Kato	90	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
P55A:						
Somewhat poorly drained soils	10	Common lilac, redosier dogwood	American plum, eastern redcedar	Black Hills spruce, blue spruce, common chokecherry, ponderosa pine, common hackberry	Green ash	Golden willow, eastern cottonwood
W:						
Water	100	---	---	---	---	---

Table 11.--Windbreak Suitability Groups

(Suitable shrubs and trees with their mature heights are listed in table 10. Absence of an entry indicates that the soil is not assigned to a windbreak suitability group)

Map symbol and component name	Pct. of map unit	Windbreak suitability group
GP:		
Pits, gravel	80	---
Udipsamments	20	---
M-W:		
Water, miscellaneous	100	---
P3A:		
Biscay	85	2
Cylinder	10	1
Talcot	5	2K
P4A:		
Calco, frequently flooded	80	10
Calco, occasionally flooded	10	2
Havelock, frequently flooded	5	10
Spillco, frequently flooded	5	10
P5A:		
Calco, occasionally flooded	80	2
Calco, frequently flooded	5	10
Colo, occasionally flooded	5	2
Havelock, occasionally flooded	5	2
Spillco, occasionally flooded	5	1
P6A:		
Colo, occasionally flooded	80	2
Calco, frequently flooded	5	10
Calco, occasionally flooded	5	2
Comfrey, occasionally flooded	5	2
Spillco, occasionally flooded	5	1

Table 11.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
P7A:		
Comfrey, occasionally flooded	80	2
Colo, occasionally flooded	5	2
Havelock, occasionally flooded	5	2
Havelock, frequently flooded	5	10
Spillco, occasionally flooded	5	1
P8A:		
Cylinder, occasionally flooded	80	1
Fairhaven	10	6
Spillco, occasionally flooded	10	1
P11A:		
Dempster	90	6
Graceville	10	3
P11B:		
Dempster	90	6
Graceville	10	3
P12B:		
Everly	80	3
Sac	10	3
Ransom	5	1
Wilmonton	5	1
P12C2:		
Everly, eroded	80	3
Everly, slightly eroded	10	3
Moneta	5	8
Wilmonton	5	1
P13A:		
Fairhaven	85	6
Cylinder	5	1
Dempster	5	6
Flandreau	5	5

Table 11.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
P13B:		
Fairhaven	80	6
Cylinder	5	1
Dempster	5	6
Flandreau	5	5
Kanaranzi	5	6
P14A:		
Flandreau	90	5
Grovena	10	5
P14B:		
Flandreau	80	5
Grovena	10	5
Thurman	10	7
P15B:		
Galva	80	3
Primghar	10	1
Annieville	5	3
Sac	5	3
P15C2:		
Galva, eroded	80	3
Galva, slightly eroded	10	3
Sac, eroded	5	3
Judson	3	3
Primghar	2	1
P16A:		
Graceville	90	3
Dempster	10	6
P16B:		
Graceville	90	3
Dempster	10	6
P17A:		
Ihlen	93	6D
Bluemound	3	10
Soils that are deep to bedrock	3	6D
Rock outcrop	1	---

Table 11.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
P17B:		
Ihlen	80	6D
Bluemound	10	10
Soils that are deep to bedrock	5	6D
Rock outcrop	5	---
P18B:		
Ihlen	55	6D
Rock outcrop	25	---
Bluemound	10	10
Soils that are deep to bedrock	10	6D
P18C:		
Ihlen	45	6D
Rock outcrop	40	---
Bluemound	10	10
Soils that are deep to bedrock	3	6D
Spillco, occasionally flooded	2	1
P19A:		
Judson	80	1
Whitewood, overwash	14	2
Primghar	6	1
P20B:		
Judson	80	3
Primghar	10	1
Galva	5	3
Whitewood, overwash	5	2
P21A:		
Marcus	80	2
Whitewood, frequently flooded	10	2
Primghar	5	1
Spicer	5	2K
P22A:		
Havelock, frequently flooded	80	10

Table 11.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
P22A:		
Havelock, occasionally flooded	10	2
Calco, frequently flooded	5	10
Spillco, frequently flooded	5	10
P23A:		
Havelock, occasionally flooded	80	2
Havelock, frequently flooded	10	10
Spillco, occasionally flooded	5	1
Comfrey, occasionally flooded	3	2
Calco, occasionally flooded	2	2
P24B:		
Moody	85	3
Primghar	10	1
Nora, eroded	3	3
Splitrock	2	3
P24C2:		
Moody, eroded	80	3
Moody, slightly eroded	5	3
Nora, eroded	5	3
Splitrock, eroded	5	3
Primghar	3	1
Crofton, eroded	2	8
P25C2:		
Nora, eroded	85	3
Crofton, eroded	5	8
Judson	5	3
Moody, eroded	5	3
P25D2:		
Nora, eroded	80	3
Crofton, eroded	10	8

Table 11.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
P25D2:		
Judson	5	3
Moody, eroded	5	3
P26C2:		
Nora, eroded	50	3
Crofton, eroded	30	8
Judson	10	3
Moody, eroded	10	3
P26D2:		
Nora, eroded	45	3
Crofton, eroded	35	8
Judson	14	3
Moody, eroded	6	3
P27A:		
Primghar	80	1
Galva	8	3
Marcus	8	2
Judson	4	1
P28A:		
Ransom	80	1
Rushmore	8	2
Sac	8	3
Primghar	4	1
P29A:		
Rushmore	80	2
Ransom	10	1
Whitewood, frequently flooded	10	2
P30B:		
Sac	80	3
Annieville	10	3
Primghar	5	1
Ransom	5	1
P30C2:		
Sac, eroded	80	3
Annieville	10	3

Table 11.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
P30C2:		
Sac, slightly eroded--	5	3
Primghar--------------	3	1
Ransom----------------	2	1
P31A:		
Spicer----------------	85	2K
Marcus----------------	10	2
Whitewood-------------	5	2
P32A:		
Spillco, frequently flooded--------------	85	10
Spillco, occasionally flooded--------------	10	1
Havelock, frequently flooded--------------	5	10
P33A:		
Spillco, occasionally flooded--------------	85	1
Spillco, frequently flooded--------------	10	10
Comfrey, occasionally flooded--------------	5	2
P34B:		
Splitrock-------------	82	3
Primghar--------------	10	1
Soils that are deep to till-----------------	8	3
P34C2:		
Splitrock, eroded-----	80	3
Splitrock, slightly eroded---------------	10	3
Soils that are deep to till-----------------	5	3
Primghar--------------	5	1
P36A:		
Talcot, occasionally flooded--------------	85	2K
Biscay, occasionally flooded--------------	10	2
Cylinder, occasionally flooded--------------	5	1

Table 11.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
P37B:		
Talmo	90	6
Kanaranzi	5	6
Thurman	5	6
P37D:		
Talmo	90	6
Kanaranzi	5	6
Thurman	5	6
P38B:		
Thurman	90	6
Henkin	10	6
P38C:		
Thurman	90	6
Henkin	10	6
P40A:		
Bluemound	85	10
Ihlen	10	6D
Rock outcrop	5	---
P41A:		
Rosedell	95	2
Spicer	3	2K
Albolls	2	2
P42A:		
Whitewood	70	2
Whitewood, frequently flooded	10	2
Whitewood, overwash	10	2
Primghar	9	1
Wakonda	1	1
P43A:		
Wilmonton	85	1
Everly	5	3
Ransom	5	1
Rushmore	5	2
P44E:		
Shindler	85	8
Judson	10	3

Table 11.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
P44E:		
Soils that are moderately deep to carbonates-----------	5	8
P45E:		
Moneta----------------	85	8
Judson----------------	10	3
Soils that are moderately deep to carbonates-----------	5	8
P47A:		
Whitewood, overwash---	80	2
Judson----------------	10	1
Whitewood, frequently flooded--------------	10	2
P48A:		
Allendorf-------------	85	6
Kanaranzi-------------	5	6
Moderately well drained soils--------	5	6
Sac-------------------	5	3
P48B:		
Allendorf-------------	85	6
Kanaranzi-------------	5	6
Moderately well drained soils--------	5	6
Sac-------------------	5	3
P55A:		
Kato------------------	90	2
Somewhat poorly drained soils--------	10	2
W:		
Water-----------------	100	---

Table 12a.--Recreation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel--------	80	Not rated		Not rated		Not rated	
Udipsamments--------	20	Not rated		Not rated		Not rated	
M-W:							
Water, miscellaneous	100	Not rated		Not rated		Not rated	
P3A:							
Biscay--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Cylinder------------	10	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.90	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Talcot--------------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
P4A:							
Calco, frequently flooded------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Calco, occasionally flooded------------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Havelock, frequently flooded------------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Spillco, frequently flooded------------	5	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
P5A:							
Calco, occasionally flooded------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P5A:							
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Colo, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Havelock, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Spillco, occasionally flooded	5	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
P6A:							
Colo, occasionally flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Calco, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Comfrey, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Spillco, occasionally flooded	5	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
		Depth to saturated zone	0.01			Depth to saturated zone	0.01

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
P7A:							
Comfrey, occasionally flooded-----------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Colo, occasionally flooded-----------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Havelock, occasionally flooded-----------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Havelock, frequently flooded-----------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Spillco, occasionally flooded-----------	5	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
P8A:							
Cylinder, occasionally flooded-----------	80	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.90	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Fairhaven-----------	10	Not limited		Not limited		Not limited	
Spillco, occasionally flooded-----------	10	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
P11A:							
Dempster------------	90	Not limited		Not limited		Not limited	
Graceville----------	10	Not limited		Not limited		Not limited	
P11B:							
Dempster------------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P11B:							
Graceville----------	10	Not limited		Not limited		Somewhat limited	
						Slope	0.50
P12B:							
Everly--------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	0.50
						Restricted permeability	0.26
Sac-----------------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
Ransom--------------	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Wilmonton-----------	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P12C2:							
Everly, eroded------	80	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.26
Everly, slightly eroded------------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	0.50
						Restricted permeability	0.26
Moneta--------------	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Wilmonton-----------	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P13A:							
Fairhaven-----------	85	Not limited		Not limited		Not limited	
Cylinder------------	5	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.90	Depth to saturated zone	1.00

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P13A:							
Dempster	5	Not limited		Not limited		Not limited	
Flandreau	5	Not limited		Not limited		Not limited	
P13B:							
Fairhaven	80	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Cylinder	5	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.90	Depth to saturated zone	1.00
Dempster	5	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Flandreau	5	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Kanaranzi	5	Not limited		Not limited		Somewhat limited	
						Slope	0.50
P14A:							
Flandreau	90	Not limited		Not limited		Not limited	
Grovena	10	Not limited		Not limited		Not limited	
P14B:							
Flandreau	80	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Grovena	10	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Thurman	10	Not limited		Not limited		Somewhat limited	
						Slope	0.50
P15B:							
Galva	80	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Primghar	10	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Annieville	5	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Sac	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
P15C2:							
Galva, eroded	80	Not limited		Not limited		Very limited	
						Slope	1.00

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P15C2:							
Galva, slightly eroded	10	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Sac, eroded	5	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	1.00
		Depth to saturated zone	0.01			Restricted permeability	0.26
						Depth to saturated zone	0.01
Judson	3	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Primghar	2	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
P16A:							
Graceville	90	Not limited		Not limited		Not limited	
Dempster	10	Not limited		Not limited		Not limited	
P16B:							
Graceville	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Dempster	10	Not limited		Not limited		Somewhat limited	
						Slope	0.50
P17A:							
Ihlen	93	Not limited		Not limited		Not limited	
Bluemound	3	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Restricted permeability	0.45	Restricted permeability	0.45	Restricted permeability	0.45
Soils that are deep to bedrock	3	Not limited		Not limited		Not limited	
Rock outcrop	1	Not rated		Not rated		Not rated	
P17B:							
Ihlen	80	Not limited		Not limited		Somewhat limited	
						Slope	0.50
						Depth to bedrock	0.46
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Restricted permeability	0.45	Restricted permeability	0.45	Restricted permeability	0.45
Soils that are deep to bedrock	5	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Rock outcrop	5	Not rated		Not rated		Not rated	

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P18B:							
Ihlen	55	Not limited		Not limited		Not limited	
Rock outcrop	25	Not rated		Not rated		Not rated	
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Restricted permeability	0.45	Restricted permeability	0.45	Restricted permeability	0.45
Soils that are deep to bedrock	10	Not limited		Not limited		Not limited	
P18C:							
Ihlen	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Restricted permeability	0.45	Restricted permeability	0.45	Depth to bedrock	0.46
						Restricted permeability	0.45
Rock outcrop	40	Not rated		Not rated		Not rated	
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Restricted permeability	0.45	Restricted permeability	0.45	Restricted permeability	0.45
Soils that are deep to bedrock	3	Not limited		Not limited		Not limited	
Spillco, occasionally flooded	2	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
P19A:							
Judson	80	Not limited		Not limited		Not limited	
Whitewood, overwash	14	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Primghar	6	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
P20B:							
Judson	80	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Primghar	10	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
P20B:							
Galva	5	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Whitewood, overwash	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P21A:							
Marcus	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Primghar	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Spicer	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
P22A:							
Havelock, frequently flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Havelock, occasionally flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Spillco, frequently flooded	5	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.01			Depth to saturated zone	0.01

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
P23A:							
Havelock, occasionally flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Havelock, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Spillco, occasionally flooded	5	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Comfrey, occasionally flooded	3	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Calco, occasionally flooded	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
P24B:							
Moody	85	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Primghar	10	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Nora, eroded	3	Not limited		Not limited		Very limited	
						Slope	1.00
Splitrock	2	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
P24C2:							
Moody, eroded	80	Not limited		Not limited		Very limited	
						Slope	1.00
Moody, slightly eroded	5	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Nora, eroded	5	Not limited		Not limited		Very limited	
						Slope	1.00

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P24C2:							
Splitrock, eroded	5	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
Primghar	3	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Crofton, eroded	2	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
P25C2:							
Nora, eroded	85	Not limited		Not limited		Very limited	
						Slope	1.00
Crofton, eroded	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Judson	5	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Moody, eroded	5	Not limited		Not limited		Very limited	
						Slope	1.00
P25D2:							
Nora, eroded	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Crofton, eroded	10	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Judson	5	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Moody, eroded	5	Not limited		Not limited		Very limited	
						Slope	1.00
P26C2:							
Nora, eroded	50	Not limited		Not limited		Very limited	
						Slope	1.00
Crofton, eroded	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Judson	10	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Moody, eroded	10	Not limited		Not limited		Very limited	
						Slope	1.00
P26D2:							
Nora, eroded	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Crofton, eroded	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Judson	14	Not limited		Not limited		Somewhat limited	
						Slope	0.88

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
P26D2:							
Moody, eroded	6	Not limited		Not limited		Very limited	
						Slope	1.00
P27A:							
Primghar	80	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Galva	8	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Marcus	8	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Judson	4	Not limited		Not limited		Not limited	
P28A:							
Ransom	80	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Rushmore	8	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Sac	8	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
Primghar	4	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
P29A:							
Rushmore	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Ransom	10	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P29A:							
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P30B:							
Sac	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
Annieville	10	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Primghar	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Ransom	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P30C2:							
Sac, eroded	80	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	1.00
		Depth to saturated zone	0.01			Restricted permeability	0.26
						Depth to saturated zone	0.01
Annieville	10	Not limited		Not limited		Very limited	
						Slope	1.00
Sac, slightly eroded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
Primghar	3	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Ransom	2	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P31A:							
Spicer	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Marcus	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Whitewood	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P32A:							
Spillco, frequently flooded	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Spillco, occasionally flooded	10	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
P33A:							
Spillco, occasionally flooded	85	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Spillco, frequently flooded	10	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Comfrey, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P34B:							
Splitrock-----------	82	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
Primghar------------	10	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Soils that are deep to till-------	8	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
P34C2:							
Splitrock, eroded---	80	Somewhat limited		Not limited		Very limited	
		Depth to saturated zone	0.01			Slope	1.00
						Depth to saturated zone	0.01
Splitrock, slightly eroded-------------	10	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
Soils that are deep to till-------	5	Somewhat limited		Not limited		Very limited	
		Depth to saturated zone	0.01			Slope	1.00
						Depth to saturated zone	0.01
Primghar------------	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
P36A:							
Talcot, occasionally flooded------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Biscay, occasionally flooded------------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Cylinder, occasionally flooded------------	5	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.90	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P37B:							
Talmo	90	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.14	Gravel content	0.14	Gravel content	1.00
						Slope	0.50
Kanaranzi	5	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Thurman	5	Not limited		Not limited		Somewhat limited	
						Slope	0.50
P37D:							
Talmo	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.14	Gravel content	0.14	Gravel content	1.00
Kanaranzi	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Thurman	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
P38B:							
Thurman	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Henkin	10	Not limited		Not limited		Somewhat limited	
						Slope	0.50
P38C:							
Thurman	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Henkin	10	Not limited		Not limited		Very limited	
						Slope	1.00
P40A:							
Bluemound	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Restricted permeability	0.45	Restricted permeability	0.45	Restricted permeability	0.45
Ihlen	10	Not limited		Not limited		Not limited	
Rock outcrop	5	Not rated		Not rated		Not rated	
P41A:							
Rosedell	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Restricted permeability	0.50	Restricted permeability	0.50
Spicer	3	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
P41A:							
Albolls	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P42A:							
Whitewood	70	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Whitewood, overwash	10	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Primghar	9	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
Wakonda	1	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
P43A:							
Wilmonton	85	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Everly	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	0.50
						Restricted permeability	0.26
Ransom	5	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Rushmore	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P44E:							
Shindler	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Judson	10	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Soils that are moderately deep to carbonates	5	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
P45E:							
Moneta	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Judson	10	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Soils that are moderately deep to carbonates	5	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P47A:							
Whitewood, overwash	80	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Judson	10	Not limited		Not limited		Not limited	
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
P48A:							
Allendorf	85	Not limited		Not limited		Not limited	
Kanaranzi	5	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Moderately well drained soils	5	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.01			Depth to saturated zone	0.01

Table 12a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
P48A:							
Sac	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
P48B:							
Allendorf	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Kanaranzi	5	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Moderately well drained soils	5	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Sac	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
		Depth to saturated zone	0.01			Slope	0.12
						Depth to saturated zone	0.01
P55A:							
Kato	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Somewhat poorly drained soils	10	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.90	Depth to saturated zone	1.00
W:							
Water	100	Not rated		Not rated		Not rated	

Table 12b.--Recreation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
GP:							
Pits, gravel	80	Not rated		Not rated		Not rated	
Udipsamments	20	Not rated		Not rated		Not rated	
M-W:							
Water, miscellaneous	100	Not rated		Not rated		Not rated	
P3A:							
Biscay	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Cylinder	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	0.78	Depth to saturated zone	0.90
						Flooding	0.60
Talcot	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
P4A:							
Calco, frequently flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Calco, occasionally flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Spillco, frequently flooded	5	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
P5A:							
Calco, occasionally flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
P5A:							
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Colo, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Havelock, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Spillco, occasionally flooded	5	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
P6A:							
Colo, occasionally flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Calco, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Comfrey, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Spillco, occasionally flooded	5	Not limited		Not limited		Somewhat limited	
						Flooding	0.60

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
P7A:							
Comfrey, occasionally flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Colo, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Havelock, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Spillco, occasionally flooded	5	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
P8A:							
Cylinder, occasionally flooded	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	0.78	Depth to saturated zone	0.90
						Flooding	0.60
Fairhaven	10	Not limited		Not limited		Not limited	
Spillco, occasionally flooded	10	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
P11A:							
Dempster	90	Not limited		Not limited		Not limited	
Graceville	10	Not limited		Not limited		Not limited	
P11B:							
Dempster	90	Not limited		Not limited		Not limited	
Graceville	10	Not limited		Not limited		Not limited	
P12B:							
Everly	80	Not limited		Not limited		Not limited	

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
P12B:							
Sac	10	Not limited		Not limited		Not limited	
Ransom	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Wilmonton	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P12C2:							
Everly, eroded	80	Not limited		Not limited		Somewhat limited	
						Slope	0.04
Everly, slightly eroded	10	Not limited		Not limited		Not limited	
Moneta	5	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Wilmonton	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P13A:							
Fairhaven	85	Not limited		Not limited		Not limited	
Cylinder	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	0.78	Depth to saturated zone	0.90
Dempster	5	Not limited		Not limited		Not limited	
Flandreau	5	Not limited		Not limited		Not limited	
P13B:							
Fairhaven	80	Not limited		Not limited		Not limited	
Cylinder	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	0.78	Depth to saturated zone	0.90
Dempster	5	Not limited		Not limited		Not limited	
Flandreau	5	Not limited		Not limited		Not limited	
Kanaranzi	5	Not limited		Not limited		Not limited	
P14A:							
Flandreau	90	Not limited		Not limited		Not limited	
Grovena	10	Not limited		Not limited		Not limited	
P14B:							
Flandreau	80	Not limited		Not limited		Not limited	
Grovena	10	Not limited		Not limited		Not limited	
Thurman	10	Not limited		Not limited		Somewhat limited	
						Droughty	0.09

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
P15B:							
Galva	80	Not limited		Not limited		Not limited	
Primghar	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Annieville	5	Not limited		Not limited		Not limited	
Sac	5	Not limited		Not limited		Not limited	
P15C2:							
Galva, eroded	80	Not limited		Not limited		Not limited	
Galva, slightly eroded	10	Not limited		Not limited		Not limited	
Sac, eroded	5	Not limited		Not limited		Not limited	
Judson	3	Not limited		Not limited		Not limited	
Primghar	2	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P16A:							
Graceville	90	Not limited		Not limited		Not limited	
Dempster	10	Not limited		Not limited		Not limited	
P16B:							
Graceville	90	Not limited		Not limited		Not limited	
Dempster	10	Not limited		Not limited		Not limited	
P17A:							
Ihlen	93	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.46
Bluemound	3	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	0.63
Soils that are deep to bedrock	3	Not limited		Not limited		Not limited	
Rock outcrop	1	Not rated		Not rated		Not rated	
P17B:							
Ihlen	80	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.46
Bluemound	10	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	0.63
Soils that are deep to bedrock	5	Not limited		Not limited		Not limited	
Rock outcrop	5	Not rated		Not rated		Not rated	

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
P18B:							
Ihlen	55	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.46
Rock outcrop	25	Not rated		Not rated		Not rated	
Bluemound	10	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	0.63
Soils that are deep to bedrock	10	Not limited		Not limited		Not limited	
P18C:							
Ihlen	45	Not limited		Not limited		Somewhat limited	
						Slope	0.96
						Depth to bedrock	0.46
Rock outcrop	40	Not rated		Not rated		Not rated	
Bluemound	10	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	0.63
Soils that are deep to bedrock	3	Not limited		Not limited		Not limited	
Spillco, occasionally flooded	2	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
P19A:							
Judson	80	Not limited		Not limited		Not limited	
Whitewood, overwash	14	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Primghar	6	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P20B:							
Judson	80	Not limited		Not limited		Not limited	
Primghar	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Galva	5	Not limited		Not limited		Not limited	
Whitewood, overwash	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P21A:							
Marcus	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
P21A:							
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Primghar------------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Spicer--------------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
P22A:							
Havelock, frequently flooded------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Havelock, occasionally flooded------------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Calco, frequently flooded------------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Spillco, frequently flooded------------	5	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
P23A:							
Havelock, occasionally flooded------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Havelock, frequently flooded------------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Spillco, occasionally flooded------------	5	Not limited		Not limited		Somewhat limited	
						Flooding	0.60

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
P23A:							
Comfrey, occasionally flooded	3	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Calco, occasionally flooded	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
P24B:							
Moody	85	Not limited		Not limited		Not limited	
Primghar	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Nora, eroded	3	Not limited		Not limited		Not limited	
Splitrock	2	Not limited		Not limited		Not limited	
P24C2:							
Moody, eroded	80	Not limited		Not limited		Not limited	
Moody, slightly eroded	5	Not limited		Not limited		Not limited	
Nora, eroded	5	Not limited		Not limited		Not limited	
Splitrock, eroded	5	Not limited		Not limited		Not limited	
Primghar	3	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Crofton, eroded	2	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.16
P25C2:							
Nora, eroded	85	Not limited		Not limited		Not limited	
Crofton, eroded	5	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.16
Judson	5	Not limited		Not limited		Not limited	
Moody, eroded	5	Not limited		Not limited		Not limited	
P25D2:							
Nora, eroded	80	Not limited		Not limited		Somewhat limited	
						Slope	0.96
Crofton, eroded	10	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02				

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
P25D2:							
Judson	5	Not limited		Not limited		Not limited	
Moody, eroded	5	Not limited		Not limited		Not limited	
P26C2:							
Nora, eroded	50	Not limited		Not limited		Not limited	
Crofton, eroded	30	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.16
Judson	10	Not limited		Not limited		Not limited	
Moody, eroded	10	Not limited		Not limited		Not limited	
P26D2:							
Nora, eroded	45	Not limited		Not limited		Somewhat limited	
						Slope	0.96
Crofton, eroded	35	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02				
Judson	14	Not limited		Not limited		Not limited	
Moody, eroded	6	Not limited		Not limited		Not limited	
P27A:							
Primghar	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Galva	8	Not limited		Not limited		Not limited	
Marcus	8	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Judson	4	Not limited		Not limited		Not limited	
P28A:							
Ransom	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Rushmore	8	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Sac	8	Not limited		Not limited		Not limited	
Primghar	4	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P29A:							
Rushmore	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
P29A:							
Ransom--------------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
P30B:							
Sac-----------------	80	Not limited		Not limited		Not limited	
Annieville----------	10	Not limited		Not limited		Not limited	
Primghar------------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Ransom--------------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P30C2:							
Sac, eroded---------	80	Not limited		Not limited		Not limited	
Annieville----------	10	Not limited		Not limited		Not limited	
Sac, slightly eroded	5	Not limited		Not limited		Not limited	
Primghar------------	3	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Ransom--------------	2	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P31A:							
Spicer--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Marcus--------------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Whitewood-----------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
P32A:							
Spillco, frequently flooded------------	85	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
Spillco, occasionally flooded------------	10	Not limited		Not limited		Somewhat limited	
						Flooding	0.60

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
P32A:							
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
P33A:							
Spillco, occasionally flooded	85	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
Spillco, frequently flooded	10	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
Comfrey, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
P34B:							
Splitrock	82	Not limited		Not limited		Not limited	
Primghar	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Soils that are deep to till	8	Not limited		Not limited		Not limited	
P34C2:							
Splitrock, eroded	80	Not limited		Not limited		Not limited	
Splitrock, slightly eroded	10	Not limited		Not limited		Not limited	
Soils that are deep to till	5	Not limited		Not limited		Not limited	
Primghar	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P36A:							
Talcot, occasionally flooded	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Biscay, occasionally flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P36A:							
Cylinder, occasionally flooded-----------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	0.78	Depth to saturated zone	0.90
						Flooding	0.60
P37B:							
Talmo---------------	90	Not limited		Not limited		Very limited	
						Droughty	1.00
						Gravel content	0.14
Kanaranzi-----------	5	Not limited		Not limited		Not limited	
Thurman-------------	5	Not limited		Not limited		Somewhat limited	
						Droughty	0.09
P37D:							
Talmo---------------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Droughty	1.00
						Slope	1.00
						Gravel content	0.14
Kanaranzi-----------	5	Not limited		Not limited		Somewhat limited	
						Slope	0.04
Thurman-------------	5	Not limited		Not limited		Somewhat limited	
						Droughty	0.05
						Slope	0.04
P38B:							
Thurman-------------	90	Not limited		Not limited		Somewhat limited	
						Droughty	0.09
Henkin--------------	10	Not limited		Not limited		Not limited	
P38C:							
Thurman-------------	90	Not limited		Not limited		Somewhat limited	
						Droughty	0.05
						Slope	0.04
Henkin--------------	10	Not limited		Not limited		Not limited	
P40A:							
Bluemound-----------	85	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	0.63
Ihlen---------------	10	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.46
Rock outcrop--------	5	Not rated		Not rated		Not rated	
P41A:							
Rosedell------------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
P41A:							
Spicer	3	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Albolls	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
P42A:							
Whitewood	70	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Whitewood, overwash	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Primghar	9	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Wakonda	1	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
P43A:							
Wilmonton	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Everly	5	Not limited		Not limited		Not limited	
Ransom	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Rushmore	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
P44E:							
Shindler	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
Judson	10	Not limited		Not limited		Not limited	
Soils that are moderately deep to carbonates	5	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
P45E:							
Moneta	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
Judson	10	Not limited		Not limited		Not limited	
Soils that are moderately deep to carbonates	5	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
P47A:							
Whitewood, overwash	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Judson	10	Not limited		Not limited		Not limited	
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
P48A:							
Allendorf	85	Not limited		Not limited		Not limited	
Kanaranzi	5	Not limited		Not limited		Not limited	
Moderately well drained soils	5	Not limited		Not limited		Not limited	
Sac	5	Not limited		Not limited		Not limited	
P48B:							
Allendorf	85	Not limited		Not limited		Not limited	
Kanaranzi	5	Not limited		Not limited		Not limited	
Moderately well drained soils	5	Not limited		Not limited		Not limited	
Sac	5	Not limited		Not limited		Not limited	
P55A:							
Kato	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Somewhat poorly drained soils	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	0.78	Depth to saturated zone	0.90

Table 12b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
W:							
Water----------------	100	Not rated		Not rated		Not rated	

Table 13.--Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable)

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Open-land wild-life	Wood-land wild-life	Wetland wild-life
GP:											
Pits, gravel	80	---	---	---	---	---	---	---	---	---	---
Udipsamments	20	---	---	---	---	---	---	---	---	---	---
M-W:											
Water, miscellaneous	100	---	---	---	---	---	---	---	---	---	---
P3A:											
Biscay	85	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Cylinder	10	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Talcot	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
P4A:											
Calco, frequently flooded	80	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Calco, occasionally flooded	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Havelock, frequently flooded	5	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Spillco, frequently flooded	5	Very poor	Fair	Good	Poor	Poor	Fair	Very poor	Poor	Poor	Poor
P5A:											
Calco, occasionally flooded	80	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Calco, frequently flooded	5	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Colo, occasionally flooded	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Havelock, occasionally flooded	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Spillco, occasionally flooded	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P6A:											
Colo, occasionally flooded	80	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Calco, frequently flooded	5	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P6A:											
Calco, occasionally flooded	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Comfrey, occasionally flooded	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Spillco, occasionally flooded	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P7A:											
Comfrey, occasionally flooded	80	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Colo, occasionally flooded	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Havelock, occasionally flooded	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Havelock, frequently flooded	5	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Spillco, occasionally flooded	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P8A:											
Cylinder, occasionally flooded	80	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Fairhaven	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Spillco, occasionally flooded	10	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P11A:											
Dempster	90	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Graceville	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P11B:											
Dempster	90	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Graceville	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P12B:											
Everly	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Sac	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Open-land wild-life	Wood-land wild-life	Wetland wild-life
P12B:											
Ransom	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Wilmonton	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P12C2:											
Everly, eroded	80	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Everly, slightly eroded	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Moneta	5	Very poor	Very poor	Good	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Wilmonton	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P13A:											
Fairhaven	85	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Cylinder	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Dempster	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Flandreau	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P13B:											
Fairhaven	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Cylinder	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Dempster	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Flandreau	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Kanaranzi	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P14A:											
Flandreau	90	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Grovena	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P14B:											
Flandreau	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Grovena	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P14B:											
Thurman	10	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P15B:											
Galva	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Primghar	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Annieville	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Sac	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P15C2:											
Galva, eroded	80	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Galva, slightly eroded	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Sac, eroded	5	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Judson	3	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Primghar	2	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P16A:											
Graceville	90	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Dempster	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P16B:											
Graceville	90	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Dempster	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P17A:											
Ihlen	93	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Bluemound	3	Very poor	Fair	Good	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Soils that are deep to bedrock	3	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Rock outcrop	1	---	---	---	---	---	---	---	---	---	---

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P17B:											
Ihlen	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Bluemound	10	Very poor	Fair	Good	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Soils that are deep to bedrock	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Rock outcrop	5	---	---	---	---	---	---	---	---	---	---
P18B:											
Ihlen	55	Very poor	Fair	Good	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Rock outcrop	25	---	---	---	---	---	---	---	---	---	---
Bluemound	10	Very poor	Fair	Good	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Soils that are deep to bedrock	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P18C:											
Ihlen	45	Very poor	Fair	Good	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Rock outcrop	40	---	---	---	---	---	---	---	---	---	---
Bluemound	10	Very poor	Fair	Good	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Soils that are deep to bedrock	3	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Spillco, occasionally flooded	2	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P19A:											
Judson	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Whitewood, overwash	14	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Primghar	6	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P20B:											
Judson	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Primghar	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Galva	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Whitewood, overwash	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P21A:											
Marcus	80	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Whitewood, frequently flooded	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Primghar	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Spicer	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
P22A:											
Havelock, frequently flooded	80	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Havelock, occasionally flooded	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Calco, frequently flooded	5	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Spillco, frequently flooded	5	Very poor	Fair	Good	Poor	Poor	Fair	Very poor	Poor	Poor	Poor
P23A:											
Havelock, occasionally flooded	80	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Havelock, frequently flooded	10	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Spillco, occasionally flooded	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Comfrey, occasionally flooded	3	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Calco, occasionally flooded	2	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
P24B:											
Moody	85	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Primghar	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Nora, eroded	3	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Splitrock	2	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P24C2:											
Moody, eroded	80	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P24C2:											
Moody, slightly eroded	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Nora, eroded	5	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Splitrock, eroded	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Primghar	3	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Crofton, eroded	2	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P25C2:											
Nora, eroded	85	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Crofton, eroded	5	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Judson	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Moody, eroded	5	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P25D2:											
Nora, eroded	80	Poor	Good	Good	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Crofton, eroded	10	Poor	Good	Good	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Judson	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Moody, eroded	5	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P26C2:											
Nora, eroded	50	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Crofton, eroded	30	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Judson	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Moody, eroded	10	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P26D2:											
Nora, eroded	45	Poor	Good	Good	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Crofton, eroded	35	Poor	Good	Good	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Open- land wild- life	Wood- land wild- life	Wetland wild- life
P26D2:											
Judson	14	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Moody, eroded	6	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P27A:											
Primghar	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Galva	8	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Marcus	8	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Judson	4	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P28A:											
Ransom	80	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Rushmore	8	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Sac	8	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Primghar	4	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P29A:											
Rushmore	80	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Ransom	10	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Whitewood, frequently flooded	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
P30B:											
Sac	80	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Annieville	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Primghar	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Ransom	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P30C2:											
Sac, eroded	80	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Annieville	10	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Sac, slightly eroded	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P30C2:											
Primghar	3	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Ransom	2	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P31A:											
Spicer	85	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Marcus	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Whitewood	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
P32A:											
Spillco, frequently flooded	85	Very poor	Fair	Good	Poor	Poor	Fair	Very poor	Poor	Poor	Poor
Spillco, occasionally flooded	10	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Havelock, frequently flooded	5	Very poor	Fair	Good	Poor	Poor	Good	Good	Poor	Poor	Good
P33A:											
Spillco, occasionally flooded	85	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Spillco, frequently flooded	10	Very poor	Fair	Good	Poor	Poor	Fair	Very poor	Poor	Poor	Poor
Comfrey, occasionally flooded	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
P34B:											
Splitrock	82	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Primghar	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Soils that are deep to till	8	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P34C2:											
Splitrock, eroded	80	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Splitrock, slightly eroded	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Soils that are deep to till	5	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P34C2:											
Primghar	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P36A:											
Talcot, occasionally flooded	85	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Biscay, occasionally flooded	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Cylinder, occasionally flooded	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
P37B:											
Talmo	90	Poor	Good	Good	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Kanaranzi	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Thurman	5	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P37D:											
Talmo	90	Very poor	Very poor	Good	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Kanaranzi	5	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Thurman	5	Poor	Good	Good	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
P38B:											
Thurman	90	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Henkin	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P38C:											
Thurman	90	Poor	Good	Good	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Henkin	10	Fair	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P40A:											
Bluemound	85	Very poor	Fair	Good	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Ihlen	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Rock outcrop	5	---	---	---	---	---	---	---	---	---	---
P41A:											
Rosedell	95	Fair	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Spicer	3	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P41A:											
Albolls	2	Fair	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
P42A:											
Whitewood	70	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Whitewood, frequently flooded	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Whitewood, overwash	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Primghar	9	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Wakonda	1	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P43A:											
Wilmonton	85	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Everly	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Ransom	5	Good	Good	Good	Poor	Poor	Fair	Very poor	Good	Poor	Poor
Rushmore	5	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
P44E:											
Shindler	85	Very poor	Very poor	Good	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Judson	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Soils that are moderately deep to carbonates	5	Very poor	Very poor	Good	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
P45E:											
Moneta	85	Very poor	Very poor	Good	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Judson	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Soils that are moderately deep to carbonates	5	Very poor	Very poor	Good	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
P47A:											
Whitewood, overwash	80	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Judson	10	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Whitewood, frequently flooded	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good

Table 13.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
P48A:											
Allendorf	85	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Kanaranzi	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Moderately well drained soils	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Sac	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P48B:											
Allendorf	85	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Kanaranzi	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Moderately well drained soils	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
Sac	5	Good	Good	Good	Poor	Poor	Very poor	Very poor	Good	Poor	Very poor
P55A:											
Kato	90	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Somewhat poorly drained soils	10	Good	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
W:											
Water	100	---	---	---	---	---	---	---	---	---	---

Table 14a.--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 limitation. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel	80	Not rated		Not rated		Not rated	
Udipsamments	20	Not rated		Not rated		Not rated	
M-W:							
Water, miscellaneous	100	Not rated		Not rated		Not rated	
P3A:							
Biscay	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Cylinder	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Talcot	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.78			Shrink-swell	0.78
P4A:							
Calco, frequently flooded	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Calco, occasionally flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Spillco, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P5A:							
Calco, occasionally flooded	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Colo, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Havelock, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Spillco, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
P6A:							
Colo, occasionally flooded	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Calco, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P6A:							
Comfrey, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Spillco, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
P7A:							
Comfrey, occasionally flooded	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Colo, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Havelock, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Spillco, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
P8A:							
Cylinder, occasionally flooded	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P8A:							
Fairhaven	10	Not limited		Not limited		Not limited	
Spillco, occasionally flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
P11A:							
Dempster	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.01			Shrink-swell	0.01
Graceville	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
P11B:							
Dempster	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.01			Shrink-swell	0.01
Graceville	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
P12B:							
Everly	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.01	Depth to saturated zone	0.61	Shrink-swell	0.01
				Shrink-swell	0.01		
Sac	10	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.01	Depth to saturated zone	0.01
Ransom	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
Wilmonton	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
P12C2:							
Everly, eroded	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Depth to saturated zone	0.61	Slope	1.00
		Shrink-swell	0.01	Slope	0.04	Shrink-swell	0.01
				Shrink-swell	0.01		
Everly, slightly eroded	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.01	Depth to saturated zone	0.61	Shrink-swell	0.01
				Shrink-swell	0.01		
Moneta	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P12C2:							
Wilmonton	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
P13A:							
Fairhaven	85	Not limited		Not limited		Not limited	
Cylinder	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Dempster	5	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.01			Shrink-swell	0.01
Flandreau	5	Not limited		Not limited		Not limited	
P13B:							
Fairhaven	80	Not limited		Not limited		Not limited	
Cylinder	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Dempster	5	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.01			Shrink-swell	0.01
Flandreau	5	Not limited		Not limited		Not limited	
Kanaranzi	5	Not limited		Not limited		Not limited	
P14A:							
Flandreau	90	Not limited		Not limited		Not limited	
Grovena	10	Not limited		Not limited		Not limited	
P14B:							
Flandreau	80	Not limited		Not limited		Not limited	
Grovena	10	Not limited		Not limited		Not limited	
Thurman	10	Not limited		Not limited		Not limited	
P15B:							
Galva	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Shrink-swell	0.27
Primghar	10	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Annieville	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	0.61	Shrink-swell	0.50
				Shrink-swell	0.50		

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P15B:							
Sac	5	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.01	Depth to saturated zone	0.01
P15C2:							
Galva, eroded	80	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.27			Slope	0.88
						Shrink-swell	0.27
Galva, slightly eroded	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Shrink-swell	0.27
Sac, eroded	5	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.01	Shrink-swell	0.01	Shrink-swell	0.50
						Depth to saturated zone	0.01
Judson	3	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Primghar	2	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
P16A:							
Graceville	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
Dempster	10	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.01			Shrink-swell	0.01
P16B:							
Graceville	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
Dempster	10	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.01			Shrink-swell	0.01
P17A:							
Ihlen	93	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.46	Shrink-swell	0.50	Depth to hard bedrock	0.46
Bluemound	3	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Soils that are deep to bedrock	3	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.68	Shrink-swell	0.50
				Shrink-swell	0.50		
Rock outcrop	1	Not rated		Not rated		Not rated	

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P17B:							
Ihlen	80	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.46	Shrink-swell	0.50	Depth to hard bedrock	0.46
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Soils that are deep to bedrock	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.68	Shrink-swell	0.50
				Shrink-swell	0.50		
Rock outcrop	5	Not rated		Not rated		Not rated	
P18B:							
Ihlen	55	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.46	Shrink-swell	0.50	Depth to hard bedrock	0.46
Rock outcrop	25	Not rated		Not rated		Not rated	
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Soils that are deep to bedrock	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.68	Shrink-swell	0.50
				Shrink-swell	0.50		
P18C:							
Ihlen	45	Somewhat limited		Very limited		Very limited	
		Slope	0.96	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	0.96	Shrink-swell	0.50
		Depth to hard bedrock	0.46	Shrink-swell	0.50	Depth to hard bedrock	0.46
Rock outcrop	40	Not rated		Not rated		Not rated	
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Soils that are deep to bedrock	3	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.68	Shrink-swell	0.50
				Shrink-swell	0.50		
Spillco, occasionally flooded	2	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P19A:							
Judson--------------	80	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.64		
Whitewood, overwash	14	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Primghar------------	6	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
P20B:							
Judson--------------	80	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Primghar------------	10	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Galva---------------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Shrink-swell	0.27
Whitewood, overwash	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
P21A:							
Marcus--------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.78	Shrink-swell	0.78	Shrink-swell	0.78
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.32	Shrink-swell	0.50
Primghar------------	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Spicer--------------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.04	Shrink-swell	0.04	Shrink-swell	0.04

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P22A:							
Havelock, frequently flooded	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Havelock, occasionally flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Spillco, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
P23A:							
Havelock, occasionally flooded	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Havelock, frequently flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
Spillco, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
Comfrey, occasionally flooded	3	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P23A:							
Calco, occasionally flooded	2	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
P24B:							
Moody	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Shrink-swell	0.27
Primghar	10	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Nora, eroded	3	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.04			Slope	0.88
						Shrink-swell	0.04
Splitrock	2	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.68	Depth to saturated zone	0.01
P24C2:							
Moody, eroded	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Slope	0.88
						Shrink-swell	0.27
Moody, slightly eroded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Shrink-swell	0.27
Nora, eroded	5	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.04			Slope	0.88
						Shrink-swell	0.04
Splitrock, eroded	5	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.68	Depth to saturated zone	0.01
Primghar	3	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Crofton, eroded	2	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
P25C2:							
Nora, eroded	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.04			Slope	0.88
						Shrink-swell	0.04
Crofton, eroded	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P25C2:							
Judson	5	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Moody, eroded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Slope	0.88
						Shrink-swell	0.27
P25D2:							
Nora, eroded	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.04	Shrink-swell	0.04	Shrink-swell	0.04
Crofton, eroded	10	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Judson	5	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Moody, eroded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Slope	0.88
						Shrink-swell	0.27
P26C2:							
Nora, eroded	50	Somewhat limited		Not limited		Very limited	
		Shrink-swell	0.04			Slope	1.00
						Shrink-swell	0.04
Crofton, eroded	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Judson	10	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Moody, eroded	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Slope	0.88
						Shrink-swell	0.27
P26D2:							
Nora, eroded	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.04			Shrink-swell	0.04
Crofton, eroded	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Judson	14	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Moody, eroded	6	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Slope	0.88
						Shrink-swell	0.27
P27A:							
Primghar	80	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Galva	8	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.27	Shrink-swell	0.27	Shrink-swell	0.27

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P27A:							
Marcus	8	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.78	Shrink-swell	0.78	Shrink-swell	0.78
Judson	4	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.64		
P28A:							
Ransom	80	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
Rushmore	8	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
Sac	8	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.01	Depth to saturated zone	0.01
Primghar	4	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
P29A:							
Rushmore	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
Ransom	10	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.32	Shrink-swell	0.50
P30B:							
Sac	80	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.01	Depth to saturated zone	0.01
Annieville	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	0.61	Shrink-swell	0.50
				Shrink-swell	0.50		

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P30B:							
Primghar------------	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Ransom--------------	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
P30C2:							
Sac, eroded---------	80	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.01	Shrink-swell	0.01	Shrink-swell	0.50
						Depth to saturated zone	0.01
Annieville----------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	0.61	Slope	0.88
				Shrink-swell	0.50	Shrink-swell	0.50
Sac, slightly eroded	5	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.01	Depth to saturated zone	0.01
Primghar------------	3	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Ransom--------------	2	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
P31A:							
Spicer--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.04	Shrink-swell	0.04	Shrink-swell	0.04
Marcus--------------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.78	Shrink-swell	0.78	Shrink-swell	0.78
Whitewood-----------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.32	Shrink-swell	0.50
P32A:							
Spillco, frequently flooded-----------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P32A:							
Spillco, occasionally flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
P33A:							
Spillco, occasionally flooded	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
Spillco, frequently flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
Comfrey, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.04	Shrink-swell	0.50
P34B:							
Splitrock	82	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.68	Depth to saturated zone	0.01
Primghar	10	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Soils that are deep to till	8	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.50	Depth to saturated zone	0.01
P34C2:							
Splitrock, eroded	80	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	0.88
		Depth to saturated zone	0.01	Shrink-swell	0.68	Shrink-swell	0.50
						Depth to saturated zone	0.01

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P34C2:							
Splitrock, slightly eroded	10	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.68	Depth to saturated zone	0.01
Soils that are deep to till	5	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	0.88
		Depth to saturated zone	0.01	Shrink-swell	0.50	Shrink-swell	0.50
						Depth to saturated zone	0.01
Primghar	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
P36A:							
Talcot, occasionally flooded	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.78			Shrink-swell	0.78
Biscay, occasionally flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Cylinder, occasionally flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
P37B:							
Talmo	90	Not limited		Not limited		Not limited	
Kanaranzi	5	Not limited		Not limited		Not limited	
Thurman	5	Not limited		Not limited		Not limited	
P37D:							
Talmo	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Kanaranzi	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Thurman	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
P38B:							
Thurman	90	Not limited		Not limited		Not limited	
Henkin	10	Not limited		Not limited		Not limited	

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P38C:							
Thurman-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Henkin--------------	10	Not limited		Not limited		Very limited	
						Slope	1.00
P40A:							
Bluemound-----------	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Ihlen---------------	10	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.46	Shrink-swell	0.50	Depth to hard bedrock	0.46
Rock outcrop--------	5	Not rated		Not rated		Not rated	
P41A:							
Rosedell------------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Spicer--------------	3	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.04	Shrink-swell	0.04	Shrink-swell	0.04
Albolls-------------	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
P42A:							
Whitewood-----------	70	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.32	Shrink-swell	0.50
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.32	Shrink-swell	0.50
Whitewood, overwash	10	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Primghar------------	9	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P42A:							
Wakonda	1	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.11	Shrink-swell	0.11	Shrink-swell	0.11
P43A:							
Wilmonton	85	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
Everly	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.01	Depth to saturated zone	0.61	Shrink-swell	0.01
				Shrink-swell	0.01		
Ransom	5	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
Rushmore	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.01	Shrink-swell	0.50
P44E:							
Shindler	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.68	Shrink-swell	0.68	Shrink-swell	0.68
Judson	10	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Soils that are moderately deep to carbonates	5	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.68	Shrink-swell	0.68	Shrink-swell	0.68
P45E:							
Moneta	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
Judson	10	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Soils that are moderately deep to carbonates	5	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.01	Shrink-swell	0.01	Shrink-swell	0.01
P47A:							
Whitewood, overwash	80	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
P47A:							
Judson	10	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.64		
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.32	Shrink-swell	0.50
P48A:							
Allendorf	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.27			Shrink-swell	0.27
Kanaranzi	5	Not limited		Not limited		Not limited	
Moderately well drained soils	5	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.27	Depth to saturated zone	1.00	Shrink-swell	0.27
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Sac	5	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.01	Depth to saturated zone	0.01
P48B:							
Allendorf	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.27			Shrink-swell	0.27
Kanaranzi	5	Not limited		Not limited		Not limited	
Moderately well drained soils	5	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.27	Depth to saturated zone	1.00	Shrink-swell	0.27
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Sac	5	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01	Shrink-swell	0.01	Depth to saturated zone	0.01
P55A:							
Kato	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.22			Shrink-swell	0.22
Somewhat poorly drained soils	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.22			Shrink-swell	0.22

Table 14a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 14b.--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 limitation. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
GP:							
Pits, gravel	80	Not rated		Not rated		Not rated	
Udipsamments	20	Not rated		Not rated		Not rated	
M-W:							
Water, miscellaneous	100	Not rated		Not rated		Not rated	
P3A:							
Biscay	85	Very limited Depth to saturated zone Frost action Flooding	 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	 1.00 0.60
Cylinder	10	Very limited Flooding Depth to saturated zone Frost action	 1.00 0.90 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.60	Somewhat limited Depth to saturated zone Flooding	 0.90 0.60
Talcot	5	Very limited Depth to saturated zone Frost action Flooding Shrink-swell	 1.00 1.00 1.00 0.78	Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	 1.00 0.60
P4A:							
Calco, frequently flooded	80	Very limited Depth to saturated zone Frost action Flooding Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	 1.00 1.00
Calco, occasionally flooded	10	Very limited Depth to saturated zone Frost action Flooding Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.60 0.10	Very limited Depth to saturated zone Flooding	 1.00 0.60
Havelock, frequently flooded	5	Very limited Depth to saturated zone Frost action Flooding Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	 1.00 1.00

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P4A:							
Spillco, frequently flooded	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		
				Cutbanks cave	0.10		
P5A:							
Calco, occasionally flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Colo, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Havelock, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Spillco, occasionally flooded	5	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Cutbanks cave	0.10		
P6A:							
Colo, occasionally flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P6A:							
Calco, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Calco, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Comfrey, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Spillco, occasionally flooded	5	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Cutbanks cave	0.10		
P7A:							
Comfrey, occasionally flooded	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Colo, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Havelock, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P7A:							
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Spillco, occasionally flooded	5	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Cutbanks cave	0.10		
P8A:							
Cylinder, occasionally flooded	80	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.90
		Depth to saturated zone	0.90	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
Fairhaven	10	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Spillco, occasionally flooded	10	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Cutbanks cave	0.10		
P11A:							
Dempster	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
Graceville	10	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
P11B:							
Dempster	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
Graceville	10	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
P12B:							
Everly	80	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.61		
		Shrink-swell	0.01	Cutbanks cave	0.10		

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P12B:							
Sac	10	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Ransom	5	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Wilmonton	5	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.01				
P12C2:							
Everly, eroded	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	0.61	Slope	0.04
		Slope	0.04	Cutbanks cave	0.10		
		Shrink-swell	0.01	Slope	0.04		
Everly, slightly eroded	10	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.61		
		Shrink-swell	0.01	Cutbanks cave	0.10		
Moneta	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.01				
Wilmonton	5	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.01				
P13A:							
Fairhaven	85	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Cylinder	5	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.90	Depth to saturated zone	1.00	Depth to saturated zone	0.90
		Frost action	0.50	Cutbanks cave	1.00		
Dempster	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
Flandreau	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
P13B:							
Fairhaven	80	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P13B:							
Cylinder------------	5	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.90	Depth to saturated zone	1.00	Depth to saturated zone	0.90
		Frost action	0.50	Cutbanks cave	1.00		
Dempster------------	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
Flandreau-----------	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Kanaranzi-----------	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
P14A:							
Flandreau-----------	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Grovena-------------	10	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
P14B:							
Flandreau-----------	80	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Grovena-------------	10	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Thurman-------------	10	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.09
P15B:							
Galva---------------	80	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.27				
Primghar------------	10	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Annieville----------	5	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.61		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Sac-----------------	5	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
P15C2:							
Galva, eroded-------	80	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.27				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P15C2:							
Galva, slightly eroded	10	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.27				
Sac, eroded	5	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Judson	3	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
Primghar	2	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P16A:							
Graceville	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
Dempster	10	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
P16B:							
Graceville	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
Dempster	10	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.01				
P17A:							
Ihlen	93	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.46
		Frost action	0.50	Cutbanks cave	0.10		
		Depth to hard bedrock	0.46				
Bluemound	3	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.63
Soils that are deep to bedrock	3	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.68		
		Frost action	0.50	Cutbanks cave	0.10		
Rock outcrop	1	Not rated		Not rated		Not rated	

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P17B:							
Ihlen	80	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.46
		Frost action	0.50	Cutbanks cave	0.10		
		Depth to hard bedrock	0.46				
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.63
Soils that are deep to bedrock	5	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.68		
		Frost action	0.50	Cutbanks cave	0.10		
Rock outcrop	5	Not rated		Not rated		Not rated	
P18B:							
Ihlen	55	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.46
		Frost action	0.50	Cutbanks cave	0.10		
		Depth to hard bedrock	0.46				
Rock outcrop	25	Not rated		Not rated		Not rated	
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.63
Soils that are deep to bedrock	10	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.68		
		Frost action	0.50	Cutbanks cave	0.10		
P18C:							
Ihlen	45	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.96	Depth to hard bedrock	1.00	Slope	0.96
		Shrink-swell	0.50	Slope	0.96	Depth to bedrock	0.46
		Frost action	0.50	Cutbanks cave	0.10		
		Depth to hard bedrock	0.46				
Rock outcrop	40	Not rated		Not rated		Not rated	
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.63
Soils that are deep to bedrock	3	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.68		
		Frost action	0.50	Cutbanks cave	0.10		

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P18C:							
Spillco, occasionally flooded	2	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Cutbanks cave	0.10		
P19A:							
Judson	80	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.64		
				Cutbanks cave	0.10		
Whitewood, overwash	14	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Primghar	6	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P20B:							
Judson	80	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
Primghar	10	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Galva	5	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.27				
Whitewood, overwash	5	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P21A:							
Marcus	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.78				
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P21A:							
Primghar------------	5	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Spicer--------------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.04				
P22A:							
Havelock, frequently flooded------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Havelock, occasionally flooded------------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Calco, frequently flooded------------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Spillco, frequently flooded------------	5	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		
				Cutbanks cave	0.10		
P23A:							
Havelock, occasionally flooded------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P23A:							
Havelock, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Spillco, occasionally flooded	5	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Cutbanks cave	0.10		
Comfrey, occasionally flooded	3	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Calco, occasionally flooded	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P24B:							
Moody	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.27				
Primghar	10	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Nora, eroded	3	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.04				
Splitrock	2	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00		
		Frost action	0.50	Cutbanks cave	0.10		
P24C2:							
Moody, eroded	80	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.27				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P24C2:							
Moody, slightly eroded	5	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.27				
Nora, eroded	5	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.04				
Splitrock, eroded	5	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00		
		Frost action	0.50	Cutbanks cave	0.10		
Primghar	3	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Crofton, eroded	2	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.16	Slope	0.16
		Slope	0.16	Cutbanks cave	0.10		
P25C2:							
Nora, eroded	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.04				
Crofton, eroded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.16	Slope	0.16
		Slope	0.16	Cutbanks cave	0.10		
Judson	5	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
Moody, eroded	5	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.27				
P25D2:							
Nora, eroded	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.04				
Crofton, eroded	10	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Judson	5	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
Moody, eroded	5	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.27				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P26C2:							
Nora, eroded	50	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.04				
Crofton, eroded	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.16	Slope	0.16
		Slope	0.16	Cutbanks cave	0.10		
Judson	10	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
Moody, eroded	10	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.27				
P26D2:							
Nora, eroded	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.04				
Crofton, eroded	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Judson	14	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
Moody, eroded	6	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.27				
P27A:							
Primghar	80	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Galva	8	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.27				
Marcus	8	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.78				
Judson	4	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.64		
				Cutbanks cave	0.10		
P28A:							
Ransom	80	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P28A:							
Rushmore	8	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Sac	8	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Primghar	4	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P29A:							
Rushmore	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Ransom	10	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P30B:							
Sac	80	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Annieville	10	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.61		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Primghar	5	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Ransom	5	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P30C2:							
Sac, eroded---------	80	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Annieville----------	10	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.61		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Sac, slightly eroded	5	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
Primghar------------	3	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Ransom--------------	2	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P31A:							
Spicer--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.04				
Marcus--------------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.78				
Whitewood-----------	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P32A:							
Spillco, frequently flooded------------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		
				Cutbanks cave	0.10		

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P32A:							
Spillco, occasionally flooded	10	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Cutbanks cave	0.10		
Havelock, frequently flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P33A:							
Spillco, occasionally flooded	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Cutbanks cave	0.10		
Spillco, frequently flooded	10	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		
				Cutbanks cave	0.10		
Comfrey, occasionally flooded	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P34B:							
Splitrock	82	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00		
		Frost action	0.50	Cutbanks cave	0.10		
Primghar	10	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Soils that are deep to till	8	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00		
		Frost action	0.50	Cutbanks cave	0.10		

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P34C2:							
Splitrock, eroded---	80	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00		
		Frost action	0.50	Cutbanks cave	0.10		
Splitrock, slightly eroded------------	10	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00		
		Frost action	0.50	Cutbanks cave	0.10		
Soils that are deep to till-----------	5	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00		
		Frost action	0.50	Cutbanks cave	0.10		
Primghar------------	5	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P36A:							
Talcot, occasionally flooded-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	1.00	Flooding	0.60
		Flooding	1.00	Flooding	0.60		
		Shrink-swell	0.78				
Biscay, occasionally flooded-----------	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	1.00	Flooding	0.60
		Flooding	1.00	Flooding	0.60		
Cylinder, occasionally flooded-----------	5	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.90
		Depth to saturated zone	0.90	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
P37B:							
Talmo---------------	90	Not limited		Very limited		Very limited	
				Cutbanks cave	1.00	Droughty	1.00
						Gravel content	0.14
Kanaranzi-----------	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Thurman-------------	5	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.09

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P37D:							
Talmo----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Droughty	1.00
				Slope	1.00	Slope	1.00
						Gravel content	0.14
Kanaranzi-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.04
		Slope	0.04	Slope	0.04		
Thurman-------------	5	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	1.00	Droughty	0.05
				Slope	0.04	Slope	0.04
P38B:							
Thurman-------------	90	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.09
Henkin--------------	10	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
P38C:							
Thurman-------------	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	1.00	Droughty	0.05
				Slope	0.04	Slope	0.04
Henkin--------------	10	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
P40A:							
Bluemound-----------	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	0.63
		Frost action	0.50	Cutbanks cave	0.10		
Ihlen---------------	10	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.46
		Frost action	0.50				
		Depth to hard bedrock	0.46	Cutbanks cave	0.10		
Rock outcrop--------	5	Not rated		Not rated		Not rated	
P41A:							
Rosedell------------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.12		
		Shrink-swell	1.00	Cutbanks cave	0.10		
Spicer--------------	3	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.04				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P41A:							
Albolls	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	1.00	Too clayey	0.12		
		Ponding	1.00	Cutbanks cave	0.10		
P42A:							
Whitewood	70	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Whitewood, overwash	10	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Primghar	9	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Wakonda	1	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.11				
P43A:							
Wilmonton	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.01				
Everly	5	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.61		
		Shrink-swell	0.01	Cutbanks cave	0.10		
Ransom	5	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P43A:							
Rushmore	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
P44E:							
Shindler	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.68	Cutbanks cave	0.10		
		Frost action	0.50				
Judson	10	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
Soils that are moderately deep to carbonates	5	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.68	Cutbanks cave	0.10		
		Frost action	0.50				
P45E:							
Moneta	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.01				
Judson	10	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
Soils that are moderately deep to carbonates	5	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.01				
P47A:							
Whitewood, overwash	80	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
		Depth to saturated zone	0.78	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Judson	10	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.64		
				Cutbanks cave	0.10		
Whitewood, frequently flooded	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
P48A:							
Allendorf	85	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.27				
Kanaranzi	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Moderately well drained soils	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.27	Depth to saturated zone	1.00		
Sac	5	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
P48B:							
Allendorf	85	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.27				
Kanaranzi	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Moderately well drained soils	5	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Shrink-swell	0.27	Depth to saturated zone	1.00		
Sac	5	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
P55A:							
Kato	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.22				
Somewhat poorly drained soils	10	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.90
		Depth to saturated zone	0.90	Cutbanks cave	1.00		
		Shrink-swell	0.22				
W:							
Water	100	Not rated		Not rated		Not rated	

Table 15a.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
GP:					
Pits, gravel	80	Not rated		Not rated	
Udipsamments	20	Not rated		Not rated	
M-W:					
Water, miscellaneous	100	Not rated		Not rated	
P3A:					
Biscay	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.47
Cylinder	10	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.36
Talcot	5	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.47
P4A:					
Calco, frequently flooded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Calco, occasionally flooded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Havelock, frequently flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, frequently flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P5A:					
Calco, occasionally flooded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Calco, frequently flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
P5A:					
Colo, occasionally flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Havelock, occasionally flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, occasionally flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P6A:					
Colo, occasionally flooded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Calco, frequently flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Calco, occasionally flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Comfrey, occasionally flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, occasionally flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P7A:					
Comfrey, occasionally flooded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Colo, occasionally flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
P7A:					
Havelock, occasionally flooded-----------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Havelock, frequently flooded-----------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, occasionally flooded-----------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P8A:					
Cylinder, occasionally flooded-----------	80	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.36
Fairhaven-----------	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.82
Spillco, occasionally flooded-----------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P11A:					
Dempster-----------	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.79
Graceville----------	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.24	Bottom layer	0.42
P11B:					
Dempster-----------	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.79
Graceville----------	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.24	Bottom layer	0.42
P12B:					
Everly-------------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sac----------------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
P12B:					
Ransom	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Wilmonton	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P12C2:					
Everly, eroded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Everly, slightly eroded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Moneta	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Wilmonton	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P13A:					
Fairhaven	85	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.82
Cylinder	5	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.36
Dempster	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.79
Flandreau	5	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
P13B:					
Fairhaven	80	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.82
Cylinder	5	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.36
Dempster	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.79
Flandreau	5	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
P13B:					
Kanaranzi	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.54
P14A:					
Flandreau	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
Grovena	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P14B:					
Flandreau	80	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
Grovena	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Thurman	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.57
P15B:					
Galva	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Annieville	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sac	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P15C2:					
Galva, eroded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Galva, slightly eroded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sac, eroded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
P15C2:					
Primghar	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P16A:					
Graceville	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.24	Bottom layer	0.42
Dempster	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.79
P16B:					
Graceville	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.24	Bottom layer	0.42
Dempster	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.79
P17A:					
Ihlen	93	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Bluemound	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Soils that are deep to bedrock	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	1	Not rated		Not rated	
P17B:					
Ihlen	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Bluemound	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Soils that are deep to bedrock	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	5	Not rated		Not rated	
P18B:					
Ihlen	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	25	Not rated		Not rated	

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
P18B:					
Bluemound-----------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Soils that are deep to bedrock----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P18C:					
Ihlen---------------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop--------	40	Not rated		Not rated	
Bluemound-----------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Soils that are deep to bedrock----	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, occasionally flooded------------	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P19A:					
Judson--------------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Whitewood, overwash	14	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar------------	6	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P20B:					
Judson--------------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar------------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Galva---------------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Whitewood, overwash	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
P21A:					
Marcus	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Whitewood, frequently flooded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spicer	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P22A:					
Havelock, frequently flooded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Havelock, occasionally flooded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Calco, frequently flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, frequently flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P23A:					
Havelock, occasionally flooded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Havelock, frequently flooded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, occasionally flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
P23A:					
Comfrey, occasionally flooded	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Calco, occasionally flooded	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P24B:					
Moody	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Nora, eroded	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Splitrock	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P24C2:					
Moody, eroded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Moody, slightly eroded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Nora, eroded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Splitrock, eroded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crofton, eroded	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P25C2:					
Nora, eroded	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
P25C2:					
Crofton, eroded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Moody, eroded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P25D2:					
Nora, eroded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crofton, eroded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Moody, eroded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P26C2:					
Nora, eroded	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crofton, eroded	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Moody, eroded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P26D2:					
Nora, eroded	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crofton, eroded	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson	14	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
P26D2:					
Moody, eroded	6	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P27A:					
Primghar	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Galva	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Marcus	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson	4	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P28A:					
Ransom	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rushmore	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sac	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar	4	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P29A:					
Rushmore	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ransom	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Whitewood, frequently flooded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P30B:					
Sac	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Annieville	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
P30B:					
Primghar	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ransom	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P30C2:					
Sac, eroded	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Annieville	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sac, slightly eroded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ransom	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P31A:					
Spicer	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Marcus	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Whitewood	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P32A:					
Spillco, frequently flooded	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, occasionally flooded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Havelock, frequently flooded	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
P33A:					
Spillco, occasionally flooded-----------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spillco, frequently flooded-----------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Comfrey, occasionally flooded-----------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P34B:					
Splitrock-----------	82	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar------------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Soils that are deep to till-------	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P34C2:					
Splitrock, eroded---	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Splitrock, slightly eroded------------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Soils that are deep to till-------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar------------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P36A:					
Talcot, occasionally flooded-----------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.47
Biscay, occasionally flooded-----------	10	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.47

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Potential as source of gravel: Value	Potential as source of sand: Rating class	Potential as source of sand: Value
P36A:					
Cylinder, occasionally flooded	5	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.36
P37B:					
Talmo	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.03
		Bottom layer	0.47	Bottom layer	0.54
Kanaranzi	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.54
Thurman	5	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.57
P37D:					
Talmo	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.03
		Bottom layer	0.47	Bottom layer	0.82
Kanaranzi	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.54
Thurman	5	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.57
P38B:					
Thurman	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.57
Henkin	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.22
P38C:					
Thurman	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.57
Henkin	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.22
P40A:					
Bluemound	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ihlen	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	5	Not rated		Not rated	

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
P41A:					
Rosedell------------	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spicer--------------	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Albolls-------------	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P42A:					
Whitewood-----------	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Whitewood, frequently flooded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Whitewood, overwash	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Primghar------------	9	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Wakonda-------------	1	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P43A:					
Wilmonton-----------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Everly--------------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ransom--------------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rushmore------------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P44E:					
Shindler------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson--------------	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
P44E:					
Soils that are moderately deep to carbonates	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P45E:					
Moneta	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Soils that are moderately deep to carbonates	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P47A:					
Whitewood, overwash	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Judson	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Whitewood, frequently flooded	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P48A:					
Allendorf	85	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.10
Kanaranzi	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.54
Moderately well drained soils	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.10
Sac	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P48B:					
Allendorf	85	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.10

Table 15a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
P48B:					
Kanaranzi-----------	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.54
Moderately well drained soils------	5	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.01	Bottom layer	0.10
Sac-----------------	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
P55A:					
Kato----------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.47
Somewhat poorly drained soils------	10	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.47
W:					
Water---------------	100	Not rated		Not rated	

Table 15b.--Construction Materials

(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 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel--------	80	Not rated		Not rated		Not rated	
Udipsamments--------	20	Not rated		Not rated		Not rated	
M-W:							
Water, miscellaneous	100	Not rated		Not rated		Not rated	
P3A:							
Biscay--------------	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.00
		Carbonate content	0.97	Depth to saturated zone	0.00		
Cylinder------------	10	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.06
				Depth to saturated zone	0.06		
Talcot--------------	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.88	Low strength	0.00	Too clayey	0.88
		Carbonate content	0.97			Carbonate content	0.97
P4A:							
Calco, frequently flooded------------	80	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.99	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.87	Too clayey	0.99
Calco, occasionally flooded------------	10	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.99	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.87	Too clayey	0.99
Havelock, frequently flooded------------	5	Fair		Poor		Poor	
		Carbonate content	0.97	Low strength	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Depth to saturated zone	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98
Spillco, frequently flooded------------	5	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P5A:							
Calco, occasionally flooded	80	Fair		Poor		Poor	
		Carbonate content	0.97	Low strength	0.00	Depth to saturated zone	0.00
		Too clayey	0.99	Depth to saturated zone	0.00	Carbonate content	0.97
				Shrink-swell	0.87	Too clayey	0.99
Calco, frequently flooded	5	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.99	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.87	Too clayey	0.99
Colo, occasionally flooded	5	Good		Poor		Poor	
				Low strength	0.00	Depth to saturated zone	0.00
				Depth to saturated zone	0.00		
				Shrink-swell	0.88		
Havelock, occasionally flooded	5	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98
Spillco, occasionally flooded	5	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
P6A:							
Colo, occasionally flooded	80	Good		Poor		Poor	
				Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Low strength	0.00		
				Shrink-swell	0.88		
Calco, frequently flooded	5	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.99	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.87	Too clayey	0.99
Calco, occasionally flooded	5	Fair		Poor		Poor	
		Carbonate content	0.97	Low strength	0.00	Depth to saturated zone	0.00
		Too clayey	0.99	Depth to saturated zone	0.00	Carbonate content	0.97
				Shrink-swell	0.87	Too clayey	0.99

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P6A:							
Comfrey, occasionally flooded	5	Fair		Poor		Poor	
		Too clayey	0.95	Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Low strength	0.00	Too clayey	0.95
				Shrink-swell	0.97		
Spillco, occasionally flooded	5	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
P7A:							
Comfrey, occasionally flooded	80	Fair		Poor		Poor	
		Too clayey	0.95	Low strength	0.00	Depth to saturated zone	0.00
				Depth to saturated zone	0.00	Too clayey	0.95
				Shrink-swell	0.97		
Colo, occasionally flooded	5	Good		Poor		Poor	
				Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Low strength	0.00		
				Shrink-swell	0.88		
Havelock, occasionally flooded	5	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98
Havelock, frequently flooded	5	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98
Spillco, occasionally flooded	5	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P8A:							
Cylinder, occasionally flooded	80	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.06
				Depth to saturated zone	0.06		
Fairhaven	10	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
		Water erosion	0.90				
Spillco, occasionally flooded	10	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
P11A:							
Dempster	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
Graceville	10	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
P11B:							
Dempster	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
Graceville	10	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
P12B:							
Everly	80	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
				Shrink-swell	0.99		
Sac	10	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Too clayey	0.98	Shrink-swell	0.97		
Ransom	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.70
		Too clayey	0.98	Shrink-swell	0.96		
Wilmonton	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Too clayey	0.98	Depth to saturated zone	0.12	Too clayey	0.98
				Shrink-swell	0.99		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P12C2:							
Everly, eroded	80	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.96
				Shrink-swell	0.99		
Everly, slightly eroded	10	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
				Shrink-swell	0.99		
Moneta	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.37
				Shrink-swell	0.99		
Wilmonton	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12		
		Too clayey	0.98			Too clayey	0.98
				Shrink-swell	0.99		
P13A:							
Fairhaven	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
		Water erosion	0.90				
Cylinder	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.06
				Depth to saturated zone	0.06		
Dempster	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
Flandreau	5	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
P13B:							
Fairhaven	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
		Water erosion	0.90				
Cylinder	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.06
				Depth to saturated zone	0.06		
Dempster	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
Flandreau	5	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P13B:							
Kanaranzi	5	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
		Water erosion	0.90				
P14A:							
Flandreau	90	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
Grovena	10	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
P14B:							
Flandreau	80	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
Grovena	10	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
Thurman	10	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Low content of organic matter	0.12			Rock fragments	0.97
		Droughty	0.59				
		Too acid	0.99				
P15B:							
Galva	80	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
		Water erosion	0.90				
Primghar	10	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12		
		Water erosion	0.90			Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Annieville	5	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
				Shrink-swell	0.94		
		Water erosion	0.90				
		Too clayey	0.98				
Sac	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
				Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Water erosion	0.90				
		Too clayey	0.98	Shrink-swell	0.97		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P15C2:							
Galva, eroded	80	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
		Water erosion	0.90				
Galva, slightly eroded	10	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
		Water erosion	0.90				
Sac, eroded	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
				Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Water erosion	0.90				
		Too clayey	0.98	Shrink-swell	0.98		
Judson	3	Good		Poor		Good	
				Low strength	0.00		
Primghar	2	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12		
		Water erosion	0.90			Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
P16A:							
Graceville	90	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
Dempster	10	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
P16B:							
Graceville	90	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
Dempster	10	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
P17A:							
Ihlen	93	Fair		Poor		Fair	
		Depth to bedrock	0.54	Low strength	0.00	Depth to bedrock	0.54
		Low content of organic matter	0.88	Depth to bedrock	0.00	Too clayey	0.70
				Shrink-swell	0.87		
		Too clayey	0.98				
		Droughty	0.98				
Bluemound	3	Poor		Poor		Poor	
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Droughty	0.00	Depth to bedrock	0.00		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P17A:							
Soils that are deep to bedrock	3	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Too clayey	0.98	Depth to bedrock	0.32		
				Shrink-swell	0.87		
Rock outcrop	1	Not rated		Not rated		Not rated	
P17B:							
Ihlen	80	Fair		Poor		Fair	
		Depth to bedrock	0.54	Depth to bedrock	0.00	Depth to bedrock	0.54
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Too clayey	0.98	Shrink-swell	0.98		
		Droughty	0.99				
Bluemound	10	Poor		Poor		Poor	
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Droughty	0.00	Depth to bedrock	0.00		
Soils that are deep to bedrock	5	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Too clayey	0.98	Depth to bedrock	0.32		
				Shrink-swell	0.87		
Rock outcrop	5	Not rated		Not rated		Not rated	
P18B:							
Ihlen	55	Fair		Poor		Fair	
		Depth to bedrock	0.54	Depth to bedrock	0.00	Depth to bedrock	0.54
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Droughty	0.98	Shrink-swell	0.87		
		Too clayey	0.98				
Rock outcrop	25	Not rated		Not rated		Not rated	
Bluemound	10	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00		
Soils that are deep to bedrock	10	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Too clayey	0.98	Depth to bedrock	0.32		
				Shrink-swell	0.87		
P18C:							
Ihlen	45	Fair		Poor		Fair	
		Depth to bedrock	0.54	Low strength	0.00	Slope	0.04
		Droughty	0.88	Depth to bedrock	0.00	Depth to bedrock	0.54
		Too clayey	0.98	Shrink-swell	0.96	Too clayey	0.98
Rock outcrop	40	Not rated		Not rated		Not rated	
Bluemound	10	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P18C:							
Soils that are deep to bedrock	3	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
				Depth to bedrock	0.32		
		Too clayey	0.98	Shrink-swell	0.87		
Spillco, occasionally flooded	2	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
P19A:							
Judson	80	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
		Water erosion	0.90				
Whitewood, overwash	14	Fair		Poor		Fair	
		Too clayey	0.98	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12	Too clayey	0.98
				Shrink-swell	0.88		
Primghar	6	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
P20B:							
Judson	80	Good		Poor		Good	
				Low strength	0.00		
Primghar	10	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Galva	5	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
		Water erosion	0.90				
Whitewood, overwash	5	Fair		Poor		Fair	
		Too clayey	0.98	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12	Too clayey	0.98
				Shrink-swell	0.88		
P21A:							
Marcus	80	Fair		Poor		Poor	
		Too clayey	0.88	Low strength	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.88	Depth to saturated zone	0.00	Too clayey	0.63
		Water erosion	0.90	Shrink-swell	0.88		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P21A:							
Whitewood, frequently flooded	10	Fair		Poor		Poor	
		Water erosion	0.90	Low strength	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Depth to saturated zone	0.00	Too clayey	0.98
				Shrink-swell	0.91		
Primghar	5	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Spicer	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.00
		Carbonate content	0.97	Depth to saturated zone	0.00	Carbonate content	0.97
		Water erosion	0.99	Shrink-swell	0.98		
P22A:							
Havelock, frequently flooded	80	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98
Havelock, occasionally flooded	10	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98
Calco, frequently flooded	5	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.99	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.87	Too clayey	0.99
Spillco, frequently flooded	5	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
P23A:							
Havelock, occasionally flooded	80	Fair		Poor		Poor	
		Carbonate content	0.97	Low strength	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Depth to saturated zone	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P23A:							
Havelock, frequently flooded	10	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98
Spillco, occasionally flooded	5	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
Comfrey, occasionally flooded	3	Fair		Poor		Poor	
		Too clayey	0.95	Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Low strength	0.00	Too clayey	0.95
				Shrink-swell	0.97		
Calco, occasionally flooded	2	Fair		Poor		Poor	
		Carbonate content	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.99	Low strength	0.00	Carbonate content	0.97
				Shrink-swell	0.87	Too clayey	0.99
P24B:							
Moody	85	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
		Water erosion	0.90	Shrink-swell	0.99		
Primghar	10	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Nora, eroded	3	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
		Water erosion	0.90				
Splitrock	2	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Shrink-swell	0.85	Depth to saturated zone	0.88
		Too clayey	0.98	Depth to saturated zone	0.88		
P24C2:							
Moody, eroded	80	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
		Water erosion	0.90	Shrink-swell	0.99		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P24C2:							
Moody, slightly eroded	5	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
				Shrink-swell	0.99		
		Water erosion	0.90				
Nora, eroded	5	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
		Water erosion	0.90				
Splitrock, eroded	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
				Shrink-swell	0.85	Depth to saturated zone	0.88
		Water erosion	0.90	Depth to saturated zone	0.88		
		Too clayey	0.98				
Primghar	3	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12		
		Water erosion	0.90			Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Crofton, eroded	2	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.84
		Water erosion	0.90				
P25C2:							
Nora, eroded	85	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
		Water erosion	0.90				
Crofton, eroded	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.84
		Water erosion	0.90				
Judson	5	Good		Poor		Good	
				Low strength	0.00		
Moody, eroded	5	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
				Shrink-swell	0.99		
		Water erosion	0.90				
P25D2:							
Nora, eroded	80	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Slope	0.04
		Water erosion	0.90				
Crofton, eroded	10	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Slope	0.98		
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P25D2:							
Judson	5	Good		Poor		Good	
				Low strength	0.00		
Moody, eroded	5	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
				Shrink-swell	0.99		
		Water erosion	0.90				
P26C2:							
Nora, eroded	50	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
		Water erosion	0.90				
Crofton, eroded	30	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.84
		Water erosion	0.90				
Judson	10	Good		Poor		Good	
				Low strength	0.00		
Moody, eroded	10	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
				Shrink-swell	0.99		
		Water erosion	0.90				
P26D2:							
Nora, eroded	45	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Slope	0.04
		Water erosion	0.90				
Crofton, eroded	35	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Slope	0.98		
		Water erosion	0.90				
Judson	14	Good		Poor		Good	
				Low strength	0.00		
Moody, eroded	6	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
				Shrink-swell	0.99		
		Water erosion	0.90				
P27A:							
Primghar	80	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12		
		Water erosion	0.90			Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Galva	8	Fair		Poor		Good	
		Low content of organic matter	0.88	Low strength	0.00		
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P27A:							
Marcus	8	Fair		Poor		Poor	
		Too clayey	0.88	Low strength	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.88	Depth to saturated zone	0.00	Too clayey	0.63
		Water erosion	0.90	Shrink-swell	0.88		
Judson	4	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
		Water erosion	0.90				
P28A:							
Ransom	80	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.70
		Too clayey	0.98	Shrink-swell	0.96		
Rushmore	8	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.82	Low strength	0.00	Too clayey	0.82
		Water erosion	0.99	Shrink-swell	0.97		
Sac	8	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Too clayey	0.98	Shrink-swell	0.97		
Primghar	4	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
P29A:							
Rushmore	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.00
		Too clayey	0.82	Depth to saturated zone	0.00	Too clayey	0.82
		Water erosion	0.99	Shrink-swell	0.97		
Ransom	10	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.70
		Too clayey	0.98	Shrink-swell	0.96		
Whitewood, frequently flooded	10	Fair		Poor		Poor	
		Water erosion	0.90	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Too clayey	0.98
				Shrink-swell	0.91		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P30B:							
Sac	80	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Too clayey	0.98	Shrink-swell	0.97		
Annieville	10	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Shrink-swell	0.94		
		Too clayey	0.98				
Primghar	5	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Ransom	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.70
		Too clayey	0.98	Shrink-swell	0.96		
P30C2:							
Sac, eroded	80	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Too clayey	0.98	Shrink-swell	0.98		
Annieville	10	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Shrink-swell	0.94		
		Too clayey	0.98				
Sac, slightly eroded	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Too clayey	0.98	Shrink-swell	0.97		
Primghar	3	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Ransom	2	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.70
		Too clayey	0.98	Shrink-swell	0.96		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P31A:							
Spicer	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Carbonate content	0.97	Low strength	0.00	Carbonate content	0.97
		Water erosion	0.99	Shrink-swell	0.98		
Marcus	10	Fair		Poor		Poor	
		Too clayey	0.88	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.63
		Water erosion	0.90	Shrink-swell	0.88		
Whitewood	5	Fair		Poor		Poor	
		Water erosion	0.90	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Too clayey	0.98
				Shrink-swell	0.91		
P32A:							
Spillco, frequently flooded	85	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
Spillco, occasionally flooded	10	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
Havelock, frequently flooded	5	Fair		Poor		Poor	
		Carbonate content	0.97	Low strength	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Depth to saturated zone	0.00	Carbonate content	0.97
				Shrink-swell	0.95	Too clayey	0.98
P33A:							
Spillco, occasionally flooded	85	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		
Spillco, frequently flooded	10	Good		Poor		Fair	
				Low strength	0.00	Depth to saturated zone	0.88
				Depth to saturated zone	0.88		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P33A:							
Comfrey, occasionally flooded	5	Fair		Poor		Poor	
		Too clayey	0.95	Low strength	0.00	Depth to saturated zone	0.00
				Depth to saturated zone	0.00	Too clayey	0.95
				Shrink-swell	0.97		
P34B:							
Splitrock	82	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Shrink-swell	0.84	Depth to saturated zone	0.88
		Too clayey	0.98	Depth to saturated zone	0.88		
Primghar	10	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Soils that are deep to till	8	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Shrink-swell	0.86	Depth to saturated zone	0.88
		Too clayey	0.98	Depth to saturated zone	0.88		
P34C2:							
Splitrock, eroded	80	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Shrink-swell	0.84	Depth to saturated zone	0.88
		Too clayey	0.98	Depth to saturated zone	0.88		
Splitrock, slightly eroded	10	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Shrink-swell	0.85	Depth to saturated zone	0.88
		Too clayey	0.98	Depth to saturated zone	0.88		
Soils that are deep to till	5	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
		Water erosion	0.90	Shrink-swell	0.86	Depth to saturated zone	0.88
		Too clayey	0.98	Depth to saturated zone	0.88		
Primghar	5	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P36A:							
Talcot, occasionally flooded	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.88	Low strength	0.00	Too clayey	0.88
		Carbonate content	0.97			Carbonate content	0.97
Biscay, occasionally flooded	10	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.00
				Depth to saturated zone	0.00		
		Carbonate content	0.97				
Cylinder, occasionally flooded	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.06
				Depth to saturated zone	0.06		
P37B:							
Talmo	90	Poor		Poor		Poor	
		Droughty	0.00	Low strength	0.00	Too sandy	0.00
		Too sandy	0.00			Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
Kanaranzi	5	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
		Water erosion	0.90				
Thurman	5	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Low content of organic matter	0.12			Rock fragments	0.97
		Droughty	0.59				
		Too acid	0.99				
P37D:							
Talmo	90	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Droughty	0.00	Slope	0.32	Rock fragments	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Slope	0.00
Kanaranzi	5	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Too sandy	0.00
		Water erosion	0.90			Slope	0.96
Thurman	5	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Low content of organic matter	0.12			Slope	0.96
						Rock fragments	0.97
		Droughty	0.67				
		Too acid	0.99				

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P38B:							
Thurman	90	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Low content of organic matter	0.12			Rock fragments	0.97
		Droughty	0.59				
		Too acid	0.99				
Henkin	10	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
P38C:							
Thurman	90	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Too sandy	0.00
		Low content of organic matter	0.12			Slope	0.96
						Rock fragments	0.97
		Droughty	0.67				
		Too acid	0.99				
Henkin	10	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
P40A:							
Bluemound	85	Poor		Poor		Poor	
		Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
		Droughty	0.00	Depth to bedrock	0.00		
Ihlen	10	Fair		Poor		Fair	
		Depth to bedrock	0.54	Depth to bedrock	0.00	Depth to bedrock	0.54
		Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
				Shrink-swell	0.87		
		Too clayey	0.98				
		Droughty	0.98				
Rock outcrop	5	Not rated		Not rated		Not rated	
P41A:							
Rosedell	95	Fair		Poor		Poor	
		Too clayey	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.09
				Shrink-swell	0.35		
Spicer	3	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Carbonate content	0.97	Low strength	0.00	Carbonate content	0.97
		Water erosion	0.99	Shrink-swell	0.98		
Albolls	2	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.00
				Depth to saturated zone	0.00		
		Too clayey	0.32			Too clayey	0.32
				Shrink-swell	0.35		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P42A:							
Whitewood	70	Fair		Poor		Poor	
		Water erosion	0.90	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Too clayey	0.98
				Shrink-swell	0.91		
Whitewood, frequently flooded	10	Fair		Poor		Poor	
		Water erosion	0.90	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Low strength	0.00	Too clayey	0.98
				Shrink-swell	0.91		
Whitewood, overwash	10	Fair		Poor		Fair	
		Too clayey	0.98	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12	Too clayey	0.98
				Shrink-swell	0.88		
Primghar	9	Fair		Poor		Fair	
		Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.88		
Wakonda	1	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12		
				Shrink-swell	0.97		
P43A:							
Wilmonton	85	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Too clayey	0.98	Depth to saturated zone	0.12	Too clayey	0.98
				Shrink-swell	0.99		
Everly	5	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
				Shrink-swell	0.99		
Ransom	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.12
		Water erosion	0.90	Depth to saturated zone	0.12	Too clayey	0.70
		Too clayey	0.98	Shrink-swell	0.96		
Rushmore	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.82	Low strength	0.00	Too clayey	0.82
		Water erosion	0.99	Shrink-swell	0.97		

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P44E:							
Shindler	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.00
		Too clayey	0.92	Slope	0.50	Too clayey	0.53
		Water erosion	0.99	Shrink-swell	0.82		
Judson	10	Good		Poor		Good	
				Low strength	0.00		
Soils that are moderately deep to carbonates	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.00
		Too clayey	0.92	Slope	0.50	Too clayey	0.53
		Water erosion	0.99	Shrink-swell	0.82		
P45E:							
Moneta	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Slope	0.50		
				Shrink-swell	0.99		
Judson	10	Good		Poor		Good	
				Low strength	0.00		
Soils that are moderately deep to carbonates	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Slope	0.50		
				Shrink-swell	0.99		
P47A:							
Whitewood, overwash	80	Fair		Poor		Fair	
		Too clayey	0.98	Low strength	0.00	Depth to saturated zone	0.12
				Depth to saturated zone	0.12	Too clayey	0.98
				Shrink-swell	0.88		
Judson	10	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
		Water erosion	0.90				
Whitewood, frequently flooded	10	Fair		Poor		Poor	
		Water erosion	0.90	Low strength	0.00	Depth to saturated zone	0.00
		Too clayey	0.98	Depth to saturated zone	0.00	Too clayey	0.98
				Shrink-swell	0.91		
P48A:							
Allendorf	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00

Table 15b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
P48A:							
Kanaranzi-----------	5	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.12			Too sandy	0.00
						Hard to reclaim	0.00
		Water erosion	0.90				
Moderately well drained soils------	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
				Depth to saturated zone	0.88	Depth to saturated zone	0.88
Sac-----------------	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
				Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Water erosion	0.90				
		Too clayey	0.98	Shrink-swell	0.97		
P48B:							
Allendorf-----------	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
Kanaranzi-----------	5	Poor		Poor		Poor	
		Too sandy	0.00	Low strength	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12			Too sandy	0.00
						Rock fragments	0.00
		Water erosion	0.90				
Moderately well drained soils------	5	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Hard to reclaim	0.00
				Depth to saturated zone	0.88	Depth to saturated zone	0.88
Sac-----------------	5	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.70
				Depth to saturated zone	0.88	Depth to saturated zone	0.88
		Water erosion	0.90				
		Too clayey	0.98	Shrink-swell	0.97		
P55A:							
Kato----------------	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.00
				Depth to saturated zone	0.00		
		Carbonate content	0.97				
Somewhat poorly drained soils------	10	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.06
				Depth to saturated zone	0.06		
		Carbonate content	0.97				
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 16.--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 limitation. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
GP:							
Pits, gravel	80	Not rated		Not rated		Not rated	
Udipsamments	20	Not rated		Not rated		Not rated	
M-W:							
Water, miscellaneous	100	Not rated		Not rated		Not rated	
P3A:							
Biscay	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.47		
Cylinder	10	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.36		
Talcot	5	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.47		
P4A:							
Calco, frequently flooded	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Hard to pack	0.03		
Calco, occasionally flooded	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Hard to pack	0.03		
Havelock, frequently flooded	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		
Spillco, frequently flooded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
P5A:							
Calco, occasionally flooded	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Hard to pack	0.03		

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P5A:							
Calco, frequently flooded-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Hard to pack	0.03		
Colo, occasionally flooded-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
Havelock, occasionally flooded-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		
Spillco, occasionally flooded-----------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
P6A:							
Colo, occasionally flooded-----------	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
Calco, frequently flooded-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Hard to pack	0.03		
Calco, occasionally flooded-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Hard to pack	0.03		
Comfrey, occasionally flooded-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Spillco, occasionally flooded-----------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
P7A:							
Comfrey, occasionally flooded	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Colo, occasionally flooded	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
Havelock, occasionally flooded	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		
Havelock, frequently flooded	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		
Spillco, occasionally flooded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
P8A:							
Cylinder, occasionally flooded	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.36		
Fairhaven	10	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
Spillco, occasionally flooded	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
P11A:							
Dempster	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.79		
Graceville	10	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.81	Depth to water	1.00
				Seepage	0.42		

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P11B:							
Dempster------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.79	Depth to water	1.00
Graceville----------	10	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.81	Depth to water	1.00
				Seepage	0.42		
P12B:							
Everly--------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.03	Piping	0.28	Slow refill	0.97
						Depth to water	0.81
						Cutbanks cave	0.10
Sac-----------------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.09	Depth to water	0.06
Ransom--------------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.32		
Wilmonton-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.25		
P12C2:							
Everly, eroded------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.03	Piping	0.26	Slow refill	0.97
						Depth to water	0.81
						Cutbanks cave	0.10
Everly, slightly eroded-------------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.03	Piping	0.28	Slow refill	0.97
						Depth to water	0.81
						Cutbanks cave	0.10
Moneta--------------	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.03	Piping	0.32	Depth to water	1.00
		Slope	0.01				
Wilmonton-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.25		
P13A:							
Fairhaven-----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
Cylinder------------	5	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.36		

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
P13A:							
Dempster	5	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.79		
Flandreau	5	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.10		
P13B:							
Fairhaven	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
Cylinder	5	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.36		
Dempster	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.79	Depth to water	1.00
Flandreau	5	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.10		
Kanaranzi	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.54	Depth to water	1.00
P14A:							
Flandreau	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.10		
Grovena	10	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
P14B:							
Flandreau	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.10		
Grovena	10	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
Thurman	10	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.57	Depth to water	1.00
P15B:							
Galva	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.26	Depth to water	1.00
Primghar	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Annieville	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.95	Piping	0.09	Depth to water	0.81
						Cutbanks cave	0.10
						Slow refill	0.05

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P15B:							
Sac	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.09	Depth to water	0.06
P15C2:							
Galva, eroded	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.17	Depth to water	1.00
Galva, slightly eroded	10	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.26	Depth to water	1.00
Sac, eroded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.10	Depth to water	0.06
Judson	3	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Primghar	2	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
P16A:							
Graceville	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.81	Depth to water	1.00
				Seepage	0.42		
Dempster	10	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.79		
P16B:							
Graceville	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.81	Depth to water	1.00
				Seepage	0.42		
Dempster	10	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.79	Depth to water	1.00
P17A:							
Ihlen	93	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.86	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.02		
Bluemound	3	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
				Piping	0.23		
Soils that are deep to bedrock	3	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.18	Depth to water	1.00
		Depth to bedrock	0.18	Piping	0.01		
Rock outcrop	1	Not rated		Not rated		Not rated	

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
P17B:							
Ihlen	80	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.86	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.13		
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
				Piping	0.23		
Soils that are deep to bedrock	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.18	Depth to water	1.00
		Depth to bedrock	0.18	Piping	0.01		
Rock outcrop	5	Not rated		Not rated		Not rated	
P18B:							
Ihlen	55	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.86	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.02		
Rock outcrop	25	Not rated		Not rated		Not rated	
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
				Piping	0.23		
Soils that are deep to bedrock	10	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.18	Depth to water	1.00
		Depth to bedrock	0.18	Piping	0.01		
P18C:							
Ihlen	45	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.86	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.18		
		Slope	0.02				
Rock outcrop	40	Not rated		Not rated		Not rated	
Bluemound	10	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
				Piping	0.23		
Soils that are deep to bedrock	3	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.18	Depth to water	1.00
		Depth to bedrock	0.18	Piping	0.01		
Spillco, occasionally flooded	2	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
P19A:							
Judson	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Piping	0.25	Depth to water	0.78
						Slow refill	0.30
						Cutbanks cave	0.10

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P19A:							
Whitewood, overwash	14	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Primghar------------	6	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
P20B:							
Judson--------------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Primghar------------	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Galva---------------	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.26	Depth to water	1.00
Whitewood, overwash	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
P21A:							
Marcus--------------	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Whitewood, frequently flooded	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Primghar------------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Spicer--------------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.89		
P22A:							
Havelock, frequently flooded------------	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		
Havelock, occasionally flooded------------	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
P22A:							
Calco, frequently flooded-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Hard to pack	0.03		
Spillco, frequently flooded-----------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
P23A:							
Havelock, occasionally flooded-----------	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		
Havelock, frequently flooded-----------	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		
Spillco, occasionally flooded-----------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
Comfrey, occasionally flooded-----------	3	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Calco, occasionally flooded-----------	2	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Hard to pack	0.03		
P24B:							
Moody---------------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.16	Depth to water	1.00
Primghar------------	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Nora, eroded--------	3	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P24B:							
Splitrock-----------	2	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
						Depth to water	0.06
P24C2:							
Moody, eroded-------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.17	Depth to water	1.00
Moody, slightly eroded-------------	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.16	Depth to water	1.00
Nora, eroded--------	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Splitrock, eroded---	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
						Depth to water	0.06
Primghar------------	3	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Crofton, eroded-----	2	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.44	Depth to water	1.00
P25C2:							
Nora, eroded--------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Crofton, eroded-----	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.44	Depth to water	1.00
Judson--------------	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Moody, eroded-------	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.17	Depth to water	1.00
P25D2:							
Nora, eroded--------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.64	Depth to water	1.00
		Slope	0.02				
Crofton, eroded-----	10	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.45	Depth to water	1.00
		Slope	0.04				
Judson--------------	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Moody, eroded-------	5	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.17	Depth to water	1.00

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P26C2:							
Nora, eroded	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.70	Depth to water	1.00
Crofton, eroded	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.44	Depth to water	1.00
Judson	10	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Moody, eroded	10	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.17	Depth to water	1.00
P26D2:							
Nora, eroded	45	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.65	Depth to water	1.00
		Slope	0.02				
Crofton, eroded	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.45	Depth to water	1.00
		Slope	0.04				
Judson	14	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Moody, eroded	6	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.17	Depth to water	1.00
P27A:							
Primghar	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Galva	8	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.26	Depth to water	1.00
Marcus	8	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Judson	4	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Piping	0.25	Depth to water	0.78
						Slow refill	0.30
						Cutbanks cave	0.10
P28A:							
Ransom	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.32		
Rushmore	8	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.23		
Sac	8	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.09	Depth to water	0.06

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P28A:							
Primghar------------	4	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
P29A:							
Rushmore------------	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.23		
Ransom--------------	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.32		
Whitewood, frequently flooded	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
P30B:							
Sac-----------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.09	Depth to water	0.06
Annieville----------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.95	Piping	0.09	Depth to water	0.81
						Cutbanks cave	0.10
						Slow refill	0.05
Primghar------------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Ransom--------------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.32		
P30C2:							
Sac, eroded---------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.10	Depth to water	0.06
Annieville----------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.95	Piping	0.09	Depth to water	0.81
						Cutbanks cave	0.10
						Slow refill	0.05
Sac, slightly eroded	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.09	Depth to water	0.06

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P30C2:							
Primghar------------	3	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Ransom--------------	2	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.32		
P31A:							
Spicer--------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.89		
Marcus--------------	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Whitewood-----------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
P32A:							
Spillco, frequently flooded------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
Spillco, occasionally flooded------------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
Havelock, frequently flooded------------	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.36		
P33A:							
Spillco, occasionally flooded------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06
Spillco, frequently flooded------------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.41	Depth to water	0.06

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P33A:							
Comfrey, occasionally flooded	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
P34B:							
Splitrock	82	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
						Depth to water	0.06
Primghar	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Soils that are deep to till	8	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
						Depth to water	0.06
P34C2:							
Splitrock, eroded	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.98
						Cutbanks cave	0.10
						Depth to water	0.06
Splitrock, slightly eroded	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
						Depth to water	0.06
Soils that are deep to till	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.30
						Cutbanks cave	0.10
						Depth to water	0.06
Primghar	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
P36A:							
Talcot, occasionally flooded	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.47		
Biscay, occasionally flooded	10	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.47		

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
P36A:							
Cylinder, occasionally flooded	5	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.36		
P37B:							
Talmo	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.54	Depth to water	1.00
Kanaranzi	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.54	Depth to water	1.00
Thurman	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.57	Depth to water	1.00
P37D:							
Talmo	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	0.15				
Kanaranzi	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.54	Depth to water	1.00
Thurman	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.57	Depth to water	1.00
P38B:							
Thurman	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.57	Depth to water	1.00
Henkin	10	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
P38C:							
Thurman	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.57	Depth to water	1.00
Henkin	10	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
P40A:							
Bluemound	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
				Piping	0.23		
Ihlen	10	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.86	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.02		
Rock outcrop	5	Not rated		Not rated		Not rated	
P41A:							
Rosedell	95	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
P41A:							
Spicer	3	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.89		
Albolls	2	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
				Ponding	1.00		
P42A:							
Whitewood	70	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Whitewood, frequently flooded	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Whitewood, overwash	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Primghar	9	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.01		
Wakonda	1	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.14		
P43A:							
Wilmonton	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.25		
Everly	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.03	Piping	0.28	Slow refill	0.97
						Depth to water	0.81
						Cutbanks cave	0.10
Ransom	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.32		
Rushmore	5	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.23		
P44E:							
Shindler	85	Somewhat limited		Not limited		Very limited	
		Slope	0.12			Depth to water	1.00
		Seepage	0.02				

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P44E:							
Judson--------------	10	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Soils that are moderately deep to carbonates---------	5	Somewhat limited		Not limited		Very limited	
		Slope	0.12			Depth to water	1.00
		Seepage	0.02				
P45E:							
Moneta--------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.12	Piping	0.32	Depth to water	1.00
		Seepage	0.03				
Judson--------------	10	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.69	Depth to water	1.00
Soils that are moderately deep to carbonates---------	5	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.12	Piping	0.32	Depth to water	1.00
		Seepage	0.03				
P47A:							
Whitewood, overwash	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
Judson--------------	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Piping	0.25	Depth to water	0.78
						Slow refill	0.30
						Cutbanks cave	0.10
Whitewood, frequently flooded	10	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
P48A:							
Allendorf-----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.84	Depth to water	1.00
				Seepage	0.10		
Kanaranzi-----------	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.54	Depth to water	1.00
Moderately well drained soils------	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.87	Cutbanks cave	1.00
						Depth to water	0.06
				Piping	0.83		
				Seepage	0.10		
Sac-----------------	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.09	Depth to water	0.06

Table 16.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
P48B:							
Allendorf	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.83	Depth to water	1.00
				Seepage	0.10		
Kanaranzi	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.54	Depth to water	1.00
Moderately well drained soils	5	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.87	Cutbanks cave	1.00
						Depth to water	0.06
				Piping	0.83		
				Seepage	0.10		
Sac	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.87	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.09	Depth to water	0.06
P55A:							
Kato	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.47		
Somewhat poorly drained soils	10	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.47		
W:							
Water	100	Not rated		Not rated		Not rated	

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

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

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

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

Engineering Index Properties

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

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.

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

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as 15 percent, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

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

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

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

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

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

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

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

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

Physical and Chemical Properties

Tables 18 and 19 show estimates of some characteristics and features that affect soil behavior. These estimates are given for the major horizons 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 horizon is indicated.

In table 18, *clay* as a soil separate, or component, consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each major soil horizon is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence linear extensibility, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^{1}/_{3}$-bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In table 18, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

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

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

Linear extensibility percent is the linear expression of the volume difference of natural soil fabric at $^1/_3$-bar or $^1/_{10}$-bar water content and oven dryness. The volume change is reported as percent change for the whole soil. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

Linear extensibility of 3 percent or more can cause damage to buildings, roads, and other structures. Special design is often needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 18, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Erosion factors are shown in table 18 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.

In table 19, *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.

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

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

Water Features

Table 20 provides information about various water features. This information can be used in land use planning that involves engineering considerations.

Soil moisture status is an estimate of the fluctuating water content in a soil. It greatly influences vegetation type and plant growth; physical properties of soils, such as permeability, workability, strength, linear extensibility, and frost action; and chemical interactions and transport. Many other properties, qualities, and interpretations also are affected. Soil moisture status is important in the classification of soils, wetland, and habitat.

Table 20 gives estimates of soil moisture for each component of a map unit at various depths for every month of the year. The depths displayed are representative values. Representative values are indicative of conditions that occur most commonly. *Dry* indicates a moisture condition under which most plants (especially crops) cannot extract water for growth. *Moist* indicates a moisture condition under which soil water is most readily available for plant growth. *Wet* indicates a condition under which water will stand in an unlined hole or at least a condition under which the soil is too wet for the growth of most agricultural species. A moisture status of 4.0-6.7 (wet) indicates that most of the time the component is saturated at some depth between 4.0 feet and 6.7 feet during the month designated. In some years the soil may be saturated at a depth of less than 4.0 feet or more than 6.7 feet; however, field observations indicate that the soil will be saturated between these depths in most years. In the summer, the soil may show the effects of drying plus intermittent rains that result in a moist or wet layer over a dry layer that gets moist or wet again.

Flooding, the temporary covering of the soil surface by flowing water, is caused by overflow from streams or by runoff from adjacent slopes. Shallow water standing or flowing for short periods after rainfall or snowmelt is not considered flooding. Standing water in marshes and swamps or in closed depressions is considered to be ponding.

Table 20 gives estimates of the frequency and duration of flooding. Flooding frequency is the annual probability of a flood event expressed as a class. *None* indicates no reasonable possibility of flooding (the chance of flooding is nearly 0 percent in any year, or flooding is likely less than once in 500 years). *Very rare* indicates that flooding is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year, or flooding is likely less than once in 100 years but more than once in 500 years). *Rare* indicates that flooding is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year, or flooding is likely 1 to 5 times in 100 years). *Occasional* indicates that flooding occurs infrequently under usual weather conditions (the chance of flooding is 5 to 50 percent in any year, or flooding is likely 5 to 50 times in 100 years). *Frequent* indicates that flooding is likely to occur often under usual weather conditions (the chance of flooding is more than 50 percent in any year, or flooding is likely more than 50 times in 100 years; but the chance of flooding is less than 50 percent in all months in any year). *Very frequent* indicates that flooding is likely to occur very often under usual weather conditions (the chance of flooding is more than 50 percent in all months of any year).

Flooding duration is the average duration of inundation per flood occurrence expressed as a class. *Extremely brief* is 0.1 hour to 4.0 hours; *very brief* is 4 to 48 hours; *brief* is 2 to 7 days; *long* is 7 to 30 days; and *very long* is more than 30 days. About two-thirds to three-fourths of all flooding occurs during the stated period.

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

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

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation.

Table 20 gives estimates of the frequency, duration, and depth of ponding. The depths displayed are representative values. Representative values are indicative of conditions that occur most commonly.

Ponding frequency is the number of times ponding occurs over a period of time. *None* indicates no reasonable possibility of ponding (the chance of ponding is nearly 0 percent in any year). *Rare* indicates that ponding is unlikely but possible under unusual weather conditions (the chance of ponding ranges from nearly 0 percent to 5 percent in any year, or ponding is likely 0 to 5 times in 100 years). *Occasional* indicates that ponding is expected infrequently under usual weather conditions (the chance of ponding ranges from 5 to 50 percent in any one year, or ponding is likely 5 to 50 times in 100 years). *Frequent* indicates that ponding is likely to occur under usual weather conditions (the chance of ponding is more than 50 percent in any year, or ponding is likely more than 50 times in 100 years).

Ponding duration is the average length of time of the ponding occurrence. It is expressed as *very brief* (less than 2 days), *brief* (2 to 7 days), *long* (7 to 30 days), and *very long* (more than 30 days).

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. *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 a zone in which the soil moisture status is wet 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 saturated zone high in the profile during the 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.

Table 17.--Engineering Index Properties

(Absence of an entry indicates that the data were not estimated)

Map symbol and component name	Pct. of map unit	Hydrologic group	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	
GP:														
Pits, gravel----	80	---	---	---	---	---	---	---	---	---	---	---	---	---
Udipsamments----	20	---	---	---	---	---	---	---	---	---	---	---	---	---
M-W:														
Water, miscellaneous--	100	---	---	---	---	---	---	---	---	---	---	---	---	---
P3A:														
Biscay----------	85	B/D	0-16	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	80-95	75-90	35-50	10-25
			16-21	Loam, clay loam, sandy clay loam	CL, ML	A-6, A-7	0	0	95-100	90-100	70-90	50-75	30-50	10-20
			21-31	Loam, clay loam, sandy clay loam	CL, ML	A-6, A-7	0	0	95-100	90-100	70-90	50-75	30-50	10-20
			31-60	Stratified loamy sand to gravelly coarse sand, coarse sand	SP, SP-SM	A-1	0	0-2	65-95	55-95	20-45	2-10	0-0	NP
Cylinder--------	10	B	0-18	Loam	CL	A-4, A-6	0	0	100	95-100	90-100	55-85	30-40	8-14
			18-28	Loam, clay loam	CL, SC	A-6	0	0	95-100	80-100	80-95	45-70	30-40	10-20
			28-39	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
			39-60	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P3A:														
Talcot----------	5	B/D	0-22	Silty clay loam	CL	A-7	0	0	100	100	80-90	60-85	40-50	15-25
			22-33	Clay loam, silty clay loam, loam	CL	A-7	0	0	95-100	85-100	70-90	60-85	40-50	15-25
			33-60	Coarse sand, stratified loamy sand to gravelly coarse sand	SW, SP, SP-SM	A-1	0	0	85-95	80-90	20-50	2-10	0-14	NP
P4A:														
Calco, frequently flooded--------	80	B/D	0-36	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			36-60	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
Calco, occasionally flooded--------	10	B/D	0-36	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			36-44	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			44-60	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
Havelock, frequently flooded--------	5	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
Spillco, frequently flooded--------	5	B	0-15	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			15-60	Silt loam, loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
P5A:														
Calco, occasionally flooded--------	80	B/D	0-36	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			36-44	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			44-60	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
Calco, frequently flooded--------	5	B/D	0-36	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			36-60	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				Pct	Pct					Pct	
P5A:														
Colo, occasionally flooded--------	5	B/D	0-34	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	40-60	15-30
			34-52	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	40-55	20-30
			52-60	Silty clay loam, silt loam	CL	A-7	0	0	100	100	95-100	80-100	40-55	15-30
Havelock, occasionally flooded--------	5	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
Spillco, occasionally flooded--------	5	B	0-10	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			10-22	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			22-60	Loam, silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
P6A:														
Colo, occasionally flooded--------	80	B/D	0-34	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	40-60	15-30
			34-52	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	40-55	20-30
			52-60	Silty clay loam, silt loam	CL	A-7	0	0	100	100	95-100	80-100	40-55	15-30
Calco, frequently flooded--------	5	B/D	0-36	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			36-60	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
Calco, occasionally flooded--------	5	B/D	0-36	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			36-44	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			44-60	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P6A:														
Comfrey, occasionally flooded--------	5	B/D	0-26	Clay loam	CL, ML	A-7	0	0	100	100	90-100	65-95	40-55	15-25
			26-35	Clay loam, loam	ML	A-7	0	0	100	100	85-100	65-85	45-60	12-25
			35-60	Clay loam, loam	CL	A-6, A-7	0	0	100	100	80-100	60-85	35-50	12-25
Spillco, occasionally flooded--------	5	B	0-10	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			10-22	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			22-60	Loam, silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
P7A:														
Comfrey, occasionally flooded--------	80	B/D	0-26	Clay loam	CL, ML	A-7	0	0	100	100	90-100	65-95	40-55	15-25
			26-35	Clay loam, loam	ML	A-7	0	0	100	100	85-100	65-85	45-60	12-25
			35-60	Clay loam, loam	CL	A-6, A-7	0	0	100	100	80-100	60-85	35-50	12-25
Colo, occasionally flooded--------	5	B/D	0-34	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	40-60	15-30
			34-52	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	40-55	20-30
			52-60	Silty clay loam, silt loam	CL	A-7	0	0	100	100	95-100	80-100	40-55	15-30
Havelock, occasionally flooded--------	5	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
Havelock, frequently flooded--------	5	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	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	
P7A:														
Spillco, occasionally flooded--------	5	B	0-10	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			10-22	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			22-60	Loam, silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
P8A:														
Cylinder, occasionally flooded--------	80	B	0-18	Loam	CL	A-4, A-6	0	0	100	95-100	90-100	55-85	30-40	8-14
			18-28	Loam, clay loam	CL, SC	A-6	0	0	95-100	80-100	80-95	45-70	30-40	10-20
			28-39	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
			39-60	Gravelly sand, gravelly coarse sand, loamy sand	SP-SM, SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
Fairhaven-------	10	B	0-8	Silt loam	ML, CL	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	NP-15
			8-13	Silt loam, loam, silty clay loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			13-36	Silt loam, loam, silty clay loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			36-60	Gravelly coarse sand, gravelly sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Spillco, occasionally flooded--------	10	B	0-10	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			10-22	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			22-60	Loam, silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P11A:														
Dempster--------	90	B	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-90	25-40	6-15
			10-29	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	30-45	7-20
			29-36	Clay loam, silt loam, loam	CL, ML	A-4, A-6, A-7	0	0	100	100	85-95	60-95	30-45	7-20
			36-60	Gravelly sand, gravelly loamy sand, very gravelly sand	SW-SM, SW, SM, GP-GM	A-1, A-2, A-3	0	0-5	55-90	30-75	20-60	3-30	15-25	NP-5
Graceville------	10	B	0-20	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-90	30-45	10-20
			20-53	Silty clay loam, silt loam	CL	A-4, A-6, A-7	0	0	100	100	90-100	70-90	30-45	8-20
			53-60	Gravelly sand, gravelly loamy sand, very gravelly sand	GW-GM, SM, SW-SM, GM	A-1, A-2	0	0	40-80	30-70	20-50	5-30	15-25	NP-5
P11B:														
Dempster--------	90	B	0-12	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-90	25-40	6-15
			12-27	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	30-45	7-20
			27-60	Gravelly sand, gravelly loamy sand, very gravelly sand	SW-SM, SW, SM, GP-GM	A-1, A-2, A-3	0	0-5	55-90	30-75	20-60	3-30	15-25	NP-5
Graceville------	10	B	0-20	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-90	30-45	10-20
			20-53	Silty clay loam, silt loam	CL	A-4, A-6, A-7	0	0	100	100	90-100	70-90	30-45	8-20
			53-60	Gravelly sand, gravelly loamy sand, very gravelly sand	GM, GW-GM, SM, SW-SM	A-1, A-2	0	0	40-80	30-70	20-50	5-30	15-25	NP-5

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P12B:														
Everly----------	80	B	0-10	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-95	65-80	30-45	10-20
			10-18	Clay loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-95	70-90	35-50	15-25
			18-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Sac-------------	10	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-28	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			28-33	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Ransom----------	5	B	0-16	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	80-95	35-50	10-22
			16-33	Silty clay loam, silt loam	ML, CL	A-6, A-7	0	0	95-100	90-100	85-100	75-95	35-50	10-22
			33-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Wilmonton-------	5	B	0-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	85-100	60-90	30-50	12-25
			15-20	Clay loam, loam	CL	A-6	0	0	100	90-100	85-100	60-90	30-40	12-20
			20-25	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			25-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P12C2:														
Everly, eroded--	80	B	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-95	65-80	30-45	10-20
			7-16	Clay loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-95	70-90	35-50	15-25
			16-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Everly, slightly eroded---------	10	B	0-10	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-95	65-80	30-45	10-20
			10-18	Clay loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-95	70-90	35-50	15-25
			18-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Moneta----------	5	B	0-9	Clay loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			9-13	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			13-53	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			53-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	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	
P12C2:														
Wilmonton-------	5	B	0-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	85-100	60-90	30-50	12-25
			15-20	Clay loam, loam	CL	A-6	0	0	100	90-100	85-100	60-90	30-40	12-20
			20-25	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			25-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P13A:														
Fairhaven-------	85	B	0-8	Silt loam	ML, CL	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	NP-15
			8-13	Silt loam, loam, silty clay loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			13-36	Silt loam, loam, silty clay loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			36-60	Gravelly coarse sand, gravelly sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Cylinder--------	5	B	0-18	Loam	CL	A-4, A-6	0	0	100	95-100	90-100	55-85	30-40	8-14
			18-28	Loam, clay loam	CL, SC	A-6	0	0	95-100	80-100	80-95	45-70	30-40	10-20
			28-39	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
			39-60	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
Dempster--------	5	B	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-90	25-40	6-15
			10-29	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	30-45	7-20
			29-36	Clay loam, silt loam, loam	CL, ML	A-4, A-6, A-7	0	0	100	100	85-95	60-95	30-45	7-20
			36-60	Gravelly sand, gravelly loamy sand, very gravelly sand	SW-SM, SW, SM, GP-GM	A-1, A-2, A-3	0	0-5	55-90	30-75	20-60	3-30	15-25	NP-5

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P13A:														
Flandreau-------	5	B	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-100	25-40	5-20
			8-30	Silt loam, loam, clay loam	ML, CL	A-4, A-6, A-7	0	0	100	95-100	85-100	65-95	30-45	5-20
			30-47	Loamy sand, loamy fine sand, sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10
			47-60	Loamy sand, loamy fine sand, fine sand	SC-SM, SW-SM, SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
P13B:														
Fairhaven-------	80	B	0-7	Silt loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	NP-15
			7-12	Silt loam, loam, silty clay loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			12-27	Silt loam, loam, silty clay loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			27-60	Gravelly coarse sand, gravelly sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Cylinder--------	5	B	0-18	Loam	CL	A-4, A-6	0	0	100	95-100	90-100	55-85	30-40	8-14
			18-28	Loam, clay loam	CL, SC	A-6	0	0	95-100	80-100	80-95	45-70	30-40	10-20
			28-39	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
			39-60	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
Dempster--------	5	B	0-12	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-90	25-40	6-15
			12-27	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	30-45	7-20
			27-60	Gravelly sand, gravelly loamy sand, very gravelly sand	SM, GP-GM, SW-SM, SW	A-1, A-2, A-3	0	0-5	55-90	30-75	20-60	3-30	15-25	NP-5

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P13B:														
Flandreau-------	5	B	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-100	25-40	5-20
			8-30	Silt loam, loam, clay loam	ML, CL	A-4, A-6, A-7	0	0	100	95-100	85-100	65-95	30-45	5-20
			30-36	Loamy sand, loamy fine sand, fine sand	SC-SM, SM, SW-SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
			36-60	Loamy sand, loamy fine sand, fine sand	SC-SM, SM, SW-SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
Kanaranzi-------	5	B	0-7	Loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	NP-15
			7-20	Silt loam, loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			20-80	Gravelly sand, gravelly coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
P14A:														
Flandreau-------	90	B	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-100	25-40	5-20
			8-30	Silt loam, loam, clay loam	ML, CL	A-4, A-6, A-7	0	0	100	95-100	85-100	65-95	30-45	5-20
			30-47	Loamy sand, loamy fine sand, sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10
			47-60	Loamy sand, loamy fine sand, fine sand	SC-SM, SW-SM, SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
Grovena---------	10	B	0-8	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-100	25-40	5-20
			8-35	Silt loam, loam	ML, CL	A-4, A-6, A-7	0	0	100	95-100	85-100	65-95	30-45	5-20
			35-42	Loam, silt loam, sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10
			42-60	Loam, silt loam, sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	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	
P14B:														
Flandreau-------	80	B	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-100	25-40	5-20
			8-30	Silt loam, loam, clay loam	ML, CL	A-6, A-7, A-4	0	0	100	95-100	85-100	65-95	30-45	5-20
			30-36	Loamy sand, loamy fine sand, fine sand	SC-SM, SM, SW-SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
			36-60	Loamy sand, loamy fine sand, fine sand	SC-SM, SM, SW-SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
Grovena---------	10	B	0-8	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-100	25-40	5-20
			8-35	Silt loam, loam	ML, CL	A-4, A-6, A-7	0	0	100	95-100	85-100	65-95	30-45	5-20
			35-42	Loam, silt loam, sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10
			42-60	Loam, silt loam, sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10
Thurman---------	10	A	0-13	Sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	95-100	95-100	55-95	25-40	20-30	2-8
			13-18	Sandy loam, fine sandy loam, loamy sand	SC-SM, SC, SM	A-2, A-4	0	0	95-100	85-100	55-95	25-45	15-25	2-8
			18-60	Loamy sand, coarse sand, sand	SP	A-2, A-3	0	0	95-100	75-100	50-80	3-7	0-14	NP
P15B:														
Galva-----------	80	B	0-11	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			11-31	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			31-45	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			45-60	Silt loam	CL-ML, CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P15B:														
Primghar--------	10	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-7, A-6	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Annieville------	5	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-52	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			52-57	Sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10
			57-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Sac-------------	5	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-28	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			28-33	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P15C2:														
Galva, eroded---	80	B	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			8-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			34-60	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
Galva, slightly eroded---------	10	B	0-11	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			11-31	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			31-45	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			45-60	Silt loam	CL-ML, CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
Sac, eroded-----	5	B	0-8	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			8-26	Silty clay loam	CL, ML	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Judson----------	3	B	0-36	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	23-40	3-20
			36-56	Silty clay loam, silt loam	ML, CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			56-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	85-100	35-50	10-25

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P15C2:														
Primghar--------	2	B	0-21	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
P16A:														
Graceville------	90	B	0-20	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-90	30-45	10-20
			20-53	Silty clay loam, silt loam	CL	A-4, A-6, A-7	0	0	100	100	90-100	70-90	30-45	8-20
			53-60	Gravelly sand, gravelly loamy sand, very gravelly sand	GM, GW-GM, SM, SW-SM	A-1, A-2	0	0	40-80	30-70	20-50	5-30	15-25	NP-5
Dempster--------	10	B	0-10	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	90-100	70-90	25-40	6-15
			10-29	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	30-45	7-20
			29-36	Clay loam, silt loam, loam	CL, ML	A-4, A-6, A-7	0	0	100	100	85-95	60-95	30-45	7-20
			36-60	Gravelly sand, gravelly loamy sand, very gravelly sand	SW-SM, SW, SM, GP-GM	A-1, A-2, A-3	0	0-5	55-90	30-75	20-60	3-30	15-25	NP-5
P16B:														
Graceville------	90	B	0-20	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-90	30-45	10-20
			20-53	Silty clay loam, silt loam	CL	A-4, A-6, A-7	0	0	100	100	90-100	70-90	30-45	8-20
			53-60	Gravelly sand, gravelly loamy sand, very gravelly sand	GM, GW-GM, SM, SW-SM	A-1, A-2	0	0	40-80	30-70	20-50	5-30	15-25	NP-5
Dempster--------	10	B	0-12	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-90	25-40	6-15
			12-27	Silty clay loam, silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	90-100	75-95	30-45	7-20
			27-60	Gravelly sand, gravelly loamy sand, very gravelly sand	SW-SM, SW, SM, GP-GM	A-1, A-2, A-3	0	0-5	55-90	30-75	20-60	3-30	15-25	NP-5

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	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	
P17A:														
Ihlen-----------	93	B	0-12	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	85-95	34-50	10-25
			12-38	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25
			38-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Bluemound-------	3	D	0-14	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	25-45	10-25
			14-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Soils that are deep to bedrock	3	B	0-12	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	85-95	34-50	10-25
			12-47	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25
			47-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Rock outcrop----	1	---	---	---	---	---	---	---	---	---	---	---	---	---
P17B:														
Ihlen-----------	80	B	0-8	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	34-50	10-25
			8-23	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25
			23-31	Silt loam	CL	A-6, A-4	0	0	100	100	90-100	85-100	30-40	8-15
			31-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Bluemound-------	10	D	0-14	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	25-45	10-25
			14-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Soils that are deep to bedrock	5	B	0-12	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	85-95	34-50	10-25
			12-47	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25
			47-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Rock outcrop----	5	---	---	---	---	---	---	---	---	---	---	---	---	---
P18B:														
Ihlen-----------	55	B	0-11	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	85-95	34-50	10-25
			11-32	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25
			32-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Rock outcrop----	25	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P18B:														
Bluemound-------	10	D	0-14	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	25-45	10-25
			14-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Soils that are deep to bedrock	10	B	0-12	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	85-95	34-50	10-25
			12-47	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25
			47-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
P18C:														
Ihlen-----------	45	B	0-14	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	34-50	10-25
			14-27	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25
			27-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Rock outcrop----	40	---	---	---	---	---	---	---	---	---	---	---	---	---
Bluemound-------	10	D	0-14	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	25-45	10-25
			14-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Soils that are deep to bedrock	3	B	0-12	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	85-95	34-50	10-25
			12-47	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	35-50	15-25
			47-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Spillco, occasionally flooded--------	2	B	0-10	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			10-22	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			22-60	Loam, silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
P19A:														
Judson----------	80	B	0-22	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			22-35	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			35-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	30-50	10-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P19A:														
Whitewood, overwash-------	14	B/D	0-48	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			48-70	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			70-80	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30
Primghar--------	6	B	0-21	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
P20B:														
Judson----------	80	B	0-36	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	23-40	3-20
			36-56	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			56-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	85-100	35-50	10-25
Primghar--------	10	B	0-21	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Galva-----------	5	B	0-11	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			11-31	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			31-45	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			45-60	Silt loam	CL-ML, CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P20B:														
Whitewood, overwash-------	5	B/D	0-48	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			48-70	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			70-80	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30
P21A:														
Marcus----------	80	B/D	0-17	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-100	40-50	20-35
			17-44	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	20-35
			44-57	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	15-25
			57-60	Loam, clay loam	CL	A-6	0	0-5	90-100	85-100	80-90	50-75	30-40	10-20
Whitewood, frequently flooded--------	10	B/D	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			25-43	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			43-60	Silty clay loam, silt loam, clay loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30
Primghar--------	5	B	0-21	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Spicer----------	5	B/D	0-17	Silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-20
			17-35	Silt loam, silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	10-20
			35-60	Silt loam, silty clay loam	ML	A-4, A-6	0	0	100	100	95-100	85-100	30-40	5-12

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				Pct	Pct					Pct	
P22A:														
Havelock, frequently flooded--------	80	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
Havelock, occasionally flooded--------	10	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
Calco, frequently flooded--------	5	B/D	0-36	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			36-60	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
Spillco, frequently flooded--------	5	B	0-15	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			15-60	Silt loam, loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
P23A:														
Havelock, occasionally flooded--------	80	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
Havelock, frequently flooded--------	10	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
Spillco, occasionally flooded--------	5	B	0-10	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			10-22	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			22-60	Loam, silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P23A:														
Comfrey, occasionally flooded--------	3	B/D	0-26	Clay loam	CL, ML	A-7	0	0	100	100	90-100	65-95	40-55	15-25
			26-35	Clay loam, loam	ML	A-7	0	0	100	100	85-100	65-85	45-60	12-25
			35-60	Clay loam, loam	CL	A-6, A-7	0	0	100	100	80-100	60-85	35-50	12-25
Calco, occasionally flooded--------	2	B/D	0-36	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			36-44	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
			44-60	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-100	40-60	15-30
P24B:														
Moody-----------	85	B	0-10	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	35-50	13-25
			10-35	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			35-48	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			48-60	Silt loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
Primghar--------	10	B	0-21	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Nora, eroded----	3	B	0-8	Silt loam	ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	30-46	7-23
			8-24	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	11-20
			24-33	Silt loam, silty clay loam	ML, CL-ML, CL	A-7, A-4, A-6	0	0	100	100	95-100	85-100	27-50	6-20
			33-60	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
Splitrock-------	2	B	0-9	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			9-34	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			34-60	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				Pct	Pct					Pct	
P24C2:														
Moody, eroded---	80	B	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			8-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			34-50	Silt loam, silty clay loam	CL, ML, CL-ML	A-6, A-7, A-4	0	0	100	100	95-100	85-100	20-45	3-20
			50-60	Silt loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
Moody, slightly eroded---------	5	B	0-10	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	35-50	13-25
			10-35	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			35-48	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			48-60	Silt loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
Nora, eroded----	5	B	0-8	Silt loam	ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	30-46	7-23
			8-24	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	11-20
			24-33	Silt loam, silty clay loam	ML, CL-ML, CL	A-7, A-4, A-6	0	0	100	100	95-100	85-100	27-50	6-20
			33-60	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
Splitrock, eroded---------	5	B	0-9	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			9-34	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			34-60	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
Primghar--------	3	B	0-21	Silty clay loam	ML, CL	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Crofton, eroded	2	B	0-8	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
			8-14	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
			14-60	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	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	
P25C2:														
Nora, eroded----	85	B	0-8	Silt loam	ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	30-46	7-23
			8-24	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	11-20
			24-33	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
			33-60	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
Crofton, eroded	5	B	0-8	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
			8-14	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
			14-60	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
Judson----------	5	B	0-36	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	23-40	3-20
			36-56	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			56-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	85-100	35-50	10-25
Moody, eroded---	5	B	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			8-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			34-50	Silt loam, silty clay loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			50-60	Silt loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
P25D2:														
Nora, eroded----	80	B	0-8	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	30-46	7-23
			8-32	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	11-20
			32-40	Silt loam, silty clay loam	CL-ML, CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
			40-60	Silt loam, silty clay loam	CL-ML, CL, ML	A-7, A-4, A-6	0	0	100	100	95-100	85-100	27-50	6-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P25D2:														
Crofton, eroded	10	B	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
			6-20	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
			20-60	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
Judson----------	5	B	0-36	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	23-40	3-20
			36-56	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			56-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	85-100	35-50	10-25
Moody, eroded---	5	B	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			8-34	Silty clay loam, silt loam	CL	A-7, A-6	0	0	100	100	95-100	85-100	32-55	11-33
			34-50	Silt loam, silty clay loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			50-60	Silt loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
P26C2:														
Nora, eroded----	50	B	0-8	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	30-46	7-23
			8-22	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	11-20
			22-30	Silt loam, silty clay loam	CL-ML, ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
			30-60	Silt loam, silty clay loam	CL-ML, ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
Crofton, eroded	30	B	0-8	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
			8-14	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
			14-60	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
Judson----------	10	B	0-36	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	23-40	3-20
			36-56	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			56-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	85-100	35-50	10-25

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro- logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
			In				Pct	Pct					Pct	
P26C2:														
Moody, eroded---	10	B	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			8-34	Silty clay loam, silt loam	CL	A-7, A-6	0	0	100	100	95-100	85-100	32-55	11-33
			34-50	Silt loam, silty clay loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			50-60	Silt loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
P26D2:														
Nora, eroded----	45	B	0-8	Silt loam	ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	30-46	7-23
			8-30	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	11-20
			30-38	Silt loam, silty clay loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
			38-60	Silt loam, silty clay loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	27-50	6-20
Crofton, eroded	35	B	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
			6-20	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
			20-60	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	5-25
Judson----------	14	B	0-36	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	23-40	3-20
			36-56	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			56-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	85-100	35-50	10-25
Moody, eroded---	6	B	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			8-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			34-50	Silt loam, silty clay loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			50-60	Silt loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro- logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
			In				Pct	Pct					Pct	
P27A:														
Primghar--------	80	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Galva-----------	8	B	0-11	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	13-25
			11-31	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			31-45	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
			45-60	Silt loam	CL-ML, CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	20-45	3-20
Marcus----------	8	B/D	0-17	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-100	40-50	20-35
			17-44	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	20-35
			44-57	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	15-25
			57-60	Loam, clay loam	CL	A-6	0	0-5	90-100	85-100	80-90	50-75	30-40	10-20
Judson----------	4	B	0-22	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			22-35	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			35-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	30-50	10-20
P28A:														
Ransom----------	80	B	0-16	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	80-95	35-50	10-22
			16-33	Silty clay loam, silt loam	ML, CL	A-6, A-7	0	0	95-100	90-100	85-100	75-95	35-50	10-22
			33-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Rushmore--------	8	B/D	0-18	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-95	35-50	10-25
			18-24	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-100	85-95	25-45	10-25
			24-32	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-100	85-95	25-45	10-25
			32-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	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	
P28A:														
Sac-------------	8	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-28	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			28-33	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Primghar--------	4	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
P29A:														
Rushmore--------	80	B/D	0-18	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-95	35-50	10-25
			18-24	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-100	85-95	25-45	10-25
			24-32	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-100	85-95	25-45	10-25
			32-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Ransom----------	10	B	0-16	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	80-95	35-50	10-22
			16-33	Silty clay loam, silt loam	ML, CL	A-6, A-7	0	0	95-100	90-100	85-100	75-95	35-50	10-22
			33-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Whitewood, frequently flooded--------	10	B/D	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			25-43	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			43-60	Silty clay loam, silt loam, clay loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30
P30B:														
Sac-------------	80	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-28	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			28-33	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P30B:														
Annieville------	10	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-52	Silt loam, silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			52-57	Sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10
			57-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Primghar--------	5	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Ransom----------	5	B	0-16	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	80-95	35-50	10-22
			16-33	Silty clay loam, silt loam	ML, CL	A-6, A-7	0	0	95-100	90-100	85-100	75-95	35-50	10-22
			33-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P30C2:														
Sac, eroded-----	80	B	0-8	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			8-26	Silty clay loam	CL, ML	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Annieville------	10	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-52	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			52-57	Sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	100	60-75	20-45	15-30	NP-10
			57-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Sac, slightly eroded---------	5	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-28	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			28-33	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Primghar--------	3	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P30C2:														
Ransom----------	2	B	0-16	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	80-95	35-50	10-22
			16-33	Silty clay loam, silt loam	ML, CL	A-6, A-7	0	0	95-100	90-100	85-100	75-95	35-50	10-22
			33-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P31A:														
Spicer----------	85	B/D	0-17	Silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-20
			17-35	Silt loam, silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	10-20
			35-60	Silt loam, silty clay loam	ML	A-4, A-6	0	0	100	100	95-100	85-100	30-40	5-12
Marcus----------	10	B/D	0-17	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-100	40-50	20-35
			17-44	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	20-35
			44-57	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	15-25
			57-60	Loam, clay loam	CL	A-6	0	0-5	90-100	85-100	80-90	50-75	30-40	10-20
Whitewood-------	5	B/D	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			25-43	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			43-60	Silty clay loam, silt loam, clay loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30
P32A:														
Spillco, frequently flooded--------	85	B	0-15	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			15-60	Silt loam, loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
Spillco, occasionally flooded--------	10	B	0-10	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			10-22	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			22-60	Loam, silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				Pct	Pct					Pct	
P32A:														
Havelock, frequently flooded--------	5	B/D	0-32	Clay loam	CL, ML	A-6, A-7	0	0	100	90-100	90-100	90-100	35-50	11-20
			32-60	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
P33A:														
Spillco, occasionally flooded--------	85	B	0-10	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			10-22	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			22-60	Loam, silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
Spillco, frequently flooded--------	10	B	0-15	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
			15-60	Silt loam, loam	CL	A-6	0	0	100	95-100	85-95	55-80	25-40	11-20
Comfrey, occasionally flooded--------	5	B/D	0-26	Clay loam	CL, ML	A-7	0	0	100	100	90-100	65-95	40-55	15-25
			26-35	Clay loam, loam	ML	A-7	0	0	100	100	85-100	65-85	45-60	12-25
			35-60	Clay loam, loam	CL	A-6, A-7	0	0	100	100	80-100	60-85	35-50	12-25
P34B:														
Splitrock-------	82	B	0-10	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			10-30	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			30-80	Clay loam	CL	A-7, A-6	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
Primghar--------	10	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Soils that are deep to till---	8	B	0-9	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			9-50	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			50-60	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				Pct	Pct					Pct	
P34C2:														
Splitrock, eroded---------	80	B	0-8	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			8-26	Silty clay loam	CL, ML	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			26-60	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
Splitrock, slightly eroded	10	B	0-9	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			9-34	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			34-60	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
Soils that are deep to till---	5	B	0-9	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			9-50	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			50-60	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
Primghar--------	5	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
P36A:														
Talcot, occasionally flooded--------	85	B/D	0-22	Silty clay loam	CL	A-7	0	0	100	100	80-90	60-85	40-50	15-25
			22-33	Clay loam, silty clay loam, loam	CL	A-7	0	0	95-100	85-100	70-90	60-85	40-50	15-25
			33-60	Coarse sand, stratified loamy sand to gravelly coarse sand	SW, SP, SP-SM	A-1	0	0	85-95	80-90	20-50	2-10	0-14	NP

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P36A:														
Biscay, occasionally flooded--------	10	B/D	0-16	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	80-95	75-90	35-50	10-25
			16-21	Loam, clay loam, sandy clay loam	CL, ML	A-6, A-7	0	0	95-100	90-100	70-90	50-75	30-50	10-20
			21-31	Loam, clay loam, sandy clay loam	CL, ML	A-6, A-7	0	0	95-100	90-100	70-90	50-75	30-50	10-20
			31-60	Stratified loamy sand to gravelly coarse sand, coarse sand	SP, SP-SM	A-1	0	0-2	65-95	55-95	20-45	2-10	0-0	NP
Cylinder, occasionally flooded--------	5	B	0-18	Loam	CL	A-4, A-6	0	0	100	95-100	90-100	55-85	30-40	8-14
			18-28	Loam, clay loam	SC, CL	A-6	0	0	95-100	80-100	80-95	45-70	30-40	10-20
			28-39	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
			39-60	Gravelly sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0-5	75-95	75-95	20-55	5-25	0-14	NP
P37B:														
Talmo-----------	90	A	0-7	Gravelly sandy loam	SM, SP-SM	A-1, A-2	0	0-5	85-95	60-75	30-60	12-20	10-25	NP
			7-10	Gravelly loamy sand, gravelly coarse sand, gravelly loamy coarse sand	SW, SP	A-1	0	0-5	50-90	40-60	10-30	0-5	5-10	NP
			10-60	Very gravelly coarse sand, very gravelly sand	GP, SW, GP-GM, SP	A-1	0	0-5	20-70	10-60	5-30	0-5	0-5	NP

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P37B:														
Kanaranzi-------	5	B	0-7	Loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	NP-15
			7-20	Silt loam, loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			20-80	Gravelly sand, gravelly coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Thurman---------	5	A	0-13	Sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	95-100	95-100	55-95	25-40	20-30	2-8
			13-18	Sandy loam, fine sandy loam, loamy sand	SC-SM, SC, SM	A-2, A-4	0	0	95-100	85-100	55-95	25-45	15-25	2-8
			18-60	Loamy sand, coarse sand, sand	SP	A-2, A-3	0	0	95-100	75-100	50-80	3-7	0-14	NP
P37D:														
Talmo-----------	90	A	0-9	Gravelly sandy loam	SM, SP-SM	A-1, A-2	0	0-5	85-95	60-75	30-60	12-20	10-25	NP
			9-12	Gravelly loamy sand, gravelly coarse sand, gravelly loamy coarse sand	SW, SP	A-1	0	0-5	50-90	40-60	10-30	0-5	5-10	NP
			12-60	Very gravelly coarse sand, very gravelly sand	SP, GP, SW, GP-GM	A-1	0	0-5	20-70	10-60	5-30	0-5	0-5	NP
Kanaranzi-------	5	B	0-7	Loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	NP-15
			7-20	Silt loam, loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			20-80	Gravelly sand, gravelly coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Thurman---------	5	A	0-10	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	95-100	95-100	55-95	25-40	20-30	2-8
			10-20	Sandy loam, fine sandy loam, loamy sand	SC-SM, SC, SM	A-2, A-4	0	0	95-100	85-100	55-95	25-45	15-25	2-8
			20-60	Loamy sand, coarse sand, sand	SP	A-2, A-3	0	0	95-100	75-100	50-80	3-7	0-14	NP

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P38B:														
Thurman---------	90	A	0-13	Sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	95-100	95-100	55-95	25-40	20-30	2-8
			13-18	Sandy loam, fine sandy loam, loamy sand	SC-SM, SC, SM	A-2, A-4	0	0	95-100	85-100	55-95	25-45	15-25	2-8
			18-60	Loamy sand, coarse sand, sand	SP	A-2, A-3	0	0	95-100	75-100	50-80	3-7	0-14	NP
Henkin----------	10	B	0-5	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-100	25-40	5-20
			5-21	Sandy loam, loam	ML, CL	A-4, A-6, A-7	0	0	100	95-100	85-100	65-95	30-45	5-20
			21-48	Sandy loam, loam	SC-SM, SM, SW-SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
			48-60	Stratified loamy sand, loam	SM, SW-SM, SC-SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
P38C:														
Thurman---------	90	A	0-10	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	95-100	95-100	55-95	25-40	20-30	2-8
			10-20	Sandy loam, fine sandy loam, loamy sand	SC-SM, SC, SM	A-2, A-4	0	0	95-100	85-100	55-95	25-45	15-25	2-8
			20-60	Loamy sand, coarse sand, sand	SP	A-2, A-3	0	0	95-100	75-100	50-80	3-7	0-14	NP
Henkin----------	10	B	0-5	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-100	25-40	5-20
			5-21	Sandy loam, loam	ML, CL	A-4, A-6, A-7	0	0	100	95-100	85-100	65-95	30-45	5-20
			21-48	Sandy loam, loam	SC-SM, SM, SW-SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
			48-60	Loamy sand, loam	SC-SM, SM, SW-SM	A-2	0	0	100	100	50-75	10-30	15-25	NP-5
P40A:														
Bluemound-------	85	D	0-14	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	25-45	10-25
			14-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Ihlen-----------	10	B	0-12	Silty clay loam	ML, CL	A-7, A-6	0	0	100	100	95-100	85-95	34-50	10-25
			12-38	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25
			38-80	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro- logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
			In				Pct	Pct					Pct	
P40A:														
Rock outcrop----	5	---	---	---	---	---	---	---	---	---	---	---	---	---
P41A:														
Rosedell--------	95	C/D	0-10	Silty clay loam	CL	A-7	0	0	100	100	95-100	75-85	40-50	15-25
			10-30	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	100	95-100	75-85	40-55	20-30
			30-44	Clay, silty clay	CH, CL	A-7	0	0	100	100	95-100	75-85	40-55	20-30
			44-80	Silty clay, clay	CH, CL	A-7	0	0	100	100	95-100	75-85	40-55	20-30
Spicer----------	3	B/D	0-17	Silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-20
			17-35	Silt loam, silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	85-100	35-50	10-20
			35-60	Silt loam, silty clay loam	ML	A-4, A-6	0	0	100	100	95-100	85-100	30-40	5-12
Albolls---------	2	C/D	0-10	Silty clay loam	CL	A-7	0	0	100	100	95-100	75-85	40-50	15-25
			10-16	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	100	95-100	75-85	40-55	20-30
			16-22	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	100	95-100	75-85	40-55	20-30
			22-30	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	100	95-100	75-85	40-55	20-30
			30-44	Clay, silty clay	CH, CL	A-7	0	0	100	100	95-100	75-85	40-55	20-30
			44-80	Silty clay, clay	CL, CH	A-7	0	0	100	100	95-100	75-85	40-55	20-30
P42A:														
Whitewood-------	70	B/D	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			25-43	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			43-60	Silty clay loam, silt loam, clay loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P42A:														
Whitewood, frequently flooded--------	10	B/D	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			25-43	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			43-60	Silty clay loam, silt loam, clay loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30
Whitewood, overwash-------	10	B/D	0-48	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			48-70	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			70-80	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30
Primghar--------	9	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-55	10-30
			21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	11-30
			42-60	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	70-100	35-50	10-25
Wakonda---------	1	B	0-9	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	28-45	10-22
			9-35	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	28-50	10-25
			35-62	Silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-100	28-50	10-25
			62-80	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-25
P43A:														
Wilmonton-------	85	B	0-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	85-100	60-90	30-50	12-25
			15-20	Clay loam, loam	CL	A-6	0	0	100	90-100	85-100	60-90	30-40	12-20
			20-25	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			25-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P43A:														
Everly----------	5	B	0-10	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-95	65-80	30-45	10-20
			10-18	Clay loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-95	70-90	35-50	15-25
			18-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Ransom----------	5	B	0-16	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	80-95	35-50	10-22
			16-33	Silty clay loam, silt loam	ML, CL	A-6, A-7	0	0	95-100	90-100	85-100	75-95	35-50	10-22
			33-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
Rushmore--------	5	B/D	0-18	Silty clay loam	CL, ML	A-6, A-7	0	0	100	95-100	90-100	85-95	35-50	10-25
			18-24	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-100	85-95	25-45	10-25
			24-32	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-100	85-95	25-45	10-25
			32-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P44E:														
Shindler--------	85	B	0-7	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
			7-11	Clay loam	CL	A-7, A-6	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
			11-35	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
			35-60	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
Judson----------	10	B	0-36	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	23-40	3-20
			36-56	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			56-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	85-100	35-50	10-25
Soils that are moderately deep to carbonates--	5	B	0-7	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
			7-20	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
			20-35	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
			35-60	Clay loam	CL	A-6, A-7	0-1	0-2	95-100	90-98	80-95	55-80	36-44	15-22
P45E:														
Moneta----------	85	B	0-9	Clay loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			9-13	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			13-53	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			53-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P45E:														
Judson----------	10	B	0-36	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	85-100	23-40	3-20
			36-56	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			56-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	95-100	95-100	85-100	35-50	10-25
Soils that are moderately deep to carbonates--	5	B	0-9	Clay loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			9-20	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			20-53	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			53-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P47A:														
Whitewood, overwash-------	80	B/D	0-48	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			48-70	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			70-80	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30
Judson----------	10	B	0-22	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			22-35	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
			35-60	Silty clay loam, silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-100	30-50	10-20
Whitewood, frequently flooded--------	10	B/D	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			25-43	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-55	15-30
			43-60	Silty clay loam, silt loam, clay loam	CL	A-6, A-7	0	0	100	100	90-100	75-95	35-55	15-30

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydrologic group	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	
P48A:														
Allendorf-------	85	B	0-14	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	35-50	13-25
			14-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			34-60	Gravelly coarse sand, very gravelly loamy coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Kanaranzi-------	5	B	0-7	Loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	NP-15
			7-20	Silt loam, loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			20-80	Gravelly sand, gravelly coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Moderately well drained soils--	5	B	0-13	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	35-50	13-25
			13-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			34-60	Gravelly coarse sand, very gravelly loamy coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Sac-------------	5	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-28	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			28-33	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P48B:														
Allendorf-------	85	B	0-13	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	35-50	13-25
			13-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			34-60	Gravelly coarse sand, very gravelly loamy coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P48B:														
Kanaranzi-------	5	B	0-7	Loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	NP-15
			7-20	Silt loam, loam	CL, ML	A-4, A-6	0	0	95-100	95-100	80-95	60-85	25-40	2-15
			20-80	Gravelly sand, gravelly coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Moderately well drained soils--	5	B	0-13	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	35-50	13-25
			13-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	32-55	11-33
			34-60	Gravelly coarse sand, very gravelly loamy coarse sand	SP, GP, GP-GM, SP-SM	A-1	0	0-5	50-100	35-100	20-50	1-10	15-25	NP-5
Sac-------------	5	B	0-11	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			11-28	Silty clay loam	ML, CL	A-7	0	0	100	100	95-100	90-100	40-55	15-25
			28-33	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
			33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	78-92	52-78	30-40	12-20
P55A:														
Kato------------	90	B/D	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	80-95	75-90	35-50	10-25
			21-31	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	80-95	75-90	35-50	10-25
			31-35	Sandy loam, fine sandy loam, loamy sand	SC-SM, SC, SM	A-2, A-4	0	0	95-100	85-100	55-95	25-45	15-25	2-8
			35-60	Stratified loamy sand to gravelly coarse sand, coarse sand	SP, SP-SM	A-1	0	0-2	65-95	55-95	20-45	2-10	0-0	NP

Table 17.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Hydro-logic group	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plas-ticity index
			In				Pct	Pct					Pct	
P55A:														
Somewhat poorly drained soils--	10	B	0-21	Silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	80-95	75-90	35-50	10-25
			21-31	Silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	80-95	75-90	35-50	10-25
			31-35	Sandy loam, fine sandy loam, loamy sand	SC-SM, SC, SM	A-2, A-4	0	0	95-100	85-100	55-95	25-45	15-25	2-8
			35-60	Stratified loamy sand to gravelly coarse sand, coarse sand	SP, SP-SM	A-1	0	0-2	65-95	55-95	20-45	2-10	0-0	NP
W:														
Water-----------	100	---	---	---	---	---	---	---	---	---	---	---	---	---

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 component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
GP:													
Pits, gravel	80	---	---	---	---	---	---	---	---	---	-	---	---
Udipsamments	20	---	---	---	---	---	---	---	---	---	-	---	---
M-W:													
Water, miscellaneous	100	---	---	---	---	---	---	---	---	---	-	---	---
P3A:													
Biscay	85	0-16	27-32	1.20-1.30	0.6-2.0	0.20-0.22	3.2-4.2	4.0-8.0	.28	.28	4	7	38
		16-21	25-32	1.25-1.35	0.6-2.0	0.17-0.19	1.0-4.2	4.0-6.0	.28	.28			
		21-31	25-32	1.25-1.35	0.6-2.0	0.17-0.19	1.0-4.2	0.5-1.0	.28	.28			
		31-60	1-6	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.1-0.5	.05	.10			
Cylinder	10	0-18	22-27	1.45-1.60	0.6-2.0	0.20-0.22	1.6-3.2	4.0-6.0	.24	.24	4	6	48
		18-28	22-30	1.45-1.60	0.6-2.0	0.17-0.19	1.6-4.2	0.5-1.0	.24	.24			
		28-39	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
		39-60	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
Talcot	5	0-22	30-35	1.20-1.30	0.6-2.0	0.18-0.22	4.2-5.8	4.0-8.0	.28	.28	4	4L	86
		22-33	26-35	1.25-1.35	0.6-2.0	0.17-0.20	4.2-5.8	0.5-1.0	.28	.28			
		33-60	1-6	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.1-0.5	.15	.15			
P4A:													
Calco, frequently flooded	80	0-36	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		36-60	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	1.0-3.0	.28	.28			
Calco, occasionally flooded	10	0-36	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		36-44	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	1.0-3.0	.28	.28			
		44-60	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	0.5-1.0	.28	.28			
Havelock, frequently flooded	5	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			
Spillco, frequently flooded	5	0-15	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		15-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P5A:													
Calco, occasionally flooded--------------	80	0-36	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		36-44	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	1.0-3.0	.28	.28			
		44-60	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	0.5-1.0	.28	.28			
Calco, frequently flooded--------------	5	0-36	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		36-60	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	1.0-3.0	.28	.28			
Colo, occasionally flooded--------------	5	0-34	27-32	1.28-1.32	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		34-52	27-35	1.25-1.35	0.6-2.0	0.18-0.20	3.2-5.8	1.0-3.0	.28	.28			
		52-60	25-35	1.25-1.35	0.6-2.0	0.18-0.20	2.6-5.8	0.5-1.0	.28	.28			
Havelock, occasionally flooded--------------	5	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			
Spillco, occasionally flooded--------------	5	0-10	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		10-22	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24			
		22-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
P6A:													
Colo, occasionally flooded--------------	80	0-34	27-32	1.28-1.32	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		34-52	27-35	1.25-1.35	0.6-2.0	0.18-0.20	3.2-5.8	1.0-3.0	.28	.28			
		52-60	25-35	1.25-1.35	0.6-2.0	0.18-0.20	2.6-5.8	0.5-1.0	.28	.28			
Calco, frequently flooded--------------	5	0-36	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		36-60	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	1.0-3.0	.28	.28			
Calco, occasionally flooded--------------	5	0-36	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		36-44	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	1.0-3.0	.28	.28			
		44-60	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	0.5-1.0	.28	.28			
Comfrey, occasionally flooded--------------	5	0-26	28-35	1.20-1.40	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.28	.28	5	6	48
		26-35	18-35	1.20-1.40	0.6-2.0	0.16-0.20	1.0-5.8	0.5-1.0	.28	.28			
		35-60	18-35	1.30-1.50	0.6-2.0	0.15-0.19	1.0-5.8	0.1-0.5	.28	.28			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P6A:													
Spillco, occasionally flooded	5	0-10	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		10-22	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24			
		22-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
P7A:													
Comfrey, occasionally flooded	80	0-26	28-35	1.20-1.40	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.28	.28	5	6	48
		26-35	18-35	1.20-1.40	0.6-2.0	0.16-0.20	1.0-5.8	0.5-1.0	.28	.28			
		35-60	18-35	1.30-1.50	0.6-2.0	0.15-0.19	1.0-5.8	0.1-0.5	.28	.28			
Colo, occasionally flooded	5	0-34	27-32	1.28-1.32	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		34-52	27-35	1.25-1.35	0.6-2.0	0.18-0.20	3.2-5.8	1.0-3.0	.28	.28			
		52-60	25-35	1.25-1.35	0.6-2.0	0.18-0.20	2.6-5.8	0.5-1.0	.28	.28			
Havelock, occasionally flooded	5	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			
Havelock, frequently flooded	5	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			
Spillco, occasionally flooded	5	0-10	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		10-22	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24			
		22-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
P8A:													
Cylinder, occasionally flooded	80	0-18	22-27	1.45-1.60	0.6-2.0	0.20-0.22	1.6-3.2	4.0-6.0	.24	.24	4	6	48
		18-28	22-30	1.45-1.60	0.6-2.0	0.17-0.19	1.6-4.2	0.5-1.0	.24	.24			
		28-39	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
		39-60	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
Fairhaven	10	0-8	18-27	1.25-1.40	0.6-2.0	0.22-0.24	1.0-3.2	3.0-6.0	.32	.32	4	6	48
		8-13	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-3.2	3.0-6.0	.43	.43			
		13-36	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-4.2	1.0-2.0	.43	.43			
		36-60	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
Spillco, occasionally flooded	10	0-10	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		10-22	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24			
		22-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P11A:													
Dempster--------------	90	0-10	20-26	1.10-1.25	0.6-2.0	0.19-0.22	1.0-3.0	3.0-6.0	.28	.28	4	6	48
		10-29	24-30	1.20-1.35	0.6-2.0	0.17-0.20	2.0-4.0	0.5-1.0	.32	.32			
		29-36	24-30	1.20-1.35	0.6-2.0	0.13-0.17	2.0-4.0	0.1-0.5	.32	.32			
		36-60	1-5	1.55-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
Graceville------------	10	0-20	27-34	1.40-1.45	0.6-2.0	0.17-0.19	3.2-4.2	4.0-8.0	.28	.28	4	6	48
		20-53	20-34	1.20-1.35	0.6-2.0	0.17-0.22	1.0-5.4	0.5-1.0	.32	.32			
		53-60	2-10	1.50-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
P11B:													
Dempster--------------	90	0-12	20-26	1.10-1.25	0.6-2.0	0.19-0.22	1.0-3.0	3.0-6.0	.28	.28	4	6	48
		12-27	24-30	1.20-1.35	0.6-2.0	0.17-0.20	2.0-4.0	0.5-1.0	.32	.32			
		27-60	1-5	1.55-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
Graceville------------	10	0-20	27-34	1.40-1.45	0.6-2.0	0.17-0.19	3.2-4.2	4.0-8.0	.28	.28	4	6	48
		20-53	20-34	1.20-1.35	0.6-2.0	0.17-0.22	1.0-5.4	0.5-1.0	.32	.32			
		53-60	2-10	1.50-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
P12B:													
Everly----------------	80	0-10	27-30	1.40-1.45	0.6-2.0	0.17-0.19	3.2-4.2	3.0-6.0	.24	.24	5	6	48
		10-18	25-35	1.45-1.55	0.6-2.0	0.15-0.17	2.6-5.8	0.5-1.0	.32	.32			
		18-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Sac-------------------	10	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-28	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		28-33	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		33-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Ransom----------------	5	0-16	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.32	.32	5	7	38
		16-33	24-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.43	.43			
		33-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Wilmonton-------------	5	0-15	27-35	1.25-1.35	0.6-2.0	0.20-0.26	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		15-20	25-32	1.25-1.35	0.6-2.0	0.18-0.24	2.6-4.8	0.5-1.0	.28	.28			
		20-25	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		25-55	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		55-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P12C2:													
Everly, eroded--------	80	0-7	27-30	1.40-1.45	0.6-2.0	0.17-0.19	3.2-4.2	3.0-6.0	.24	.24	5	6	48
		7-16	25-35	1.45-1.55	0.6-2.0	0.15-0.17	2.6-5.8	0.5-1.0	.32	.32			
		16-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P12C2:													
Everly, slightly eroded	10	0-10	27-30	1.40-1.45	0.6-2.0	0.17-0.19	3.2-4.2	3.0-6.0	.24	.24	5	6	48
		10-18	25-35	1.45-1.55	0.6-2.0	0.15-0.17	2.6-5.8	0.5-1.0	.32	.32			
		18-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Moneta	5	0-9	27-32	1.45-1.65	0.2-0.6	0.14-0.18	3.2-4.8	1.0-3.0	.32	.37	5	4L	86
		9-13	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.5-1.0	.32	.37			
		13-53	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		53-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Wilmonton	5	0-15	27-35	1.25-1.35	0.6-2.0	0.20-0.26	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		15-20	25-32	1.25-1.35	0.6-2.0	0.18-0.24	2.6-4.8	0.5-1.0	.28	.28			
		20-25	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		25-55	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		55-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P13A:													
Fairhaven	85	0-8	18-27	1.25-1.40	0.6-2.0	0.22-0.24	1.0-3.2	3.0-6.0	.32	.32	4	6	48
		8-13	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-3.2	3.0-6.0	.43	.43			
		13-36	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-4.2	1.0-2.0	.43	.43			
		36-60	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
Cylinder	5	0-18	22-27	1.45-1.60	0.6-2.0	0.20-0.22	1.6-3.2	4.0-6.0	.24	.24	4	6	48
		18-28	22-30	1.45-1.60	0.6-2.0	0.17-0.19	1.6-4.2	0.5-1.0	.24	.24			
		28-39	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
		39-60	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
Dempster	5	0-10	20-26	1.10-1.25	0.6-2.0	0.19-0.22	1.0-3.0	3.0-6.0	.28	.28	4	6	48
		10-29	24-30	1.20-1.35	0.6-2.0	0.17-0.20	2.0-4.0	0.5-1.0	.32	.32			
		29-36	24-30	1.20-1.35	0.6-2.0	0.13-0.17	2.0-4.0	0.1-0.5	.32	.32			
		36-60	1-5	1.55-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
Flandreau	5	0-8	20-26	1.20-1.30	0.6-2.0	0.20-0.22	1.0-2.9	3.0-6.0	.28	.28	4	6	48
		8-30	20-30	1.20-1.35	0.6-2.0	0.16-0.22	1.0-4.2	0.5-1.0	.32	.32			
		30-47	5-18	1.50-1.70	2.0-6.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
		47-60	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
P13B:													
Fairhaven	80	0-7	18-27	1.25-1.40	0.6-2.0	0.22-0.24	1.0-3.2	3.0-6.0	.32	.32	4	6	48
		7-12	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-3.2	3.0-6.0	.43	.43			
		12-27	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-4.2	1.0-2.0	.43	.43			
		27-60	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P13B:													
Cylinder--------------	5	0-18	22-27	1.45-1.60	0.6-2.0	0.20-0.22	1.6-3.2	4.0-6.0	.24	.24	4	6	48
		18-28	22-30	1.45-1.60	0.6-2.0	0.17-0.19	1.6-4.2	0.5-1.0	.24	.24			
		28-39	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
		39-60	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
Dempster--------------	5	0-12	20-26	1.10-1.25	0.6-2.0	0.19-0.22	1.0-3.0	3.0-6.0	.28	.28	4	6	48
		12-27	24-30	1.20-1.35	0.6-2.0	0.17-0.20	2.0-4.0	0.5-1.0	.32	.32			
		27-60	1-5	1.55-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
Flandreau-------------	5	0-8	20-26	1.20-1.30	0.6-2.0	0.20-0.22	1.0-2.9	3.0-6.0	.28	.28	4	6	48
		8-30	20-30	1.20-1.35	0.6-2.0	0.16-0.22	1.0-4.2	0.5-1.0	.32	.32			
		30-36	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
		36-60	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
Kanaranzi-------------	5	0-7	18-27	1.25-1.40	0.6-2.0	0.22-0.24	1.0-3.2	3.0-6.0	.32	.32	4	6	48
		7-20	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-4.2	1.0-2.0	.43	.43			
		20-80	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
P14A:													
Flandreau-------------	90	0-8	20-26	1.20-1.30	0.6-2.0	0.20-0.22	1.0-2.9	3.0-6.0	.28	.28	4	6	48
		8-30	20-30	1.20-1.35	0.6-2.0	0.16-0.22	1.0-4.2	0.5-1.0	.32	.32			
		30-47	5-18	1.50-1.70	2.0-6.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
		47-60	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
Grovena---------------	10	0-8	20-26	1.20-1.30	0.6-2.0	0.20-0.22	1.0-2.9	3.0-6.0	.28	.28	4	6	48
		8-35	20-30	1.20-1.35	0.6-2.0	0.16-0.22	1.0-4.2	0.5-1.0	.32	.32			
		35-42	5-18	1.50-1.70	0.6-2.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
		42-60	5-18	1.50-1.70	0.6-2.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
P14B:													
Flandreau-------------	80	0-8	20-26	1.20-1.30	0.6-2.0	0.20-0.22	1.0-2.9	3.0-6.0	.28	.28	4	6	48
		8-30	20-30	1.20-1.35	0.6-2.0	0.16-0.22	1.0-4.2	0.5-1.0	.32	.32			
		30-36	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
		36-60	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
Grovena---------------	10	0-8	20-26	1.20-1.30	0.6-2.0	0.20-0.22	1.0-2.9	3.0-6.0	.28	.28	4	6	48
		8-35	20-30	1.20-1.35	0.6-2.0	0.16-0.22	1.0-4.2	0.5-1.0	.32	.32			
		35-42	5-18	1.50-1.70	0.6-2.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
		42-60	5-18	1.50-1.70	0.6-2.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
Thurman---------------	10	0-13	6-18	1.30-1.40	2.0-6.0	0.13-0.15	0.0-1.0	2.0-4.0	.20	.20	3	3	86
		13-18	6-18	1.35-1.50	2.0-6.0	0.12-0.14	0.0-1.0	0.5-1.0	.20	.20			
		18-60	1-10	1.50-1.60	6.0-20	0.02-0.07	0.0-0.0	0.1-0.5	.15	.15			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P15B:													
Galva-----------------	80	0-11	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	5	7	38
		11-31	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		31-45	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		45-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
Primghar--------------	10	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Annieville------------	5	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-52	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		52-57	5-18	1.50-1.70	0.6-2.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
		57-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Sac-------------------	5	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-28	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		28-33	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		33-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P15C2:													
Galva, eroded---------	80	0-8	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	5	7	38
		8-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
Galva, slightly eroded	10	0-11	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	5	7	38
		11-31	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		31-45	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		45-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
Sac, eroded-----------	5	0-8	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	2.0-5.0	.32	.32	5	7	38
		8-26	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		26-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Judson----------------	3	0-36	20-26	1.20-1.35	0.6-2.0	0.19-0.22	1.0-2.9	4.0-8.0	.28	.28	5	6	48
		36-56	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		56-60	20-32	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.8	0.1-0.5	.43	.43			
Primghar--------------	2	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
P16A:													
Graceville------------	90	0-20	27-34	1.40-1.45	0.6-2.0	0.17-0.19	3.2-4.2	4.0-8.0	.28	.28	4	6	48
		20-53	20-34	1.20-1.35	0.6-2.0	0.17-0.22	1.0-5.4	0.5-1.0	.32	.32			
		53-60	2-10	1.50-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
									Kw	Kf	T		
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P16A:													
Dempster--------------	10	0-10	20-26	1.10-1.25	0.6-2.0	0.19-0.22	1.0-3.0	3.0-6.0	.28	.28	4	6	48
		10-29	24-30	1.20-1.35	0.6-2.0	0.17-0.20	2.0-4.0	0.5-1.0	.32	.32			
		29-36	24-30	1.20-1.35	0.6-2.0	0.13-0.17	2.0-4.0	0.1-0.5	.32	.32			
		36-60	1-5	1.55-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
P16B:													
Graceville------------	90	0-20	27-34	1.40-1.45	0.6-2.0	0.17-0.19	3.2-4.2	4.0-8.0	.28	.28	4	6	48
		20-53	20-34	1.20-1.35	0.6-2.0	0.17-0.22	1.0-5.4	0.5-1.0	.32	.32			
		53-60	2-10	1.50-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
Dempster--------------	10	0-12	20-26	1.10-1.25	0.6-2.0	0.19-0.22	1.0-3.0	3.0-6.0	.28	.28	4	6	48
		12-27	24-30	1.20-1.35	0.6-2.0	0.17-0.20	2.0-4.0	0.5-1.0	.32	.32			
		27-60	1-5	1.55-1.70	6.0-20	0.03-0.06	0.0-0.0	0.1-0.5	.10	.24			
P17A:													
Ihlen-----------------	93	0-12	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	2	7	38
		12-38	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		38-80	---	---	0-0.01	---	---	---	---	---			
Bluemound-------------	3	0-14	18-27	1.20-1.30	0.6-2.0	0.18-0.22	1.0-3.2	4.0-6.0	.28	.28	1	6	48
		14-80	---	---	0-0.01	---	---	---	---	---			
Soils that are deep to bedrock-----------	3	0-12	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	3	7	38
		12-47	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		47-80	---	---	0-0.01	---	---	---	---	---			
Rock outcrop----------	1	---	---	---	---	---	---	---	---	---	-	---	---
P17B:													
Ihlen-----------------	80	0-8	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	2	7	38
		8-23	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		23-31	18-27	1.20-1.45	0.6-2.0	0.20-0.22	1.0-3.2	0.1-0.5	.32	.32			
		31-80	---	---	0-0.01	---	---	---	---	---			
Bluemound-------------	10	0-14	18-27	1.20-1.30	0.6-2.0	0.18-0.22	1.0-3.2	4.0-6.0	.28	.28	1	6	48
		14-80	---	---	0-0.01	---	---	---	---	---			
Soils that are deep to bedrock-----------	5	0-12	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	3	7	38
		12-47	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		47-80	---	---	0-0.01	---	---	---	---	---			
Rock outcrop----------	5	---	---	---	---	---	---	---	---	---	-	---	---

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P18B:													
Ihlen-----------------	55	0-11	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	2	7	38
		11-32	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		32-80	---	---	0-0.01	---	---	---	---	---			
Rock outcrop----------	25	---	---	---	---	---	---	---	---	---	-	---	---
Bluemound-------------	10	0-14	18-27	1.20-1.30	0.6-2.0	0.18-0.22	1.0-3.2	4.0-6.0	.28	.28	1	6	48
		14-80	---	---	0-0.01	---	---	---	---	---			
Soils that are deep to bedrock-----------	10	0-12	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	3	7	38
		12-47	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		47-80	---	---	0-0.01	---	---	---	---	---			
P18C:													
Ihlen-----------------	45	0-14	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	2	7	38
		14-27	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		27-80	---	---	0-0.01	---	---	---	---	---			
Rock outcrop----------	40	---	---	---	---	---	---	---	---	---	-	---	---
Bluemound-------------	10	0-14	18-27	1.20-1.30	0.6-2.0	0.18-0.22	1.0-3.2	4.0-6.0	.28	.28	1	6	48
		14-80	---	---	0-0.01	---	---	---	---	---			
Soils that are deep to bedrock-----------	3	0-12	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	3	7	38
		12-47	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		47-80	---	---	0-0.01	---	---	---	---	---			
Spillco, occasionally flooded--------------	2	0-10	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		10-22	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24			
		22-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
P19A:													
Judson----------------	80	0-22	27-32	1.20-1.35	0.6-2.0	0.19-0.22	3.2-4.8	4.0-8.0	.28	.28	5	7	38
		22-35	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		35-60	20-32	1.20-1.45	0.6-2.0	0.17-0.22	1.0-4.8	0.1-0.5	.43	.43			
Whitewood, overwash---	14	0-48	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		48-70	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		70-80	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P19A:													
Primghar--------------	6	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
P20B:													
Judson----------------	80	0-36	20-26	1.20-1.35	0.6-2.0	0.19-0.22	1.0-2.9	4.0-8.0	.28	.28	5	6	48
		36-56	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		56-60	20-32	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.8	0.1-0.5	.43	.43			
Primghar--------------	10	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Galva-----------------	5	0-11	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	5	7	38
		11-31	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		31-45	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		45-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
Whitewood, overwash---	5	0-48	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		48-70	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		70-80	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			
P21A:													
Marcus----------------	80	0-17	30-40	1.30-1.35	0.2-0.6	0.21-0.23	4.2-7.3	4.0-8.0	.28	.28	5	7	38
		17-44	30-35	1.35-1.40	0.2-0.6	0.18-0.20	4.2-5.8	0.5-1.0	.43	.43			
		44-57	22-30	1.35-1.45	0.2-0.6	0.20-0.22	1.6-4.2	0.1-0.5	.43	.43			
		57-60	22-30	1.55-1.65	0.2-0.6	0.17-0.19	1.6-4.2	0.1-0.5	.43	.43			
Whitewood, frequently flooded--------------	10	0-25	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		25-43	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		43-60	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			
Primghar--------------	5	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Spicer----------------	5	0-17	29-35	1.20-1.30	0.6-2.0	0.18-0.24	3.9-5.8	4.0-8.0	.28	.28	5	4L	86
		17-35	18-35	1.25-1.35	0.6-2.0	0.16-0.22	1.0-5.8	0.5-1.0	.37	.37			
		35-60	18-35	1.25-1.35	0.6-2.0	0.16-0.22	1.0-5.8	0.1-0.5	.37	.37			
P22A:													
Havelock, frequently flooded--------------	80	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P22A:													
Havelock, occasionally flooded-------------	10	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			
Calco, frequently flooded-------------	5	0-36	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		36-60	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	1.0-3.0	.28	.28			
Spillco, frequently flooded-------------	5	0-15	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		15-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
P23A:													
Havelock, occasionally flooded-------------	80	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			
Havelock, frequently flooded-------------	10	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			
Spillco, occasionally flooded-------------	5	0-10	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		10-22	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24			
		22-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
Comfrey, occasionally flooded-------------	3	0-26	28-35	1.20-1.40	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.28	.28	5	6	48
		26-35	18-35	1.20-1.40	0.6-2.0	0.16-0.20	1.0-5.8	0.5-1.0	.28	.28			
		35-60	18-35	1.30-1.50	0.6-2.0	0.15-0.19	1.0-5.8	0.1-0.5	.28	.28			
Calco, occasionally flooded-------------	2	0-36	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		36-44	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	1.0-3.0	.28	.28			
		44-60	27-35	1.25-1.30	0.6-2.0	0.21-0.23	3.2-5.8	0.5-1.0	.28	.28			
P24B:													
Moody-----------------	85	0-10	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	5	7	38
		10-35	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		35-48	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		48-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
Primghar--------------	10	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P24B:													
Nora, eroded----------	3	0-8	20-27	1.20-1.30	0.6-2.0	0.19-0.22	1.0-3.2	2.0-5.0	.32	.32	5	6	48
		8-24	20-35	1.25-1.35	0.6-2.0	0.17-0.20	1.0-5.8	0.5-1.0	.43	.43			
		24-33	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		33-60	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
Splitrock-------------	2	0-9	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		9-34	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		34-60	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.32	.37			
P24C2:													
Moody, eroded---------	80	0-8	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	2.0-5.0	.28	.28	5	7	38
		8-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-50	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		50-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
Moody, slightly eroded	5	0-10	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	5	7	38
		10-35	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		35-48	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		48-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
Nora, eroded----------	5	0-8	20-27	1.20-1.30	0.6-2.0	0.19-0.22	1.0-3.2	2.0-5.0	.32	.32	5	6	48
		8-24	20-35	1.25-1.35	0.6-2.0	0.17-0.20	1.0-5.8	0.5-1.0	.43	.43			
		24-33	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		33-60	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
Splitrock, eroded-----	5	0-9	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		9-34	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		34-60	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.32	.37			
Primghar--------------	3	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Crofton, eroded-------	2	0-8	20-27	1.20-1.30	0.6-2.0	0.21-0.24	1.0-3.2	0.5-3.0	.43	.43	5	4L	86
		8-14	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
		14-60	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
P25C2:													
Nora, eroded----------	85	0-8	20-27	1.20-1.30	0.6-2.0	0.19-0.22	1.0-3.2	2.0-5.0	.32	.32	5	6	48
		8-24	20-35	1.25-1.35	0.6-2.0	0.17-0.20	1.0-5.8	0.5-1.0	.43	.43			
		24-33	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		33-60	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P25C2:													
Crofton, eroded-------	5	0-8	20-27	1.20-1.30	0.6-2.0	0.21-0.24	1.0-3.2	0.5-3.0	.43	.43	5	4L	86
		8-14	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
		14-60	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
Judson----------------	5	0-36	20-26	1.20-1.35	0.6-2.0	0.19-0.22	1.0-2.9	4.0-8.0	.28	.28	5	6	48
		36-56	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		56-60	20-32	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.8	0.1-0.5	.43	.43			
Moody, eroded---------	5	0-8	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	2.0-5.0	.28	.28	5	7	38
		8-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-50	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		50-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
P25D2:													
Nora, eroded----------	80	0-8	20-27	1.20-1.30	0.6-2.0	0.19-0.22	1.0-3.2	2.0-5.0	.32	.32	5	6	48
		8-32	20-35	1.25-1.35	0.6-2.0	0.17-0.20	1.0-5.8	0.5-1.0	.43	.43			
		32-40	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		40-60	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
Crofton, eroded-------	10	0-6	20-27	1.20-1.30	0.6-2.0	0.21-0.24	1.0-3.2	0.5-3.0	.43	.43	5	4L	86
		6-20	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
		20-60	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
Judson----------------	5	0-36	20-26	1.20-1.35	0.6-2.0	0.19-0.22	1.0-2.9	4.0-8.0	.28	.28	5	6	48
		36-56	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		56-60	20-32	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.8	0.1-0.5	.43	.43			
Moody, eroded---------	5	0-8	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	2.0-5.0	.28	.28	5	7	38
		8-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-50	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		50-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
P26C2:													
Nora, eroded----------	50	0-8	20-27	1.20-1.30	0.6-2.0	0.19-0.22	1.0-3.2	2.0-5.0	.32	.32	5	6	48
		8-22	20-35	1.25-1.35	0.6-2.0	0.17-0.20	1.0-5.8	0.5-1.0	.43	.43			
		22-30	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		30-60	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
Crofton, eroded-------	30	0-8	20-27	1.20-1.30	0.6-2.0	0.21-0.24	1.0-3.2	0.5-3.0	.43	.43	5	4L	86
		8-14	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
		14-60	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
Judson----------------	10	0-36	20-26	1.20-1.35	0.6-2.0	0.19-0.22	1.0-2.9	4.0-8.0	.28	.28	5	6	48
		36-56	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		56-60	20-32	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.8	0.1-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P26C2:													
Moody, eroded	10	0-8	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	2.0-5.0	.28	.28	5	7	38
		8-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-50	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		50-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
P26D2:													
Nora, eroded	45	0-8	20-27	1.20-1.30	0.6-2.0	0.19-0.22	1.0-3.2	2.0-5.0	.32	.32	5	6	48
		8-30	20-35	1.25-1.35	0.6-2.0	0.17-0.20	1.0-5.8	0.5-1.0	.43	.43			
		30-38	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		38-60	18-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
Crofton, eroded	35	0-6	20-27	1.20-1.30	0.6-2.0	0.21-0.24	1.0-3.2	0.5-3.0	.43	.43	5	4L	86
		6-20	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
		20-60	15-27	1.10-1.20	0.6-2.0	0.18-0.22	0.8-3.2	0.1-0.5	.43	.43			
Judson	14	0-36	20-26	1.20-1.35	0.6-2.0	0.19-0.22	1.0-2.9	4.0-8.0	.28	.28	5	6	48
		36-56	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		56-60	20-32	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.8	0.1-0.5	.43	.43			
Moody, eroded	6	0-8	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	2.0-5.0	.28	.28	5	7	38
		8-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-50	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		50-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
P27A:													
Primghar	80	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Galva	8	0-11	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	5	7	38
		11-31	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		31-45	20-30	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.2	0.1-0.5	.43	.43			
		45-60	18-25	1.30-1.50	0.6-2.0	0.17-0.20	1.0-2.6	0.1-0.5	.43	.43			
Marcus	8	0-17	30-40	1.30-1.35	0.2-0.6	0.21-0.23	4.2-7.3	4.0-8.0	.28	.28	5	7	38
		17-44	30-35	1.35-1.40	0.2-0.6	0.18-0.20	4.2-5.8	0.5-1.0	.43	.43			
		44-57	22-30	1.35-1.45	0.2-0.6	0.20-0.22	1.6-4.2	0.1-0.5	.43	.43			
		57-60	22-30	1.55-1.65	0.2-0.6	0.17-0.19	1.6-4.2	0.1-0.5	.43	.43			
Judson	4	0-22	27-32	1.20-1.35	0.6-2.0	0.19-0.22	3.2-4.8	4.0-8.0	.28	.28	5	7	38
		22-35	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		35-60	20-32	1.20-1.45	0.6-2.0	0.17-0.22	1.0-4.8	0.1-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P28A:													
Ransom	80	0-16	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.32	.32	5	7	38
		16-33	24-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.43	.43			
		33-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Rushmore	8	0-18	28-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		18-24	28-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.37	.37			
		24-32	28-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.1-0.5	.37	.37			
		32-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Sac	8	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-28	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		28-33	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		33-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Primghar	4	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
P29A:													
Rushmore	80	0-18	28-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		18-24	28-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.37	.37			
		24-32	28-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.1-0.5	.37	.37			
		32-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Ransom	10	0-16	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.32	.32	5	7	38
		16-33	24-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.43	.43			
		33-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Whitewood, frequently flooded	10	0-25	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		25-43	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		43-60	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			
P30B:													
Sac	80	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-28	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		28-33	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		33-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Annieville	10	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-52	26-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		52-57	5-18	1.50-1.70	0.6-2.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
		57-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P30B:													
Primghar--------------	5	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Ransom----------------	5	0-16	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.32	.32	5	7	38
		16-33	24-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.43	.43			
		33-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P30C2:													
Sac, eroded-----------	80	0-8	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	2.0-5.0	.32	.32	5	7	38
		8-26	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		26-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Annieville------------	10	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-52	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		52-57	5-18	1.50-1.70	0.6-2.0	0.08-0.13	0.0-0.0	0.0-0.5	.24	.24			
		57-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Sac, slightly eroded--	5	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-28	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		28-33	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		33-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Primghar--------------	3	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Ransom----------------	2	0-16	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.32	.32	5	7	38
		16-33	24-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.43	.43			
		33-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P31A:													
Spicer----------------	85	0-17	29-35	1.20-1.30	0.6-2.0	0.18-0.24	3.9-5.8	4.0-8.0	.28	.28	5	4L	86
		17-35	18-35	1.25-1.35	0.6-2.0	0.16-0.22	1.0-5.8	0.5-1.0	.37	.37			
		35-60	18-35	1.25-1.35	0.6-2.0	0.16-0.22	1.0-5.8	0.1-0.5	.37	.37			
Marcus----------------	10	0-17	30-40	1.30-1.35	0.2-0.6	0.21-0.23	4.2-7.3	4.0-8.0	.28	.28	5	7	38
		17-44	30-35	1.35-1.40	0.2-0.6	0.18-0.20	4.2-5.8	0.5-1.0	.43	.43			
		44-57	22-30	1.35-1.45	0.2-0.6	0.20-0.22	1.6-4.2	0.1-0.5	.43	.43			
		57-60	22-30	1.55-1.65	0.2-0.6	0.17-0.19	1.6-4.2	0.1-0.5	.43	.43			
Whitewood-------------	5	0-25	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		25-43	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		43-60	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P32A:													
Spillco, frequently flooded--------------	85	0-15	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		15-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
Spillco, occasionally flooded--------------	10	0-10	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		10-22	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24			
		22-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
Havelock, frequently flooded--------------	5	0-32	27-35	1.40-1.60	0.6-2.0	0.17-0.23	3.2-5.8	4.0-8.0	.28	.28	5	4L	86
		32-60	18-35	1.40-1.60	0.6-2.0	0.17-0.20	1.0-5.8	1.0-3.0	.28	.28			
P33A:													
Spillco, occasionally flooded--------------	85	0-10	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		10-22	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24			
		22-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
Spillco, frequently flooded--------------	10	0-15	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	4.0-6.0	.24	.24	5	6	48
		15-60	18-26	1.45-1.55	0.6-2.0	0.19-0.21	1.0-2.9	1.0-3.0	.24	.24			
Comfrey, occasionally flooded--------------	5	0-26	28-35	1.20-1.40	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.28	.28	5	6	48
		26-35	18-35	1.20-1.40	0.6-2.0	0.16-0.20	1.0-5.8	0.5-1.0	.28	.28			
		35-60	18-35	1.30-1.50	0.6-2.0	0.15-0.19	1.0-5.8	0.1-0.5	.28	.28			
P34B:													
Splitrock-------------	82	0-10	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		10-30	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		30-80	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.32	.37			
Primghar--------------	10	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Soils that are deep to till--------------	8	0-9	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		9-50	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		50-60	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.32	.37			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P34C2:													
Splitrock, eroded-----	80	0-8	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		8-26	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		26-60	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.32	.37			
Splitrock, slightly eroded---------------	10	0-9	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		9-34	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		34-60	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.32	.37			
Soils that are deep to till--------------	5	0-9	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		9-50	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		50-60	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.32	.37			
Primghar--------------	5	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
P36A:													
Talcot, occasionally flooded--------------	85	0-22	30-35	1.20-1.30	0.6-2.0	0.18-0.22	4.2-5.8	4.0-8.0	.28	.28	4	4L	86
		22-33	26-35	1.25-1.35	0.6-2.0	0.17-0.20	4.2-5.8	0.5-1.0	.28	.28			
		33-60	1-6	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.1-0.5	.15	.15			
Biscay, occasionally flooded--------------	10	0-16	27-32	1.20-1.30	0.6-2.0	0.20-0.22	3.2-4.2	4.0-8.0	.28	.28	4	7	38
		16-21	25-32	1.25-1.35	0.6-2.0	0.17-0.19	1.0-4.2	4.0-6.0	.28	.28			
		21-31	25-32	1.25-1.35	0.6-2.0	0.17-0.19	1.0-4.2	0.5-1.0	.28	.28			
		31-60	1-6	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.1-0.5	.05	.10			
Cylinder, occasionally flooded--------------	5	0-18	22-27	1.45-1.60	0.6-2.0	0.20-0.22	1.6-3.2	4.0-6.0	.24	.24	4	6	48
		18-28	22-30	1.45-1.60	0.6-2.0	0.17-0.19	1.6-4.2	0.5-1.0	.24	.24			
		28-39	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
		39-60	2-12	1.60-1.70	20-40	0.02-0.04	0.0-0.5	0.0-0.5	.10	.15			
P37B:													
Talmo-----------------	90	0-7	5-15	1.35-1.45	2.0-6.0	0.10-0.12	0.0-0.0	1.0-3.0	.10	.20	3	8	0
		7-10	2-8	1.50-1.65	6.0-20	0.02-0.04	0.0-0.0	0.5-1.0	.10	.17			
		10-60	0-5	1.50-1.65	6.0-20	0.02-0.04	0.0-0.0	0.1-0.5	.10	.17			
Kanaranzi-------------	5	0-7	18-27	1.25-1.40	0.6-2.0	0.22-0.24	1.0-3.2	3.0-6.0	.32	.32	4	6	48
		7-20	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-4.2	1.0-2.0	.43	.43			
		20-80	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P37B:													
Thurman---------------	5	0-13	6-18	1.30-1.40	2.0-6.0	0.13-0.15	0.0-1.0	2.0-4.0	.20	.20	3	3	86
		13-18	6-18	1.35-1.50	2.0-6.0	0.12-0.14	0.0-1.0	0.5-1.0	.20	.20			
		18-60	1-10	1.50-1.60	6.0-20	0.02-0.07	0.0-0.0	0.1-0.5	.15	.15			
P37D:													
Talmo-----------------	90	0-9	5-15	1.35-1.45	2.0-6.0	0.10-0.12	0.0-0.0	1.0-3.0	.10	.20	3	8	0
		9-12	2-8	1.50-1.65	6.0-20	0.02-0.04	0.0-0.0	0.5-1.0	.10	.17			
		12-60	0-5	1.50-1.65	6.0-20	0.02-0.04	0.0-0.0	0.1-0.5	.10	.17			
Kanaranzi-------------	5	0-7	18-27	1.25-1.40	0.6-2.0	0.22-0.24	1.0-3.2	3.0-6.0	.32	.32	4	6	48
		7-20	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-4.2	1.0-2.0	.43	.43			
		20-80	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
Thurman---------------	5	0-10	6-18	1.30-1.40	2.0-6.0	0.13-0.15	0.0-1.0	2.0-4.0	.20	.20	3	3	86
		10-20	6-18	1.35-1.50	2.0-6.0	0.12-0.14	0.0-1.0	0.5-1.0	.20	.20			
		20-60	1-10	1.50-1.60	6.0-20	0.02-0.07	0.0-0.0	0.1-0.5	.15	.15			
P38B:													
Thurman---------------	90	0-13	6-18	1.30-1.40	2.0-6.0	0.13-0.15	0.0-1.0	2.0-4.0	.20	.20	3	3	86
		13-18	6-18	1.35-1.50	2.0-6.0	0.12-0.14	0.0-1.0	0.5-1.0	.20	.20			
		18-60	1-10	1.50-1.60	6.0-20	0.02-0.07	0.0-0.0	0.1-0.5	.15	.15			
Henkin----------------	10	0-5	20-26	1.20-1.30	2.0-6.0	0.20-0.22	1.0-2.9	3.0-6.0	.28	.28	4	6	48
		5-21	18-26	1.20-1.35	2.0-6.0	0.16-0.22	1.0-4.2	0.5-1.0	.32	.32			
		21-48	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
		48-60	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
P38C:													
Thurman---------------	90	0-10	6-18	1.30-1.40	2.0-6.0	0.13-0.15	0.0-1.0	2.0-4.0	.20	.20	3	3	86
		10-20	6-18	1.35-1.50	2.0-6.0	0.12-0.14	0.0-1.0	0.5-1.0	.20	.20			
		20-60	1-10	1.50-1.60	6.0-20	0.02-0.07	0.0-0.0	0.1-0.5	.15	.15			
Henkin----------------	10	0-5	20-26	1.20-1.30	2.0-6.0	0.20-0.22	1.0-2.9	3.0-6.0	.28	.28	4	6	48
		5-21	18-26	1.20-1.35	2.0-6.0	0.16-0.22	1.0-4.2	0.5-1.0	.32	.32			
		21-48	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
		48-60	3-10	1.50-1.70	6.0-20	0.06-0.10	0.0-0.0	0.0-0.5	.17	.17			
P40A:													
Bluemound-------------	85	0-14	18-27	1.20-1.30	0.6-2.0	0.18-0.22	1.0-3.2	4.0-6.0	.28	.28	1	6	48
		14-80	---	---	0-0.01	---	---	---	---	---			
Ihlen-----------------	10	0-12	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	3.0-6.0	.32	.32	2	7	38
		12-38	27-35	1.20-1.30	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.32	.32			
		38-80	---	---	0-0.01	---	---	---	---	---			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P40A:													
Rock outcrop----------	5	---	---	---	---	---	---	---	---	---	-	---	---
P41A:													
Rosedell--------------	95	0-10	32-40	1.30-1.35	0.2-0.6	0.21-0.23	4.8-7.3	4.0-8.0	.28	.28	5	4	86
		10-30	35-40	1.35-1.40	0.2-0.6	0.18-0.20	5.8-7.3	0.5-1.0	.28	.28			
		30-44	40-50	1.35-1.40	0.06-0.6	0.18-0.20	5.8-7.3	0.1-0.5	.28	.28			
		44-80	40-50	1.35-1.40	0.06-0.6	0.18-0.20	5.8-7.3	0.1-0.5	.28	.28			
Spicer----------------	3	0-17	29-35	1.20-1.30	0.6-2.0	0.18-0.24	3.9-5.8	4.0-8.0	.28	.28	5	4L	86
		17-35	18-35	1.25-1.35	0.6-2.0	0.16-0.22	1.0-5.8	0.5-1.0	.37	.37			
		35-60	18-35	1.25-1.35	0.6-2.0	0.16-0.22	1.0-5.8	0.1-0.5	.37	.37			
Albolls---------------	2	0-10	32-40	1.30-1.35	0.2-0.6	0.21-0.23	4.8-7.3	4.0-8.0	.28	.28	5	4	86
		10-16	28-36	1.35-1.40	0.2-0.6	0.18-0.20	5.8-7.3	0.5-1.0	.28	.28			
		16-22	38-42	1.35-1.40	0.2-0.6	0.18-0.20	5.8-7.3	0.5-1.0	.28	.28			
		22-30	35-40	1.35-1.40	0.2-0.6	0.18-0.20	5.8-7.3	0.5-1.0	.28	.28			
		30-44	40-50	1.35-1.40	0.2-0.6	0.18-0.20	5.8-7.3	0.1-0.5	.28	.28			
		44-80	40-50	1.35-1.40	0.2-0.6	0.18-0.20	5.8-7.3	0.1-0.5	.28	.28			
P42A:													
Whitewood-------------	70	0-25	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		25-43	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		43-60	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			
Whitewood, frequently flooded--------------	10	0-25	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		25-43	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		43-60	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			
Whitewood, overwash---	10	0-48	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		48-70	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		70-80	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			
Primghar--------------	9	0-21	27-35	1.20-1.30	0.6-2.0	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		21-42	27-35	1.20-1.35	0.6-2.0	0.17-0.20	3.2-5.8	0.5-1.0	.43	.43			
		42-60	25-35	1.20-1.40	0.6-2.0	0.17-0.20	2.9-5.8	0.1-0.5	.43	.43			
Wakonda---------------	1	0-9	22-26	1.20-1.30	0.6-2.0	0.19-0.22	1.6-2.9	4.0-8.0	.28	.28	5	4L	86
		9-35	22-35	1.20-1.35	0.6-2.0	0.17-0.20	1.6-5.8	0.5-1.0	.43	.43			
		35-62	22-35	1.20-1.40	0.6-2.0	0.17-0.20	1.6-5.8	0.1-0.5	.43	.43			
		62-80	22-35	1.40-1.60	0.6-2.0	0.17-0.20	1.6-5.8	0.1-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P43A:													
Wilmonton	85	0-15	27-35	1.25-1.35	0.6-2.0	0.20-0.26	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		15-20	25-32	1.25-1.35	0.6-2.0	0.18-0.24	2.6-4.8	0.5-1.0	.28	.28			
		20-25	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		25-55	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		55-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Everly	5	0-10	27-30	1.40-1.45	0.6-2.0	0.17-0.19	3.2-4.2	3.0-6.0	.24	.24	5	6	48
		10-18	25-35	1.45-1.55	0.6-2.0	0.15-0.17	2.6-5.8	0.5-1.0	.32	.32			
		18-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Ransom	5	0-16	27-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.32	.32	5	7	38
		16-33	24-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.43	.43			
		33-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Rushmore	5	0-18	28-35	1.20-1.30	0.6-2.0	0.18-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		18-24	28-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.5-1.0	.37	.37			
		24-32	28-35	1.25-1.35	0.6-2.0	0.16-0.19	3.2-5.8	0.1-0.5	.37	.37			
		32-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P44E:													
Shindler	85	0-7	27-36	1.55-1.75	0.06-0.6	0.16-0.18	3.2-6.1	1.0-3.0	.32	.32	5	4L	86
		7-11	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.5-1.0	.37	.37			
		11-35	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.37	.37			
		35-60	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.37	.37			
Judson	10	0-36	20-26	1.20-1.35	0.6-2.0	0.19-0.22	1.0-2.9	4.0-8.0	.28	.28	5	6	48
		36-56	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		56-60	20-32	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.8	0.1-0.5	.43	.43			
Soils that are moderately deep to carbonates	5	0-7	27-36	1.55-1.75	0.06-0.6	0.16-0.18	3.2-6.1	1.0-3.0	.32	.32	5	6	48
		7-20	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.5-1.0	.37	.37			
		20-35	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.37	.37			
		35-60	27-36	1.55-1.75	0.06-0.6	0.14-0.16	3.2-6.1	0.1-0.5	.37	.37			
P45E:													
Moneta	85	0-9	27-32	1.45-1.65	0.2-0.6	0.14-0.18	3.2-4.8	1.0-3.0	.32	.37	5	4L	86
		9-13	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.5-1.0	.32	.37			
		13-53	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		53-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
Judson	10	0-36	20-26	1.20-1.35	0.6-2.0	0.19-0.22	1.0-2.9	4.0-8.0	.28	.28	5	6	48
		36-56	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		56-60	20-32	1.30-1.45	0.6-2.0	0.17-0.20	1.0-4.8	0.1-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P45E:													
Soils that are moderately deep to carbonates-----------	5	0-9	27-32	1.45-1.65	0.2-0.6	0.14-0.18	3.2-4.8	1.0-3.0	.32	.37	5	6	48
		9-20	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.5-1.0	.32	.37			
		20-53	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		53-80	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P47A:													
Whitewood, overwash---	80	0-48	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		48-70	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		70-80	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			
Judson----------------	10	0-22	27-32	1.20-1.35	0.6-2.0	0.19-0.22	3.2-4.8	4.0-8.0	.28	.28	5	7	38
		22-35	20-32	1.20-1.35	0.6-2.0	0.19-0.22	1.0-4.8	1.0-3.0	.28	.28			
		35-60	20-32	1.20-1.45	0.6-2.0	0.17-0.22	1.0-4.8	0.1-0.5	.43	.43			
Whitewood, frequently flooded--------------	10	0-25	27-35	1.20-1.30	0.2-0.6	0.19-0.22	3.2-5.8	4.0-8.0	.28	.28	5	7	38
		25-43	25-35	1.20-1.30	0.2-0.6	0.17-0.20	2.6-5.8	0.5-1.0	.43	.43			
		43-60	25-35	1.20-1.40	0.2-0.6	0.17-0.20	2.6-5.8	0.1-0.5	.43	.43			
P48A:													
Allendorf-------------	85	0-14	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	4	6	48
		14-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-60	0-5	1.55-1.65	20-40	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
Kanaranzi-------------	5	0-7	18-27	1.25-1.40	0.6-2.0	0.22-0.24	1.0-3.2	3.0-6.0	.32	.32	4	6	48
		7-20	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-4.2	1.0-2.0	.43	.43			
		20-80	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
Moderately well drained soils--------	5	0-13	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	4	6	48
		13-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-60	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
Sac-------------------	5	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-28	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		28-33	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		33-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P48B:													
Allendorf-------------	85	0-13	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	4	6	48
		13-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-60	0-5	1.55-1.65	20-40	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Permea-bility	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
		In	Pct	g/cc	In/hr	In/in	Pct	Pct					
P48B:													
Kanaranzi	5	0-7	18-27	1.25-1.40	0.6-2.0	0.22-0.24	1.0-3.2	3.0-6.0	.32	.32	4	6	48
		7-20	18-30	1.30-1.45	0.6-2.0	0.20-0.22	1.0-4.2	1.0-2.0	.43	.43			
		20-80	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
Moderately well drained soils	5	0-13	27-35	1.25-1.30	0.6-2.0	0.19-0.22	3.2-5.8	3.0-6.0	.28	.28	4	6	48
		13-34	24-35	1.20-1.30	0.6-2.0	0.17-0.20	2.3-5.8	0.5-1.0	.32	.32			
		34-60	0-5	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.0-0.5	.10	.17			
Sac	5	0-11	32-35	1.25-1.30	0.6-2.0	0.21-0.23	4.8-5.8	3.0-6.0	.32	.32	5	7	38
		11-28	27-35	1.30-1.35	0.6-2.0	0.18-0.20	3.2-5.8	0.5-1.0	.43	.43			
		28-33	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
		33-60	22-32	1.45-1.65	0.2-0.6	0.14-0.18	1.6-4.8	0.1-0.5	.32	.37			
P55A:													
Kato	90	0-21	27-32	1.20-1.30	0.6-2.0	0.20-0.22	3.2-4.8	4.0-8.0	.28	.28	4	7	38
		21-31	26-32	1.20-1.30	0.6-2.0	0.20-0.22	3.2-4.8	0.5-1.0	.28	.28			
		31-35	6-18	1.35-1.50	6.0-20	0.12-0.14	0.0-1.0	0.1-0.5	.20	.20			
		35-60	1-6	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.1-0.5	.05	.10			
Somewhat poorly drained soils	10	0-21	27-32	1.20-1.30	0.6-2.0	0.20-0.22	3.2-4.8	4.0-8.0	.28	.28	4	7	38
		21-31	26-32	1.20-1.30	0.6-2.0	0.20-0.22	3.2-4.8	0.5-1.0	.28	.28			
		31-35	6-18	1.35-1.50	2.0-6.0	0.12-0.14	0.0-1.0	0.1-0.5	.20	.20			
		35-60	1-6	1.55-1.65	6.0-20	0.02-0.04	0.0-0.0	0.1-0.5	.05	.10			
W:													
Water	100	---	---	---	---	---	---	---	---	---	-	---	---

Table 19.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
GP:					
Pits, gravel	80	---	---	---	---
Udipsamments	20	---	---	---	---
M-W:					
Water, miscellaneous	100	---	---	---	---
P3A:					
Biscay	85	0-16	20-35	6.1-7.3	0
		16-21	12-25	6.6-7.3	0
		21-31	12-25	6.6-7.3	0
		31-60	1.0-5.0	7.4-8.4	5-30
Cylinder	10	0-18	11-25	6.1-7.3	0
		18-28	11-15	6.1-7.3	0
		28-39	1.0-6.0	7.4-8.4	0
		39-60	1.0-6.0	7.4-8.4	1-5
Talcot	5	0-22	21-30	7.4-8.4	5-30
		22-33	15-25	7.4-8.4	5-30
		33-60	1.0-3.0	7.4-8.4	5-30
P4A:					
Calco, frequently flooded	80	0-36	25-41	7.4-8.4	5-30
		36-60	18-41	7.4-8.4	5-30
Calco, occasionally flooded	10	0-36	25-41	7.4-8.4	5-30
		36-44	18-41	7.4-8.4	5-30
		44-60	15-41	7.4-8.4	5-30
Havelock, frequently flooded	5	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30
Spillco, frequently flooded	5	0-15	20-25	6.6-7.3	0
		15-60	12-25	6.6-8.4	0-30
P5A:					
Calco, occasionally flooded	80	0-36	25-41	7.4-8.4	5-30
		36-44	18-41	7.4-8.4	5-30
		44-60	15-41	7.4-8.4	5-30
Calco, frequently flooded	5	0-36	25-41	7.4-8.4	5-30
		36-60	18-41	7.4-8.4	5-30
Colo, occasionally flooded	5	0-34	25-41	5.6-7.3	0
		34-52	18-41	5.6-7.3	0
		52-60	15-41	6.1-7.3	0
Havelock, occasionally flooded	5	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P5A:					
Spillco, occasionally flooded	5	0-10	20-25	6.6-7.3	0
		10-22	20-25	6.6-8.4	0-30
		22-60	12-25	6.6-8.4	0-30
P6A:					
Colo, occasionally flooded	80	0-34	25-41	5.6-7.3	0
		34-52	18-41	5.6-7.3	0
		52-60	15-41	6.1-7.3	0
Calco, frequently flooded	5	0-36	25-41	7.4-8.4	5-30
		36-60	18-41	7.4-8.4	5-30
Calco, occasionally flooded	5	0-36	25-41	7.4-8.4	5-30
		36-44	18-41	7.4-8.4	5-30
		44-60	15-41	7.4-8.4	5-30
Comfrey, occasionally flooded	5	0-26	20-30	6.6-7.3	0
		26-35	12-25	6.6-7.3	0
		35-60	12-25	6.6-8.4	0-5
Spillco, occasionally flooded	5	0-10	20-25	6.6-7.3	0
		10-22	20-25	6.6-8.4	0-30
		22-60	12-25	6.6-8.4	0-30
P7A:					
Comfrey, occasionally flooded	80	0-26	20-30	6.6-7.3	0
		26-35	12-25	6.6-7.3	0
		35-60	12-25	6.6-8.4	0-5
Colo, occasionally flooded	5	0-34	25-41	5.6-7.3	0
		34-52	18-41	5.6-7.3	0
		52-60	15-41	6.1-7.3	0
Havelock, occasionally flooded	5	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30
Havelock, frequently flooded	5	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30
Spillco, occasionally flooded	5	0-10	20-25	6.6-7.3	0
		10-22	20-25	6.6-8.4	0-30
		22-60	12-25	6.6-8.4	0-30
P8A:					
Cylinder, occasionally flooded	80	0-18	11-25	6.1-7.3	0
		18-28	11-15	6.1-7.3	0
		28-39	1.0-6.0	7.4-8.4	0
		39-60	1.0-6.0	7.4-8.4	1-5

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P8A:					
Fairhaven------------	10	0-8	20-30	6.1-7.3	0
		8-13	15-25	6.1-7.3	0
		13-36	12-25	6.1-7.3	0
		36-60	0.0-5.0	6.1-8.4	0-15
Spillco, occasionally flooded------------	10	0-10	20-25	6.6-7.3	0
		10-22	20-25	6.6-8.4	0-30
		22-60	12-25	6.6-8.4	0-30
P11A:					
Dempster-------------	90	0-10	15-25	6.1-7.3	0
		10-29	10-16	6.1-7.3	0
		29-36	10-15	7.4-8.4	3-15
		36-60	1.0-3.0	7.4-8.4	1-15
Graceville-----------	10	0-20	20-33	5.6-7.3	0
		20-53	14-24	5.6-7.3	0
		53-60	2.0-5.0	6.1-7.8	0-5
P11B:					
Dempster-------------	90	0-12	15-25	6.1-7.3	0
		12-27	10-16	6.1-7.3	0
		27-60	1.0-3.0	7.4-8.4	1-15
Graceville-----------	10	0-20	20-33	5.6-7.3	0
		20-53	14-24	5.6-7.3	0
		53-60	2.0-5.0	6.1-7.8	0-5
P12B:					
Everly---------------	80	0-10	20-33	6.1-7.3	0
		10-18	15-20	6.1-7.3	0
		18-80	10-18	7.4-8.4	10-20
Sac------------------	10	0-11	20-41	6.1-7.3	0
		11-28	15-41	6.1-7.3	0
		28-33	10-18	6.1-7.3	0
		33-60	10-18	7.4-8.4	10-20
Ransom---------------	5	0-16	25-35	6.6-7.3	0
		16-33	15-30	6.6-7.3	0
		33-80	10-18	7.4-8.4	10-20
Wilmonton------------	5	0-15	19-30	6.1-7.3	0
		15-20	15-22	6.1-7.3	0
		20-25	10-18	6.1-7.3	0
		25-55	10-18	7.4-8.4	10-20
		55-80	10-18	7.4-8.4	10-20
P12C2:					
Everly, eroded-------	80	0-7	20-33	6.1-7.3	0
		7-16	15-20	6.1-7.3	0
		16-80	10-18	7.4-8.4	10-20
Everly, slightly eroded--------------	10	0-10	20-33	6.1-7.3	0
		10-18	15-20	6.1-7.3	0
		18-80	10-18	7.4-8.4	10-20

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P12C2:					
Moneta---------------	5	0-9	10-25	7.4-8.4	0-10
		9-13	10-18	7.4-8.4	1-10
		13-53	10-18	7.4-8.4	10-20
		53-80	10-18	7.4-8.4	10-20
Wilmonton------------	5	0-15	19-30	6.1-7.3	0
		15-20	15-22	6.1-7.3	0
		20-25	10-18	6.1-7.3	0
		25-55	10-18	7.4-8.4	10-20
		55-80	10-18	7.4-8.4	10-20
P13A:					
Fairhaven------------	85	0-8	20-30	6.1-7.3	0
		8-13	15-25	6.1-7.3	0
		13-36	12-25	6.1-7.3	0
		36-60	0.0-5.0	6.1-8.4	0-15
Cylinder-------------	5	0-18	11-25	6.1-7.3	0
		18-28	11-15	6.1-7.3	0
		28-39	1.0-6.0	7.4-8.4	0
		39-60	1.0-6.0	7.4-8.4	1-5
Dempster-------------	5	0-10	15-25	6.1-7.3	0
		10-29	10-16	6.1-7.3	0
		29-36	10-15	7.4-8.4	3-15
		36-60	1.0-3.0	7.4-8.4	1-15
Flandreau------------	5	0-8	15-26	6.1-7.3	0
		8-30	12-23	6.1-7.3	0
		30-47	5.0-10	6.1-7.3	0
		47-60	3.0-5.0	7.4-8.4	3-15
P13B:					
Fairhaven------------	80	0-7	20-30	6.1-7.3	0
		7-12	15-25	6.1-7.3	0
		12-27	12-25	6.1-7.3	0
		27-60	0.0-5.0	6.1-8.4	0-15
Cylinder-------------	5	0-18	11-25	6.1-7.3	0
		18-28	11-15	6.1-7.3	0
		28-39	1.0-6.0	7.4-8.4	0
		39-60	1.0-6.0	7.4-8.4	1-5
Dempster-------------	5	0-12	15-25	6.1-7.3	0
		12-27	10-16	6.1-7.3	0
		27-60	1.0-3.0	7.4-8.4	1-15
Flandreau------------	5	0-8	15-26	6.1-7.3	0
		8-30	12-23	6.1-7.3	0
		30-36	3.0-5.0	6.1-7.3	0
		36-60	3.0-5.0	7.4-8.4	3-15
Kanaranzi------------	5	0-7	15-30	6.1-7.3	0
		7-20	10-25	6.1-7.3	0
		20-80	0.0-5.0	6.1-8.4	0-15
P14A:					
Flandreau------------	90	0-8	15-26	6.1-7.3	0
		8-30	12-23	6.1-7.3	0
		30-47	5.0-10	6.1-7.3	0
		47-60	3.0-5.0	7.4-8.4	3-15

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P14A:					
Grovena--------------	10	0-8	15-26	6.1-7.3	0
		8-35	12-23	6.1-7.3	0
		35-42	5.0-10	7.4-8.4	5-15
		42-60	5.0-10	7.4-8.4	1-10
P14B:					
Flandreau------------	80	0-8	15-26	6.1-7.3	0
		8-30	12-23	6.1-7.3	0
		30-36	3.0-5.0	6.1-7.3	0
		36-60	3.0-5.0	7.4-8.4	3-15
Grovena--------------	10	0-8	15-26	6.1-7.3	0
		8-35	12-23	6.1-7.3	0
		35-42	5.0-10	7.4-8.4	5-15
		42-60	5.0-10	7.4-8.4	1-10
Thurman--------------	10	0-13	5.0-15	6.1-6.5	0
		13-18	3.0-10	6.1-7.3	0
		18-60	0.0-5.0	6.1-7.8	0-5
P15B:					
Galva----------------	80	0-11	20-32	6.1-7.3	0
		11-31	15-27	6.1-7.3	0
		31-45	10-25	6.1-7.3	0
		45-60	10-20	7.4-8.4	3-15
Primghar-------------	10	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Annieville-----------	5	0-11	20-41	6.1-7.3	0
		11-52	15-41	6.1-7.3	0
		52-57	5.0-10	6.6-7.8	0-5
		57-80	10-18	7.4-8.4	10-20
Sac------------------	5	0-11	20-41	6.1-7.3	0
		11-28	15-41	6.1-7.3	0
		28-33	10-18	6.1-7.3	0
		33-60	10-18	7.4-8.4	10-20
P15C2:					
Galva, eroded--------	80	0-8	20-32	6.1-7.3	0
		8-34	15-27	6.1-7.3	0
		34-60	10-20	7.4-8.4	3-15
Galva, slightly eroded--------------	10	0-11	20-32	6.1-7.3	0
		11-31	15-27	6.1-7.3	0
		31-45	10-25	6.1-7.3	0
		45-60	10-20	7.4-8.4	3-15
Sac, eroded----------	5	0-8	20-41	6.1-7.3	0
		8-26	15-41	6.1-7.3	0
		26-60	10-18	7.4-8.4	10-20
Judson---------------	3	0-36	20-30	6.1-7.3	0
		36-56	15-35	6.1-7.3	0
		56-60	10-30	6.6-7.8	0-10

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P15C2:					
Primghar-------------	2	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
P16A:					
Graceville-----------	90	0-20	20-33	5.6-7.3	0
		20-53	14-24	5.6-7.3	0
		53-60	2.0-5.0	6.1-7.8	0-5
Dempster-------------	10	0-10	15-25	6.1-7.3	0
		10-29	10-16	6.1-7.3	0
		29-36	10-15	7.4-8.4	3-15
		36-60	1.0-3.0	7.4-8.4	1-15
P16B:					
Graceville-----------	90	0-20	20-33	5.6-7.3	0
		20-53	14-24	5.6-7.3	0
		53-60	2.0-5.0	6.1-7.8	0-5
Dempster-------------	10	0-12	15-25	6.1-7.3	0
		12-27	10-16	6.1-7.3	0
		27-60	1.0-3.0	7.4-8.4	1-15
P17A:					
Ihlen----------------	93	0-12	16-27	6.1-7.3	0
		12-38	12-19	6.1-7.3	0
		38-80	---	---	---
Bluemound------------	3	0-14	13-25	6.1-7.3	0
		14-80	---	---	---
Soils that are deep to bedrock----------	3	0-12	16-27	6.1-7.3	0
		12-47	12-19	6.1-7.3	0
		47-80	---	---	---
Rock outcrop---------	1	---	---	---	---
P17B:					
Ihlen----------------	80	0-8	16-27	6.1-7.3	0
		8-23	12-19	6.1-7.3	0
		23-31	9.0-14	6.6-8.4	0-15
		31-80	---	---	---
Bluemound------------	10	0-14	13-25	6.1-7.3	0
		14-80	---	---	---
Soils that are deep to bedrock----------	5	0-12	16-27	6.1-7.3	0
		12-47	12-19	6.1-7.3	0
		47-80	---	---	---
Rock outcrop---------	5	---	---	---	---
P18B:					
Ihlen----------------	55	0-11	16-27	6.1-7.3	0
		11-32	12-19	6.1-7.3	0
		32-80	---	---	---
Rock outcrop---------	25	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P18B:					
Bluemound------------	10	0-14	13-25	6.1-7.3	0
		14-80	---	---	---
Soils that are deep to bedrock----------	10	0-12	16-27	6.1-7.3	0
		12-47	12-19	6.1-7.3	0
		47-80	---	---	---
P18C:					
Ihlen----------------	45	0-14	16-27	6.1-7.3	0
		14-27	12-19	6.1-7.3	0
		27-80	---	---	---
Rock outcrop---------	40	---	---	---	---
Bluemound------------	10	0-14	13-25	6.1-7.3	0
		14-80	---	---	---
Soils that are deep to bedrock----------	3	0-12	16-27	6.1-7.3	0
		12-47	12-19	6.1-7.3	0
		47-80	---	---	---
Spillco, occasionally flooded------------	2	0-10	20-25	6.6-7.3	0
		10-22	20-25	6.6-8.4	0-30
		22-60	12-25	6.6-8.4	0-30
P19A:					
Judson---------------	80	0-22	19-30	6.1-7.3	0
		22-35	14-22	6.1-7.3	0
		35-60	10-22	6.1-7.3	0
Whitewood, overwash--	14	0-48	19-30	6.1-7.3	0
		48-70	15-25	7.4-8.4	1-10
		70-80	15-25	7.4-8.4	1-5
Primghar-------------	6	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
P20B:					
Judson---------------	80	0-36	20-30	6.1-7.3	0
		36-56	15-35	6.1-7.3	0
		56-60	10-30	6.6-7.8	0-10
Primghar-------------	10	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Galva----------------	5	0-11	20-32	6.1-7.3	0
		11-31	15-27	6.1-7.3	0
		31-45	10-25	6.1-7.3	0
		45-60	10-20	7.4-8.4	3-15
Whitewood, overwash--	5	0-48	19-30	6.1-7.3	0
		48-70	15-25	7.4-8.4	1-10
		70-80	15-25	7.4-8.4	1-5

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P21A:					
Marcus	80	0-17	25-45	6.1-7.3	0
		17-44	15-45	6.1-7.3	0
		44-57	10-41	7.9-8.4	10-20
		57-60	10-36	7.9-8.4	10-20
Whitewood, frequently flooded	10	0-25	19-30	6.1-7.3	0
		25-43	15-25	6.6-7.8	0
		43-60	15-25	7.4-8.4	1-10
Primghar	5	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Spicer	5	0-17	25-40	7.4-8.4	5-30
		17-35	10-35	7.4-8.4	5-30
		35-60	10-30	7.4-8.4	5-30
P22A:					
Havelock, frequently flooded	80	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30
Havelock, occasionally flooded	10	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30
Calco, frequently flooded	5	0-36	25-41	7.4-8.4	5-30
		36-60	18-41	7.4-8.4	5-30
Spillco, frequently flooded	5	0-15	20-25	6.6-7.3	0
		15-60	12-25	6.6-8.4	0-30
P23A:					
Havelock, occasionally flooded	80	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30
Havelock, frequently flooded	10	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30
Spillco, occasionally flooded	5	0-10	20-25	6.6-7.3	0
		10-22	20-25	6.6-8.4	0-30
		22-60	12-25	6.6-8.4	0-30
Comfrey, occasionally flooded	3	0-26	20-30	6.6-7.3	0
		26-35	12-25	6.6-7.3	0
		35-60	12-25	6.6-8.4	0-5
Calco, occasionally flooded	2	0-36	25-41	7.4-8.4	5-30
		36-44	18-41	7.4-8.4	5-30
		44-60	15-41	7.4-8.4	5-30

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P24B:					
Moody----------------	85	0-10	20-32	6.1-7.3	0
		10-35	15-27	6.1-7.3	0
		35-48	10-25	7.4-8.4	8-15
		48-60	10-20	7.4-8.4	3-15
Primghar-------------	10	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Nora, eroded---------	3	0-8	15-25	6.1-7.3	0
		8-24	12-25	6.1-7.3	0
		24-33	10-22	7.4-8.4	8-15
		33-60	10-22	7.4-8.4	5-15
Splitrock------------	2	0-9	20-41	6.1-7.3	0
		9-34	15-41	6.1-7.3	0
		34-60	12-20	7.4-8.4	8-16
P24C2:					
Moody, eroded--------	80	0-8	20-32	6.1-7.3	0
		8-34	15-27	6.1-7.3	0
		34-50	10-25	7.4-8.4	8-15
		50-60	10-20	7.4-8.4	3-15
Moody, slightly eroded--------------	5	0-10	20-32	6.1-7.3	0
		10-35	15-27	6.1-7.3	0
		35-48	10-25	7.4-8.4	8-15
		48-60	10-20	7.4-8.4	3-15
Nora, eroded---------	5	0-8	15-25	6.1-7.3	0
		8-24	12-25	6.1-7.3	0
		24-33	10-22	7.4-8.4	8-15
		33-60	10-22	7.4-8.4	5-15
Splitrock, eroded----	5	0-9	20-41	6.1-7.3	0
		9-34	15-41	6.1-7.3	0
		34-60	12-20	7.4-8.4	8-16
Primghar-------------	3	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Crofton, eroded------	2	0-8	12-25	7.4-8.4	1-10
		8-14	10-25	7.4-8.4	8-15
		14-60	10-25	7.4-8.4	5-15
P25C2:					
Nora, eroded---------	85	0-8	15-25	6.1-7.3	0
		8-24	12-25	6.1-7.3	0
		24-33	10-22	7.4-8.4	8-15
		33-60	10-22	7.4-8.4	5-15
Crofton, eroded------	5	0-8	12-25	7.4-8.4	1-10
		8-14	10-25	7.4-8.4	8-15
		14-60	10-25	7.4-8.4	5-15
Judson---------------	5	0-36	20-30	6.1-7.3	0
		36-56	15-35	6.1-7.3	0
		56-60	10-30	6.6-7.8	0-10

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P25C2:					
Moody, eroded	5	0-8	20-32	6.1-7.3	0
		8-34	15-27	6.1-7.3	0
		34-50	10-25	7.4-8.4	8-15
		50-60	10-20	7.4-8.4	3-15
P25D2:					
Nora, eroded	80	0-8	15-25	6.1-7.3	0
		8-32	12-25	6.1-7.3	0
		32-40	10-22	7.4-8.4	8-15
		40-60	10-22	7.4-8.4	5-15
Crofton, eroded	10	0-6	12-25	7.4-8.4	1-10
		6-20	10-25	7.4-8.4	8-15
		20-60	10-25	7.4-8.4	5-15
Judson	5	0-36	20-30	6.1-7.3	0
		36-56	15-35	6.1-7.3	0
		56-60	10-30	6.6-7.8	0-10
Moody, eroded	5	0-8	20-32	6.1-7.3	0
		8-34	15-27	6.1-7.3	0
		34-50	10-25	7.4-8.4	8-15
		50-60	10-20	7.4-8.4	3-15
P26C2:					
Nora, eroded	50	0-8	15-25	6.1-7.3	0
		8-22	12-25	6.1-7.3	0
		22-30	10-22	7.4-8.4	8-15
		30-60	10-22	7.4-8.4	5-15
Crofton, eroded	30	0-8	12-25	7.4-8.4	1-10
		8-14	10-25	7.4-8.4	8-15
		14-60	10-25	7.4-8.4	5-15
Judson	10	0-36	20-30	6.1-7.3	0
		36-56	15-35	6.1-7.3	0
		56-60	10-30	6.6-7.8	0-10
Moody, eroded	10	0-8	20-32	6.1-7.3	0
		8-34	15-27	6.1-7.3	0
		34-50	10-25	7.4-8.4	8-15
		50-60	10-20	7.4-8.4	3-15
P26D2:					
Nora, eroded	45	0-8	15-25	6.1-7.3	0
		8-30	12-25	6.1-7.3	0
		30-38	10-22	7.4-8.4	8-15
		38-60	10-22	7.4-8.4	5-15
Crofton, eroded	35	0-6	12-25	7.4-8.4	1-10
		6-20	10-25	7.4-8.4	8-15
		20-60	10-25	7.4-8.4	5-15
Judson	14	0-36	20-30	6.1-7.3	0
		36-56	15-35	6.1-7.3	0
		56-60	10-30	6.6-7.8	0-10
Moody, eroded	6	0-8	20-32	6.1-7.3	0
		8-34	15-27	6.1-7.3	0
		34-50	10-25	7.4-8.4	8-15
		50-60	10-20	7.4-8.4	3-15

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P27A:					
Primghar-------------	80	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Galva----------------	8	0-11	20-32	6.1-7.3	0
		11-31	15-27	6.1-7.3	0
		31-45	10-25	6.1-7.3	0
		45-60	10-20	7.4-8.4	3-15
Marcus---------------	8	0-17	25-45	6.1-7.3	0
		17-44	15-45	6.1-7.3	0
		44-57	10-41	7.9-8.4	10-20
		57-60	10-36	7.9-8.4	10-20
Judson---------------	4	0-22	19-30	6.1-7.3	0
		22-35	14-22	6.1-7.3	0
		35-60	10-22	6.1-7.3	0
P28A:					
Ransom---------------	80	0-16	25-35	6.6-7.3	0
		16-33	15-30	6.6-7.3	0
		33-80	10-18	7.4-8.4	10-20
Rushmore-------------	8	0-18	25-35	6.6-7.3	0
		18-24	15-35	6.6-7.3	0
		24-32	15-30	7.3-7.8	0
		32-80	10-18	7.4-8.4	10-20
Sac------------------	8	0-11	20-41	6.1-7.3	0
		11-28	15-41	6.1-7.3	0
		28-33	10-18	6.1-7.3	0
		33-60	10-18	7.4-8.4	10-20
Primghar-------------	4	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
P29A:					
Rushmore-------------	80	0-18	25-35	6.6-7.3	0
		18-24	15-35	6.6-7.3	0
		24-32	15-30	7.4-7.8	1-10
		32-80	10-18	7.4-8.4	10-20
Ransom---------------	10	0-16	25-35	6.6-7.3	0
		16-33	15-30	6.6-7.3	0
		33-80	10-18	7.4-8.4	10-20
Whitewood, frequently flooded-------------	10	0-25	19-30	6.1-7.3	0
		25-43	15-25	6.6-7.8	0
		43-60	15-25	7.4-8.4	1-10
P30B:					
Sac------------------	80	0-11	20-41	6.1-7.3	0
		11-28	15-41	6.1-7.3	0
		28-33	10-18	6.1-7.3	0
		33-60	10-18	7.4-8.4	10-20

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P30B:					
Annieville-----------	10	0-11	20-41	6.1-7.3	0
		11-52	15-41	6.1-7.3	0
		52-57	5.0-10	6.6-7.8	0-5
		57-80	10-18	7.4-8.4	10-20
Primghar-------------	5	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Ransom---------------	5	0-16	25-35	6.6-7.3	0
		16-33	15-30	6.6-7.3	0
		33-80	10-18	7.4-8.4	10-20
P30C2:					
Sac, eroded----------	80	0-8	20-41	6.1-7.3	0
		8-26	15-41	6.1-7.3	0
		26-60	10-18	7.4-8.4	10-20
Annieville-----------	10	0-11	20-41	6.1-7.3	0
		11-52	15-41	6.1-7.3	0
		52-57	5.0-10	6.6-7.8	0-5
		57-80	10-18	7.4-8.4	10-20
Sac, slightly eroded	5	0-11	20-41	6.1-7.3	0
		11-28	15-41	6.1-7.3	0
		28-33	10-18	6.1-7.3	0
		33-60	10-18	7.4-8.4	10-20
Primghar-------------	3	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Ransom---------------	2	0-16	25-35	6.6-7.3	0
		16-33	15-30	6.6-7.3	0
		33-80	10-18	7.4-8.4	10-20
P31A:					
Spicer---------------	85	0-17	25-40	7.4-8.4	5-30
		17-35	10-35	7.4-8.4	5-30
		35-60	10-30	7.4-8.4	5-30
Marcus---------------	10	0-17	25-45	6.1-7.3	0
		17-44	15-45	6.1-7.3	0
		44-57	10-41	7.9-8.4	10-20
		57-60	10-36	7.9-8.4	10-20
Whitewood------------	5	0-25	19-30	6.1-7.3	0
		25-43	15-25	6.6-7.8	0
		43-60	15-25	7.4-8.4	1-10
P32A:					
Spillco, frequently flooded-------------	85	0-15	20-25	6.6-7.3	0
		15-60	12-25	6.6-8.4	0-30
Spillco, occasionally flooded-------------	10	0-10	20-25	6.6-7.3	0
		10-22	20-25	6.6-8.4	0-30
		22-60	12-25	6.6-8.4	0-30

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P32A:					
Havelock, frequently flooded	5	0-32	24-33	7.4-8.4	5-30
		32-60	12-27	7.4-8.4	5-30
P33A:					
Spillco, occasionally flooded	85	0-10	20-25	6.6-7.3	0
		10-22	20-25	6.6-8.4	0-30
		22-60	12-25	6.6-8.4	0-30
Spillco, frequently flooded	10	0-15	20-25	6.6-7.3	0
		15-60	12-25	6.6-8.4	0-30
Comfrey, occasionally flooded	5	0-26	20-30	6.6-7.3	0
		26-35	12-25	6.6-7.3	0
		35-60	12-25	6.6-8.4	0-5
P34B:					
Splitrock	82	0-10	20-41	6.1-7.3	0
		10-30	15-41	6.1-7.3	0
		30-80	12-20	7.4-8.4	8-16
Primghar	10	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Soils that are deep to till	8	0-9	20-41	6.1-7.3	0
		9-50	15-41	6.1-7.3	0
		50-60	12-20	7.4-8.4	8-16
P34C2:					
Splitrock, eroded	80	0-8	20-41	6.1-7.3	0
		8-26	15-41	6.1-7.3	0
		26-60	12-20	7.4-8.4	8-16
Splitrock, slightly eroded	10	0-9	20-41	6.1-7.3	0
		9-34	15-41	6.1-7.3	0
		34-60	12-20	7.4-8.4	8-16
Soils that are deep to till	5	0-9	20-41	6.1-7.3	0
		9-50	15-41	6.1-7.3	0
		50-60	12-20	7.4-8.4	8-16
Primghar	5	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
P36A:					
Talcot, occasionally flooded	85	0-22	21-30	7.4-8.4	5-30
		22-33	15-25	7.4-8.4	5-30
		33-60	1.0-3.0	7.4-8.4	5-30

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P36A:					
Biscay, occasionally flooded	10	0-16	20-35	6.1-7.3	0
		16-21	12-25	6.6-7.3	0
		21-31	12-25	6.6-7.3	0
		31-60	1.0-5.0	7.4-8.4	5-30
Cylinder, occasionally flooded	5	0-18	11-25	6.1-7.3	0
		18-28	11-15	6.1-7.3	0
		28-39	1.0-6.0	7.4-8.4	0
		39-60	1.0-6.0	7.4-8.4	1-5
P37B:					
Talmo	90	0-7	2.0-10	6.1-8.4	0-1
		7-10	1.0-5.0	7.4-8.4	1-5
		10-60	0.0-3.0	7.4-8.4	1-10
Kanaranzi	5	0-7	15-30	6.1-7.3	0
		7-20	10-25	6.1-7.3	0
		20-80	0.0-5.0	6.1-8.4	0-15
Thurman	5	0-13	5.0-15	6.1-6.5	0
		13-18	3.0-10	6.1-7.3	0
		18-60	0.0-5.0	6.1-7.8	0-5
P37D:					
Talmo	90	0-9	2.0-10	6.1-8.4	0-1
		9-12	1.0-5.0	7.4-8.4	1-5
		12-60	0.0-3.0	7.4-8.4	1-10
Kanaranzi	5	0-7	15-30	6.1-7.3	0
		7-20	10-25	6.1-7.3	0
		20-80	0.0-5.0	6.1-8.4	0-15
Thurman	5	0-10	5.0-15	6.1-6.5	0
		10-20	3.0-10	6.1-7.3	0
		20-60	0.0-5.0	6.1-7.8	0-5
P38B:					
Thurman	90	0-13	5.0-15	6.1-6.5	0
		13-18	3.0-10	6.1-7.3	0
		18-60	0.0-5.0	6.1-7.8	0-5
Henkin	10	0-5	15-26	6.1-7.3	0
		5-21	12-23	6.1-7.3	0
		21-48	3.0-5.0	7.4-8.4	5-15
		48-60	3.0-5.0	7.4-8.4	3-15
P38C:					
Thurman	90	0-10	5.0-15	6.1-6.5	0
		10-20	3.0-10	6.1-7.3	0
		20-60	0.0-5.0	6.1-7.8	0-5
Henkin	10	0-5	15-26	6.1-7.3	0
		5-21	12-23	6.1-7.3	0
		21-48	3.0-5.0	7.4-8.4	5-15
		48-60	3.0-5.0	7.4-8.4	3-15

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P40A:					
Bluemound------------	85	0-14	13-25	6.1-7.3	0
		14-80	---	---	---
Ihlen----------------	10	0-12	16-27	6.1-7.3	0
		12-38	12-19	6.1-7.3	0
		38-80	---	---	---
Rock outcrop---------	5	---	---	---	---
P41A:					
Rosedell-------------	95	0-10	22-35	6.1-7.3	0
		10-30	18-28	6.1-7.3	0
		30-44	20-28	7.4-8.4	5-15
		44-80	20-28	7.4-8.4	1-10
Spicer---------------	3	0-17	25-40	7.4-8.4	5-30
		17-35	10-35	7.4-8.4	5-30
		35-60	10-30	7.4-8.4	5-30
Albolls--------------	2	0-10	22-35	6.1-7.3	0
		10-16	15-28	6.1-7.3	0
		16-22	20-28	6.1-7.3	0
		22-30	18-28	6.1-7.3	0
		30-44	20-28	7.4-8.4	5-15
		44-80	20-28	7.4-8.4	1-10
P42A:					
Whitewood------------	70	0-25	19-30	6.1-7.3	0
		25-43	15-25	6.6-7.8	0
		43-60	15-25	7.4-8.4	1-10
Whitewood, frequently flooded------------	10	0-25	19-30	6.1-7.3	0
		25-43	15-25	6.6-7.8	0
		43-60	15-25	7.4-8.4	1-10
Whitewood, overwash--	10	0-48	19-30	6.6-7.8	0
		48-70	15-25	7.4-8.4	1-10
		70-80	15-25	7.4-8.4	1-5
Primghar-------------	9	0-21	25-35	6.1-7.3	0
		21-42	15-30	6.1-7.3	0
		42-60	10-20	7.4-8.4	1-10
Wakonda--------------	1	0-9	20-35	7.4-8.4	5-15
		9-35	15-30	7.4-8.4	10-20
		35-62	12-30	7.4-8.4	5-15
		62-80	12-27	7.4-8.4	5-15
P43A:					
Wilmonton------------	85	0-15	19-30	6.1-7.3	0
		15-20	15-22	6.1-7.3	0
		20-25	10-18	6.1-7.3	0
		25-55	10-18	7.4-8.4	10-20
		55-80	10-18	7.4-8.4	10-20
Everly---------------	5	0-10	20-33	6.1-7.3	0
		10-18	15-20	6.1-7.3	0
		18-80	10-18	7.4-8.4	10-20

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P43A:					
Ransom---------------	5	0-16	25-35	6.6-7.3	0
		16-33	15-30	6.6-7.3	0
		33-80	10-18	7.4-8.4	10-20
Rushmore-------------	5	0-18	25-35	6.6-7.3	0
		18-24	15-35	6.6-7.3	0
		24-32	15-30	7.4-7.8	1-10
		32-80	10-18	7.4-8.4	10-20
P44E:					
Shindler-------------	85	0-7	15-25	7.4-8.4	0-10
		7-11	15-25	7.4-8.4	1-10
		11-35	15-25	7.4-8.4	8-16
		35-60	15-25	7.4-8.4	8-16
Judson---------------	10	0-36	20-30	6.1-7.3	0
		36-56	15-35	6.1-7.3	0
		56-60	10-30	6.6-7.8	0-10
Soils that are moderately deep to carbonates----------	5	0-7	15-25	6.7-7.3	0
		7-20	15-25	7.4-8.4	1-10
		20-35	15-25	7.4-8.4	8-16
		35-60	15-25	7.4-8.4	8-16
P45E:					
Moneta---------------	85	0-9	10-25	7.4-8.4	0-10
		9-13	10-18	7.4-8.4	1-10
		13-53	10-18	7.4-8.4	10-20
		53-80	10-18	7.4-8.4	10-20
Judson---------------	10	0-36	20-30	6.1-7.3	0
		36-56	15-35	6.1-7.3	0
		56-60	10-30	6.6-7.8	0-10
Soils that are moderately deep to carbonates----------	5	0-9	10-20	6.7-7.3	0
		9-20	10-18	7.4-8.4	1-10
		20-53	10-18	7.4-8.4	10-20
		53-80	10-18	7.4-8.4	10-20
P47A:					
Whitewood, overwash--	80	0-48	19-30	6.6-7.8	0
		48-70	15-25	7.4-8.4	1-10
		70-80	15-25	7.4-8.4	1-5
Judson---------------	10	0-22	19-30	6.1-7.3	0
		22-35	14-22	6.1-7.3	0
		35-60	10-22	6.1-7.3	0
Whitewood, frequently flooded-------------	10	0-25	19-30	6.1-7.3	0
		25-43	15-25	6.6-7.8	0
		43-60	15-25	7.4-8.4	1-10
P48A:					
Allendorf------------	85	0-14	20-32	6.1-7.3	0
		14-34	15-27	6.1-7.3	0
		34-60	0.0-5.0	6.1-8.4	0-15

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation-exchange capacity	Soil reaction	Calcium carbon-ate
		In	meq/100 g	pH	Pct
P48A:					
Kanaranzi	5	0-7	15-30	6.1-7.3	0
		7-20	10-25	6.1-7.3	0
		20-80	0.0-5.0	6.1-8.4	0-15
Moderately well drained soils	5	0-13	20-32	6.1-7.3	0
		13-34	15-27	6.1-7.3	0
		34-60	0.0-5.0	6.1-8.4	0-15
Sac	5	0-11	20-41	6.1-7.3	0
		11-28	15-41	6.1-7.3	0
		28-33	10-18	6.1-7.3	0
		33-60	10-18	7.4-8.4	10-20
P48B:					
Allendorf	85	0-13	20-32	6.1-7.3	0
		13-34	15-27	6.1-7.3	0
		34-60	0.0-5.0	6.1-8.4	0-15
Kanaranzi	5	0-7	15-30	6.1-7.3	0
		7-20	10-25	6.1-7.3	0
		20-80	0.0-5.0	6.1-8.4	0-15
Moderately well drained soils	5	0-13	20-32	6.1-7.3	0
		13-34	15-27	6.1-7.3	0
		34-60	0.0-5.0	6.1-8.4	0-15
Sac	5	0-11	20-41	6.1-7.3	0
		11-28	15-41	6.1-7.3	0
		28-33	10-18	6.1-7.3	0
		33-60	10-18	7.4-8.4	10-20
P55A:					
Kato	90	0-21	20-35	6.1-7.3	0
		21-31	15-35	6.1-7.3	0
		31-35	3.0-10	6.1-7.3	0
		35-60	1.0-5.0	7.4-8.4	5-30
Somewhat poorly drained soils	10	0-21	20-35	6.1-7.3	0
		21-31	15-35	6.1-7.3	0
		31-35	3.0-10	6.1-7.3	0
		35-60	1.0-5.0	7.4-8.4	5-30
W:					
Water	100	---	---	---	---

Table 20.--Soil Moisture, Ponding, and Flooding

(Depths are in feet. The values given for top depth, bottom depth, and ponding depth are representative values. See text for further explanation of terms used in this table)

GP Pits, gravel-Udipsamments complex

Pits, gravel (80 percent of the map unit) (not applicable)

Udipsamments (20 percent of the map unit) (not applicable)

M-W Water, miscellaneous

Water, miscellaneous (100 percent of the map unit) (not applicable)

P3A Biscay silty clay loam, 0 to 2 percent slopes, occasionally flooded

Biscay (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
February	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	1.6	occasional	very brief	none	---	---
	wet	1.6	6.7					
August	moist	0.0	2.0	occasional	very brief	none	---	---
	wet	2.0	6.7					
September	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
October	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P3A (continued)

Cylinder (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
February	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
March	moist	0.0	1.6	occasional	brief	none	---	---
	wet	1.6	6.7					
April	moist	0.0	1.3	occasional	brief	none	---	---
	wet	1.3	6.7					
May	moist	0.0	1.6	occasional	brief	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	occasional	brief	none	---	---
	wet	2.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.0	occasional	very brief	none	---	---
	wet	3.0	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
November	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
December	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					

Talcot (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
February	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	1.6	occasional	very brief	none	---	---
	wet	1.6	6.7					
August	moist	0.0	2.0	occasional	very brief	none	---	---
	wet	2.0	6.7					
September	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
October	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P4A Calco silty clay loam, 0 to 2 percent slopes, frequently flooded

Calco, frequently flooded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Calco, occasionally flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.6					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.6					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.6					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.6					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.6					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.6					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.6					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.6					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.6					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.6					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P4A (continued)

Havelock, frequently flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Spillco, frequently flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	frequent	long	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	frequent	long	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	frequent	long	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	frequent	long	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P5A Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded

Calco, occasionally flooded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Calco, frequently flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P5A (continued)

Colo, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Havelock, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P5A (continued)

Spillco, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	occasional	brief	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	very brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	very brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

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P6A Colo silty clay loam, 0 to 2 percent slopes, occasionally flooded

Colo, occasionally flooded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P6A (continued)

Calco, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Calco, frequently flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P6A (continued)

Comfrey, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Spillco, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	occasional	brief	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	very brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	very brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P7A Comfrey clay loam, 0 to 2 percent slopes, occasionally flooded

Comfrey, occasionally flooded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Colo, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P7A (continued)

Havelock, frequently flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Havelock, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P7A (continued)

Spillco, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	occasional	brief	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	very brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	very brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

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P8A Cylinder loam, 0 to 2 percent slopes, occasionally flooded

Cylinder, occasionally flooded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
February	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
March	moist	0.0	1.6	occasional	brief	none	---	---
	wet	1.6	6.7					
April	moist	0.0	1.3	occasional	brief	none	---	---
	wet	1.3	6.7					
May	moist	0.0	1.6	occasional	brief	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	occasional	brief	none	---	---
	wet	2.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.0	occasional	very brief	none	---	---
	wet	3.0	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
November	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
December	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P8A (continued)

Fairhaven (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Spillco, occasionally flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	occasional	brief	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	very brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	very brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P11A Dempster silt loam, 0 to 2 percent slopes

Dempster (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Graceville (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P11B Dempster silt loam, 2 to 6 percent slopes

Dempster (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Graceville (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P12B Everly silty clay loam, 2 to 6 percent slopes

Everly (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	4.0	none	---	none	---	---
	wet	4.0	6.7					
May	moist	0.0	4.4	none	---	none	---	---
	wet	4.4	6.7					
June	moist	0.0	4.8	none	---	none	---	---
	wet	4.8	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Sac (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P12B (continued)

Ransom (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Wilmonton (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P12C2 Everly silty clay loam, 6 to 12 percent slopes, eroded

Everly, eroded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	4.0	none	---	none	---	---
	wet	4.0	6.7					
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Everly, slightly eroded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	4.0	none	---	none	---	---
	wet	4.0	6.7					
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P12C2 (continued)

Moneta (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Wilmonton (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P13A Fairhaven silt loam, 0 to 2 percent slopes

Fairhaven (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Cylinder (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
February	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
March	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
April	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
November	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
December	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P13A (continued)

Dempster (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Flandreau (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P13B Fairhaven silt loam, 2 to 6 percent slopes

Fairhaven (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P13B (continued)

Cylinder (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
February	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
March	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
April	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
November	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
December	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					

Dempster (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P13B (continued)

Flandreau (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Kanaranzi (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P14A Flandreau silt loam, 0 to 2 percent slopes

Flandreau (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P14A (continued)

Grovena (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P14B Flandreau silt loam, 2 to 6 percent slopes

Flandreau (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Grovena (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P14B (continued)

Thurman (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P15B Galva silty clay loam, 2 to 5 percent slopes

Galva (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P15B (continued)

Primghar (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Annieville (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	4.0	none	---	none	---	---
	wet	4.0	6.7					
May	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
June	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P15B (continued)

Sac (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P15C2 Galva silty clay loam, 5 to 9 percent slopes, eroded

Galva, eroded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P15C2 (continued)

Galva, slightly eroded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Sac, eroded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Judson (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P15C2 (continued)

Primghar (2 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

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P16A Graceville silty clay loam, 0 to 2 percent slopes

Graceville (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P16A (continued)

Dempster (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P16B Graceville silty clay loam, 2 to 6 percent slopes

Graceville (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Dempster (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P17A Ihlen silty clay loam, 0 to 2 percent slopes

Ihlen (93 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.2	none	---	none	---	---
February	moist	0.0	3.2	none	---	none	---	---
March	moist	0.0	3.2	none	---	none	---	---
April	moist	0.0	3.2	none	---	none	---	---
May	moist	0.0	3.2	none	---	none	---	---
June	moist	0.0	3.2	none	---	none	---	---
July	moist	0.0	3.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	3.2					
September	moist	0.0	3.2	none	---	none	---	---
October	moist	0.0	3.2	none	---	none	---	---
November	moist	0.0	3.2	none	---	none	---	---
December	moist	0.0	3.2	none	---	none	---	---

Bluemound (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.2	none	---	none	---	---
February	moist	0.0	1.2	none	---	none	---	---
March	moist	0.0	1.2	none	---	none	---	---
April	moist	0.0	1.2	none	---	none	---	---
May	moist	0.0	1.2	none	---	none	---	---
June	moist	0.0	1.2	none	---	none	---	---
July	moist	0.0	1.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	1.2					
September	moist	0.0	1.2	none	---	none	---	---
October	moist	0.0	1.2	none	---	none	---	---
November	moist	0.0	1.2	none	---	none	---	---
December	moist	0.0	1.2	none	---	none	---	---

Soils that are deep to bedrock (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.2	none	---	none	---	---
February	moist	0.0	3.2	none	---	none	---	---
March	moist	0.0	3.2	none	---	none	---	---
April	moist	0.0	3.2	none	---	none	---	---
May	moist	0.0	3.2	none	---	none	---	---
June	moist	0.0	3.2	none	---	none	---	---
July	moist	0.0	3.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	3.2					
September	moist	0.0	3.2	none	---	none	---	---
October	moist	0.0	3.2	none	---	none	---	---
November	moist	0.0	3.2	none	---	none	---	---
December	moist	0.0	3.2	none	---	none	---	---

Rock outcrop (1 percent of the map unit) (not applicable)

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P17B Ihlen silty clay loam, 2 to 6 percent slopes

Ihlen (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
February	moist	0.0	2.6	none	---	none	---	---
March	moist	0.0	2.6	none	---	none	---	---
April	moist	0.0	2.6	none	---	none	---	---
May	moist	0.0	2.6	none	---	none	---	---
June	moist	0.0	2.6	none	---	none	---	---
July	moist	0.0	2.6	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	2.6					
September	moist	0.0	2.6	none	---	none	---	---
October	moist	0.0	2.6	none	---	none	---	---
November	moist	0.0	2.6	none	---	none	---	---
December	moist	0.0	2.6	none	---	none	---	---

Bluemound (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.2	none	---	none	---	---
February	moist	0.0	1.2	none	---	none	---	---
March	moist	0.0	1.2	none	---	none	---	---
April	moist	0.0	1.2	none	---	none	---	---
May	moist	0.0	1.2	none	---	none	---	---
June	moist	0.0	1.2	none	---	none	---	---
July	moist	0.0	1.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	1.2					
September	moist	0.0	1.2	none	---	none	---	---
October	moist	0.0	1.2	none	---	none	---	---
November	moist	0.0	1.2	none	---	none	---	---
December	moist	0.0	1.2	none	---	none	---	---

Soils that are deep to bedrock (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.2	none	---	none	---	---
February	moist	0.0	3.2	none	---	none	---	---
March	moist	0.0	3.2	none	---	none	---	---
April	moist	0.0	3.2	none	---	none	---	---
May	moist	0.0	3.2	none	---	none	---	---
June	moist	0.0	3.2	none	---	none	---	---
July	moist	0.0	3.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	3.2					
September	moist	0.0	3.2	none	---	none	---	---
October	moist	0.0	3.2	none	---	none	---	---
November	moist	0.0	3.2	none	---	none	---	---
December	moist	0.0	3.2	none	---	none	---	---

Rock outcrop (5 percent of the map unit) (not applicable)

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P18B Ihlen-Rock outcrop complex, 0 to 4 percent slopes

Ihlen (55 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.7	none	---	none	---	---
February	moist	0.0	2.7	none	---	none	---	---
March	moist	0.0	2.7	none	---	none	---	---
April	moist	0.0	2.7	none	---	none	---	---
May	moist	0.0	2.7	none	---	none	---	---
June	moist	0.0	2.7	none	---	none	---	---
July	moist	0.0	2.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	2.7					
September	moist	0.0	2.7	none	---	none	---	---
October	moist	0.0	2.7	none	---	none	---	---
November	moist	0.0	2.7	none	---	none	---	---
December	moist	0.0	2.7	none	---	none	---	---

Rock outcrop (25 percent of the map unit) (not applicable)

Bluemound (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.2	none	---	none	---	---
February	moist	0.0	1.2	none	---	none	---	---
March	moist	0.0	1.2	none	---	none	---	---
April	moist	0.0	1.2	none	---	none	---	---
May	moist	0.0	1.2	none	---	none	---	---
June	moist	0.0	1.2	none	---	none	---	---
July	moist	0.0	1.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	1.2					
September	moist	0.0	1.2	none	---	none	---	---
October	moist	0.0	1.2	none	---	none	---	---
November	moist	0.0	1.2	none	---	none	---	---
December	moist	0.0	1.2	none	---	none	---	---

Soils that are deep to bedrock (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.2	none	---	none	---	---
February	moist	0.0	3.2	none	---	none	---	---
March	moist	0.0	3.2	none	---	none	---	---
April	moist	0.0	3.2	none	---	none	---	---
May	moist	0.0	3.2	none	---	none	---	---
June	moist	0.0	3.2	none	---	none	---	---
July	moist	0.0	3.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	3.2					
September	moist	0.0	3.2	none	---	none	---	---
October	moist	0.0	3.2	none	---	none	---	---
November	moist	0.0	3.2	none	---	none	---	---
December	moist	0.0	3.2	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P18C Ihlen-Rock outcrop complex, 4 to 35 percent slopes

Ihlen (45 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.3	none	---	none	---	---
February	moist	0.0	2.3	none	---	none	---	---
March	moist	0.0	2.3	none	---	none	---	---
April	moist	0.0	2.3	none	---	none	---	---
May	moist	0.0	2.3	none	---	none	---	---
June	moist	0.0	2.3	none	---	none	---	---
July	moist	0.0	2.3	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	2.3					
September	moist	0.0	2.3	none	---	none	---	---
October	moist	0.0	2.3	none	---	none	---	---
November	moist	0.0	2.3	none	---	none	---	---
December	moist	0.0	2.3	none	---	none	---	---

Rock outcrop (40 percent of the map unit) (not applicable)

Bluemound (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.2	none	---	none	---	---
February	moist	0.0	1.2	none	---	none	---	---
March	moist	0.0	1.2	none	---	none	---	---
April	moist	0.0	1.2	none	---	none	---	---
May	moist	0.0	1.2	none	---	none	---	---
June	moist	0.0	1.2	none	---	none	---	---
July	moist	0.0	1.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	1.2					
September	moist	0.0	1.2	none	---	none	---	---
October	moist	0.0	1.2	none	---	none	---	---
November	moist	0.0	1.2	none	---	none	---	---
December	moist	0.0	1.2	none	---	none	---	---

Soils that are deep to bedrock (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.2	none	---	none	---	---
February	moist	0.0	3.2	none	---	none	---	---
March	moist	0.0	3.2	none	---	none	---	---
April	moist	0.0	3.2	none	---	none	---	---
May	moist	0.0	3.2	none	---	none	---	---
June	moist	0.0	3.2	none	---	none	---	---
July	moist	0.0	3.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	3.2					
September	moist	0.0	3.2	none	---	none	---	---
October	moist	0.0	3.2	none	---	none	---	---
November	moist	0.0	3.2	none	---	none	---	---
December	moist	0.0	3.2	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P18C (continued)

Spillco, occasionally flooded (2 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	occasional	brief	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	very brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	very brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

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P19A Judson silty clay loam, 1 to 3 percent slopes

Judson (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
April	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
May	moist	0.0	4.1	none	---	none	---	---
	wet	4.1	6.7					
June	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
November	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
December	moist	0.0	5.2	none	---	none	---	---
	wet	5.2	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P19A (continued)

Whitewood, overwash (14 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Primghar (6 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P20B Judson silt loam, 3 to 8 percent slopes

Judson (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Primghar (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P20B (continued)

Galva (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Whitewood, overwash (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P21A Marcus silty clay loam, 0 to 2 percent slopes

Marcus (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Whitewood, frequently flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	very brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	very brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	very brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P21A (continued)

Primghar (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Spicer (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P22A Havelock clay loam, 0 to 2 percent slopes, frequently flooded

Havelock, frequently flooded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Havelock, occasionally flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P22A (continued)

Calco, frequently flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Spillco, frequently flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	frequent	long	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	frequent	long	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	frequent	long	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	frequent	long	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P23A Havelock clay loam, 0 to 2 percent slopes, occasionally flooded

Havelock, occasionally flooded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Havelock, frequently flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P23A (continued)

Spillco, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	occasional	brief	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	very brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	very brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Comfrey, occasionally flooded (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P23A (continued)

Calco, occasionally flooded (2 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

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P24B Moody silty clay loam, 2 to 5 percent slopes

Moody (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P24B (continued)

Primghar (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Nora, eroded (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P24B (continued)

Splitrock (2 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P24C2 Moody silty clay loam, 5 to 9 percent slopes, eroded

Moody, eroded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Moody, slightly eroded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P24C2 (continued)

Nora, eroded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Splitrock, eroded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P24C2 (continued)

Primghar (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Crofton, eroded (2 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P25C2 Nora silt loam, 4 to 10 percent slopes, eroded

Nora, eroded (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Crofton, eroded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Judson (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P25C2 (continued)

Moody, eroded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P25D2 Nora silt loam, 10 to 18 percent slopes, eroded

Nora, eroded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Crofton, eroded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P25D2 (continued)

Judson (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Moody, eroded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P26C2 Nora-Crofton complex, 6 to 12 percent slopes, eroded

Nora, eroded (50 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P26C2 (continued)

Crofton, eroded (30 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Judson (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Moody, eroded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P26D2 Nora-Crofton complex, 12 to 18 percent slopes, eroded

Nora, eroded (45 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Crofton, eroded (35 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Judson (14 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P26D2 (continued)

Moody, eroded (6 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P27A Primghar silty clay loam, 1 to 3 percent slopes

Primghar (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P27A (continued)

Galva (8 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.6	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Marcus (8 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P27A (continued)

Judson (4 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
April	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
May	moist	0.0	4.1	none	---	none	---	---
	wet	4.1	6.7					
June	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
November	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
December	moist	0.0	5.2	none	---	none	---	---
	wet	5.2	6.7					

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P28A Ransom silty clay loam, 1 to 3 percent slopes

Ransom (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P28A (continued)

Rushmore (8 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Sac (8 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P28A (continued)

Primghar (4 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

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P29A Rushmore silty clay loam, 0 to 2 percent slopes

Rushmore (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P29A (continued)

Ransom (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Whitewood, frequently flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	very brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	very brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	very brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P30B Sac silty clay loam, 2 to 5 percent slopes

Sac (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Annieville (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	4.0	none	---	none	---	---
	wet	4.0	6.7					
May	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
June	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P30B (continued)

Primghar (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Ransom (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P30C2 Sac silty clay loam, 5 to 10 percent slopes, eroded

Sac, eroded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Annieville (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	4.0	none	---	none	---	---
	wet	4.0	6.7					
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P30C2 (continued)

Sac, slightly eroded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Primghar (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P30C2 (continued)

Ransom (2 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

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P31A Spicer silty clay loam, 0 to 2 percent slopes

Spicer (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P31A (continued)

Marcus (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Whitewood (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P32A Spillco silt loam, 0 to 2 percent slopes, frequently flooded

Spillco, frequently flooded (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	frequent	long	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	frequent	long	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	frequent	long	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	frequent	long	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Spillco, occasionally flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	occasional	brief	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	very brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	very brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P32A (continued)

Havelock, frequently flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	long	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	long	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	long	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

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P33A Spillco silt loam, 0 to 2 percent slopes, occasionally flooded

Spillco, occasionally flooded (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	occasional	brief	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	occasional	brief	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	occasional	brief	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	very brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	very brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P33A (continued)

Spillco, frequently flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	frequent	long	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	frequent	long	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	frequent	long	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	frequent	long	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	occasional	brief	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	occasional	brief	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Comfrey, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	occasional	very brief	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P34B Splitrock silty clay loam, 2 to 5 percent slopes

Splitrock (82 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Primghar (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P34B (continued)

Soils that are deep to till (8 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P34C2 Splitrock silty clay loam, 5 to 9 percent slopes, eroded

Splitrock, eroded (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P34C2 (continued)

Splitrock, slightly eroded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Soils that are deep to till (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P34C2 (continued)

Primghar (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

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P36A Talcot silty clay loam, 0 to 2 percent slopes, occasionally flooded

Talcot, occasionally flooded (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
February	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	1.6	occasional	very brief	none	---	---
	wet	1.6	6.7					
August	moist	0.0	2.0	occasional	very brief	none	---	---
	wet	2.0	6.7					
September	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
October	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P36A (continued)

Biscay, occasionally flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
February	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
March	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	occasional	brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	occasional	brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	occasional	brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	1.6	occasional	very brief	none	---	---
	wet	1.6	6.7					
August	moist	0.0	2.0	occasional	very brief	none	---	---
	wet	2.0	6.7					
September	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
October	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Cylinder, occasionally flooded (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
February	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
March	moist	0.0	1.6	occasional	brief	none	---	---
	wet	1.6	6.7					
April	moist	0.0	1.3	occasional	brief	none	---	---
	wet	1.3	6.7					
May	moist	0.0	1.6	occasional	brief	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	occasional	brief	none	---	---
	wet	2.0	6.7					
July	moist	0.0	2.6	occasional	very brief	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.0	occasional	very brief	none	---	---
	wet	3.0	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
November	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
December	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P37B Talmo gravelly sandy loam, 2 to 6 percent slopes

Talmo (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Kanaranzi (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Thurman (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P37D Talmo gravelly sandy loam, 6 to 35 percent slopes

Talmo (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Kanaranzi (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Thurman (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P38B Thurman sandy loam, 2 to 6 percent slopes

Thurman (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Henkin (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

P38C Thurman sandy loam, 6 to 12 percent slopes

Thurman (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P38C (continued)

Henkin (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P40A Bluemound silt loam, 0 to 3 percent slopes

Bluemound (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.2	none	---	none	---	---
February	moist	0.0	1.2	none	---	none	---	---
March	moist	0.0	1.2	none	---	none	---	---
April	moist	0.0	1.2	none	---	none	---	---
May	moist	0.0	1.2	none	---	none	---	---
June	moist	0.0	1.2	none	---	none	---	---
July	moist	0.0	1.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	1.2					
September	moist	0.0	1.2	none	---	none	---	---
October	moist	0.0	1.2	none	---	none	---	---
November	moist	0.0	1.2	none	---	none	---	---
December	moist	0.0	1.2	none	---	none	---	---

Ihlen (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.2	none	---	none	---	---
February	moist	0.0	3.2	none	---	none	---	---
March	moist	0.0	3.2	none	---	none	---	---
April	moist	0.0	3.2	none	---	none	---	---
May	moist	0.0	3.2	none	---	none	---	---
June	moist	0.0	3.2	none	---	none	---	---
July	moist	0.0	3.2	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	3.2					
September	moist	0.0	3.2	none	---	none	---	---
October	moist	0.0	3.2	none	---	none	---	---
November	moist	0.0	3.2	none	---	none	---	---
December	moist	0.0	3.2	none	---	none	---	---

Rock outcrop (5 percent of the map unit) (not applicable)

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P41A Rosedell silty clay loam, 0 to 2 percent slopes

Rosedell (95 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Spicer (3 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P41A (continued)

Albolls (2 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
February	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
March	wet	0.0	6.7	none	---	frequent	brief	0.5
April	wet	0.0	6.7	none	---	frequent	brief	1.0
May	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
June	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
July	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
August	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
September	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
October	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
November	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
December	moist	0.0	0.8	none	---	none	---	---
	wet	0.8	6.7					

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P42A Whitewood silty clay loam, 0 to 2 percent slopes

Whitewood (70 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P42A (continued)

Whitewood, overwash (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Whitewood, frequently flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	very brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	very brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	very brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P42A (continued)

Primghar (9 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Wakonda (1 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P43A Wilmonton silty clay loam, 1 to 3 percent slopes

Wilmonton (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Everly (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	4.0	none	---	none	---	---
	wet	4.0	6.7					
May	moist	0.0	4.4	none	---	none	---	---
	wet	4.4	6.7					
June	moist	0.0	4.8	none	---	none	---	---
	wet	4.8	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P43A (continued)

Ransom (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Rushmore (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P44E Shindler clay loam, 15 to 45 percent slopes

Shindler (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Judson (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Soils that are moderately deep to carbonates (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P45E Moneta clay loam, 15 to 45 percent slopes

Moneta (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Judson (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Soils that are moderately deep to carbonates (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P47A Whitewood silty clay loam, overwash, 0 to 2 percent slopes

Whitewood, overwash (80 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
February	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
March	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
April	moist	0.0	1.5	none	---	none	---	---
	wet	1.5	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
August	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
September	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
October	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
November	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
December	moist	0.0	2.3	none	---	none	---	---
	wet	2.3	6.7					

Judson (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
April	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
May	moist	0.0	4.1	none	---	none	---	---
	wet	4.1	6.7					
June	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	5.9	none	---	none	---	---
	wet	5.9	6.7					
November	moist	0.0	4.6	none	---	none	---	---
	wet	4.6	6.7					
December	moist	0.0	5.2	none	---	none	---	---
	wet	5.2	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P47A (continued)

Whitewood, frequently flooded (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
February	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	frequent	very brief	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	frequent	very brief	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	frequent	very brief	none	---	---
	wet	1.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

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P48A Allendorf silty clay loam, 0 to 2 percent slopes

Allendorf (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P48A (continued)

Kanaranzi (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Moderately well drained soils (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	none	---	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P48A (continued)

Sac (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

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P48B Allendorf silty clay loam, 2 to 6 percent slopes

Allendorf (85 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Kanaranzi (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	6.7	none	---	none	---	---
May	moist	0.0	6.7	none	---	none	---	---
June	moist	0.0	6.7	none	---	none	---	---
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P48B (continued)

Moderately well drained soils (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
June	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
July	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
August	moist	0.0	6.7	none	---	none	---	---
September	moist	0.0	4.9	none	---	none	---	---
	wet	4.9	6.7					
October	moist	0.0	3.9	none	---	none	---	---
	wet	3.9	6.7					
November	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
December	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					

Sac (5 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	6.7	none	---	none	---	---
February	moist	0.0	6.7	none	---	none	---	---
March	moist	0.0	6.7	none	---	none	---	---
April	moist	0.0	2.5	none	---	none	---	---
	wet	2.5	6.7					
May	moist	0.0	2.8	none	---	none	---	---
	wet	2.8	6.7					
June	moist	0.0	3.3	none	---	none	---	---
	wet	3.3	6.7					
July	moist	0.0	6.7	none	---	none	---	---
August	dry	0.0	0.7	none	---	none	---	---
	moist	0.7	6.7					
September	moist	0.0	6.7	none	---	none	---	---
October	moist	0.0	6.7	none	---	none	---	---
November	moist	0.0	6.7	none	---	none	---	---
December	moist	0.0	6.7	none	---	none	---	---

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

P55A Kato silty clay loam, 0 to 2 percent slopes

Kato (90 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
February	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
March	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
April	moist	0.0	0.5	none	---	none	---	---
	wet	0.5	6.7					
May	moist	0.0	0.7	none	---	none	---	---
	wet	0.7	6.7					
June	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
July	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
August	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
September	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
October	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
November	moist	0.0	1.0	none	---	none	---	---
	wet	1.0	6.7					
December	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					

Somewhat poorly drained soils (10 percent of the map unit)

Month	Moisture status	Top depth	Bottom depth	Flooding frequency	Flooding duration	Ponding frequency	Ponding duration	Ponding depth
January	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
February	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
March	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
April	moist	0.0	1.3	none	---	none	---	---
	wet	1.3	6.7					
May	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
June	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
July	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
August	moist	0.0	3.0	none	---	none	---	---
	wet	3.0	6.7					
September	moist	0.0	2.6	none	---	none	---	---
	wet	2.6	6.7					
October	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					
November	moist	0.0	1.6	none	---	none	---	---
	wet	1.6	6.7					
December	moist	0.0	2.0	none	---	none	---	---
	wet	2.0	6.7					

Table 20.--Soil Moisture, Ponding, and Flooding--Continued

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W Water

Water (100 percent of the map unit) (not applicable)

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 component name	Pct. of map unit	Restrictive layer		Potential for frost action	Risk of corrosion	
		Kind	Depth to top		Uncoated steel	Concrete
			In			
GP:						
Pits, gravel	80	---	---	---	---	---
Udipsamments	20	---	---	---	---	---
M-W:						
Water, miscellaneous	100	---	---	---	---	---
P3A:						
Biscay	85	---	>80	High	Moderate	Low
Cylinder	10	---	>80	Moderate	Moderate	Low
Talcot	5	---	>80	High	High	Low
P4A:						
Calco, frequently flooded	80	---	>80	High	High	Low
Calco, occasionally flooded	10	---	>80	High	High	Low
Havelock, frequently flooded	5	---	>80	High	High	Low
Spillco, frequently flooded	5	---	>80	Moderate	Moderate	Low
P5A:						
Calco, occasionally flooded	80	---	>80	High	High	Low
Calco, frequently flooded	5	---	>80	High	High	Low
Colo, occasionally flooded	5	---	>80	High	High	Low
Havelock, occasionally flooded	5	---	>80	High	High	Low
Spillco, occasionally flooded	5	---	>80	Moderate	Moderate	Low
P6A:						
Colo, occasionally flooded	80	---	>80	High	High	Low
Calco, frequently flooded	5	---	>80	High	High	Low
Calco, occasionally flooded	5	---	>80	High	High	Low
Comfrey, occasionally flooded	5	---	>80	High	High	Low
Spillco, occasionally flooded	5	---	>80	Moderate	Moderate	Low

Table 21.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
			In			
P7A:						
Comfrey, occasionally flooded	80	---	>80	High	High	Low
Colo, occasionally flooded	5	---	>80	High	High	Low
Havelock, occasionally flooded	5	---	>80	High	High	Low
Havelock, frequently flooded	5	---	>80	High	High	Low
Spillco, occasionally flooded	5	---	>80	Moderate	Moderate	Low
P8A:						
Cylinder, occasionally flooded	80	---	>80	Moderate	Moderate	Low
Fairhaven	10	---	>80	Moderate	Low	Low
Spillco, occasionally flooded	10	---	>80	Moderate	Moderate	Low
P11A:						
Dempster	90	---	>80	Moderate	Low	Low
Graceville	10	---	>80	Moderate	Low	Low
P11B:						
Dempster	90	---	>80	Moderate	Low	Low
Graceville	10	---	>80	Moderate	Low	Low
P12B:						
Everly	80	---	>80	Moderate	Moderate	Low
Sac	10	---	>80	High	Moderate	Low
Ransom	5	---	>80	High	High	Low
Wilmonton	5	---	>80	Moderate	High	Low
P12C2:						
Everly, eroded	80	---	>80	Moderate	Moderate	Low
Everly, slightly eroded	10	---	>80	Moderate	Moderate	Low
Moneta	5	---	>80	Moderate	Moderate	Low
Wilmonton	5	---	>80	Moderate	High	Low
P13A:						
Fairhaven	85	---	>80	Moderate	Low	Low
Cylinder	5	---	>80	Moderate	Moderate	Low
Dempster	5	---	>80	Moderate	Low	Low
Flandreau	5	---	>80	Moderate	Low	Low

Table 21.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
			In			
P13B:						
Fairhaven	80	---	>80	Moderate	Low	Low
Cylinder	5	---	>80	Moderate	Moderate	Low
Dempster	5	---	>80	Moderate	Low	Low
Flandreau	5	---	>80	Moderate	Low	Low
Kanaranzi	5	---	>80	Moderate	Low	Low
P14A:						
Flandreau	90	---	>80	Moderate	Low	Low
Grovena	10	---	>80	Moderate	Low	Low
P14B:						
Flandreau	80	---	>80	Moderate	Low	Low
Grovena	10	---	>80	Moderate	Low	Low
Thurman	10	---	>80	Low	Low	Moderate
P15B:						
Galva	80	---	>80	High	Moderate	Low
Primghar	10	---	>80	High	High	Low
Annieville	5	---	>80	High	Moderate	Low
Sac	5	---	>80	High	Moderate	Low
P15C2:						
Galva, eroded	80	---	>80	High	Moderate	Low
Galva, slightly eroded	10	---	>80	High	Moderate	Low
Sac, eroded	5	---	>80	High	Moderate	Low
Judson	3	---	>80	High	Moderate	Low
Primghar	2	---	>80	High	High	Low
P16A:						
Graceville	90	---	>80	Moderate	Low	Low
Dempster	10	---	>80	Moderate	Low	Low
P16B:						
Graceville	90	---	>80	Moderate	Low	Low
Dempster	10	---	>80	Moderate	Low	Low
P17A:						
Ihlen	93	Bedrock (lithic)	20-40	Moderate	Moderate	Low
Bluemound	3	Bedrock (lithic)	10-20	Moderate	Moderate	Low
Soils that are deep to bedrock	3	Bedrock (lithic)	39-59	Moderate	Moderate	Low
Rock outcrop	1	---	---	---	---	---

Table 21.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Restrictive layer		Potential for frost action	Risk of corrosion	
		Kind	Depth to top		Uncoated steel	Concrete
			In			
P17B:						
Ihlen------------------	80	Bedrock (lithic)	20-40	Moderate	Moderate	Low
Bluemound--------------	10	Bedrock (lithic)	10-20	Moderate	Moderate	Low
Soils that are deep to bedrock---------------	5	Bedrock (lithic)	39-59	Moderate	Moderate	Low
Rock outcrop-----------	5	---	---	---	---	---
P18B:						
Ihlen------------------	55	Bedrock (lithic)	20-40	Moderate	Moderate	Low
Rock outcrop-----------	25	---	---	---	---	---
Bluemound--------------	10	Bedrock (lithic)	10-20	Moderate	Moderate	Low
Soils that are deep to bedrock---------------	10	Bedrock (lithic)	39-59	Moderate	Moderate	Low
P18C:						
Ihlen------------------	45	Bedrock (lithic)	20-40	Moderate	Moderate	Low
Rock outcrop-----------	40	---	---	---	---	---
Bluemound--------------	10	Bedrock (lithic)	10-20	Moderate	Moderate	Low
Soils that are deep to bedrock---------------	3	Bedrock (lithic)	39-59	Moderate	Moderate	Low
Spillco, occasionally flooded---------------	2	---	>80	Moderate	Moderate	Low
P19A:						
Judson-----------------	80	---	>80	High	Moderate	Low
Whitewood, overwash----	14	---	>80	High	High	Low
Primghar---------------	6	---	>80	High	High	Low
P20B:						
Judson-----------------	80	---	>80	High	Moderate	Low
Primghar---------------	10	---	>80	High	High	Low
Galva------------------	5	---	>80	High	Moderate	Low
Whitewood, overwash----	5	---	>80	High	High	Low
P21A:						
Marcus-----------------	80	---	>80	High	High	Low
Whitewood, frequently flooded---------------	10	---	>80	High	High	Low
Primghar---------------	5	---	>80	High	High	Low
Spicer-----------------	5	---	>80	High	High	Low
P22A:						
Havelock, frequently flooded---------------	80	---	>80	High	High	Low

Table 21.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Restrictive layer		Potential for frost action	Risk of corrosion	
		Kind	Depth to top		Uncoated steel	Concrete
			In			
P22A:						
Havelock, occasionally flooded	10	---	>80	High	High	Low
Calco, frequently flooded	5	---	>80	High	High	Low
Spillco, frequently flooded	5	---	>80	Moderate	Moderate	Low
P23A:						
Havelock, occasionally flooded	80	---	>80	High	High	Low
Havelock, frequently flooded	10	---	>80	High	High	Low
Spillco, occasionally flooded	5	---	>80	Moderate	Moderate	Low
Comfrey, occasionally flooded	3	---	>80	High	High	Low
Calco, occasionally flooded	2	---	>80	High	High	Low
P24B:						
Moody	85	---	>80	Moderate	Moderate	Low
Primghar	10	---	>80	High	High	Low
Nora, eroded	3	---	>80	Moderate	Low	Low
Splitrock	2	---	>80	Moderate	Moderate	Low
P24C2:						
Moody, eroded	80	---	>80	Moderate	Moderate	Low
Moody, slightly eroded	5	---	>80	Moderate	Moderate	Low
Nora, eroded	5	---	>80	Moderate	Low	Low
Splitrock, eroded	5	---	>80	Moderate	Moderate	Low
Primghar	3	---	>80	High	High	Low
Crofton, eroded	2	---	>80	Moderate	Low	Low
P25C2:						
Nora, eroded	85	---	>80	Moderate	Low	Low
Crofton, eroded	5	---	>80	Moderate	Low	Low
Judson	5	---	>80	High	Moderate	Low
Moody, eroded	5	---	>80	Moderate	Moderate	Low
P25D2:						
Nora, eroded	80	---	>80	Moderate	Low	Low
Crofton, eroded	10	---	>80	Moderate	Low	Low

Table 21.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Restrictive layer		Potential for frost action	Risk of corrosion	
		Kind	Depth to top		Uncoated steel	Concrete
			In			
P25D2:						
Judson	5	---	>80	High	Moderate	Low
Moody, eroded	5	---	>80	Moderate	Moderate	Low
P26C2:						
Nora, eroded	50	---	>80	Moderate	Low	Low
Crofton, eroded	30	---	>80	Moderate	Low	Low
Judson	10	---	>80	High	Moderate	Low
Moody, eroded	10	---	>80	Moderate	Moderate	Low
P26D2:						
Nora, eroded	45	---	>80	Moderate	Low	Low
Crofton, eroded	35	---	>80	Moderate	Low	Low
Judson	14	---	>80	High	Moderate	Low
Moody, eroded	6	---	>80	Moderate	Moderate	Low
P27A:						
Primghar	80	---	>80	High	High	Low
Galva	8	---	>80	High	Moderate	Low
Marcus	8	---	>80	High	High	Low
Judson	4	---	>80	High	Moderate	Low
P28A:						
Ransom	80	---	>80	High	High	Low
Rushmore	8	---	>80	High	High	Low
Sac	8	---	>80	High	Moderate	Low
Primghar	4	---	>80	High	High	Low
P29A:						
Rushmore	80	---	>80	High	High	Low
Ransom	10	---	>80	High	High	Low
Whitewood, frequently flooded	10	---	>80	High	High	Low
P30B:						
Sac	80	---	>80	High	Moderate	Low
Annieville	10	---	>80	High	Moderate	Low
Primghar	5	---	>80	High	High	Low
Ransom	5	---	>80	High	High	Low
P30C2:						
Sac, eroded	80	---	>80	High	Moderate	Low
Annieville	10	---	>80	High	Moderate	Low

Table 21.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
			In			
P30C2:						
Sac, slightly eroded	5	---	>80	High	Moderate	Low
Primghar	3	---	>80	High	High	Low
Ransom	2	---	>80	High	High	Low
P31A:						
Spicer	85	---	>80	High	High	Low
Marcus	10	---	>80	High	High	Low
Whitewood	5	---	>80	High	High	Low
P32A:						
Spillco, frequently flooded	85	---	>80	Moderate	Moderate	Low
Spillco, occasionally flooded	10	---	>80	Moderate	Moderate	Low
Havelock, frequently flooded	5	---	>80	High	High	Low
P33A:						
Spillco, occasionally flooded	85	---	>80	Moderate	Moderate	Low
Spillco, frequently flooded	10	---	>80	Moderate	Moderate	Low
Comfrey, occasionally flooded	5	---	>80	High	High	Low
P34B:						
Splitrock	82	---	>80	Moderate	Moderate	Low
Primghar	10	---	>80	High	High	Low
Soils that are deep to till	8	---	>80	Moderate	Moderate	Low
P34C2:						
Splitrock, eroded	80	---	>80	Moderate	Moderate	Low
Splitrock, slightly eroded	10	---	>80	Moderate	Moderate	Low
Soils that are deep to till	5	---	>80	Moderate	Moderate	Low
Primghar	5	---	>80	High	High	Low
P36A:						
Talcot, occasionally flooded	85	---	>80	High	High	Low
Biscay, occasionally flooded	10	---	>80	High	Moderate	Low
Cylinder, occasionally flooded	5	---	>80	Moderate	Moderate	Low

Table 21.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
			In			
P37B:						
Talmo	90	---	>80	Low	Low	Low
Kanaranzi	5	---	>80	Moderate	Low	Low
Thurman	5	---	>80	Low	Low	Moderate
P37D:						
Talmo	90	---	>80	Low	Low	Low
Kanaranzi	5	---	>80	Moderate	Low	Low
Thurman	5	---	>80	Low	Low	Moderate
P38B:						
Thurman	90	---	>80	Low	Low	Moderate
Henkin	10	---	>80	Moderate	Low	Low
P38C:						
Thurman	90	---	>80	Low	Low	Moderate
Henkin	10	---	>80	Moderate	Low	Low
P40A:						
Bluemound	85	Bedrock (lithic)	10-20	Moderate	Moderate	Low
Ihlen	10	Bedrock (lithic)	20-40	Moderate	Moderate	Low
Rock outcrop	5	---	---	---	---	---
P41A:						
Rosedell	95	---	>80	High	High	Low
Spicer	3	---	>80	High	High	Low
Albolls	2	---	>80	High	High	Low
P42A:						
Whitewood	70	---	>80	High	High	Low
Whitewood, frequently flooded	10	---	>80	High	High	Low
Whitewood, overwash	10	---	>80	High	High	Low
Primghar	9	---	>80	High	High	Low
Wakonda	1	---	>80	High	Moderate	Low
P43A:						
Wilmonton	85	---	>80	Moderate	High	Low
Everly	5	---	>80	Moderate	Moderate	Low
Ransom	5	---	>80	High	High	Low
Rushmore	5	---	>80	High	High	Low
P44E:						
Shindler	85	---	>80	Moderate	Moderate	Low
Judson	10	---	>80	High	Moderate	Low

Table 21.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
			In			
P44E:						
Soils that are moderately deep to carbonates	5	---	>80	Moderate	Moderate	Low
P45E:						
Moneta	85	---	>80	Moderate	Moderate	Low
Judson	10	---	>80	High	Moderate	Low
Soils that are moderately deep to carbonates	5	---	>80	Moderate	Moderate	Low
P47A:						
Whitewood, overwash	80	---	>80	High	High	Low
Judson	10	---	>80	High	Moderate	Low
Whitewood, frequently flooded	10	---	>80	High	High	Low
P48A:						
Allendorf	85	---	>80	Moderate	Low	Low
Kanaranzi	5	---	>80	Moderate	Low	Low
Moderately well drained soils	5	---	>80	Moderate	Low	Low
Sac	5	---	>80	High	Moderate	Low
P48B:						
Allendorf	85	---	>80	Moderate	Low	Low
Kanaranzi	5	---	>80	Moderate	Low	Low
Moderately well drained soils	5	---	>80	Moderate	Low	Low
Sac	5	---	>80	High	Moderate	Low
P55A:						
Kato	90	---	>80	High	Moderate	Low
Somewhat poorly drained soils	10	---	>80	High	Moderate	Low
W:						
Water	100	---	---	---	---	---

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Glossary

Ablation till. Loose, permeable till deposited during the final downwasting of glacial ice. Lenses of crudely sorted sand and gravel are common.

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.

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

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

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

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

Aspect. The direction in which a slope faces.

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

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

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

Basal till. Compact glacial till deposited beneath the ice.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Beach deposits. Material, such as sand and gravel, that is generally laid down parallel to an active or relict shoreline of a postglacial or glacial lake.

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.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

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

Blowout. A shallow depression from which all or most of the soil material has been removed by the wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts the water table is exposed.

Bog. Waterlogged, spongy ground, consisting primarily of mosses, containing acidic, decaying vegetation (such as sphagnum, sedges, and heaths) that develops into peat.

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

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.

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

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

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

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

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

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

Catsteps. Very small, irregular terraces on steep hillsides, especially in pasture, formed by the trampling of cattle or the slippage of saturated soil.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

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

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

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

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

Coarse textured soil. Sand or loamy sand.

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

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

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

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

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

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.

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

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

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

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.

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.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Depression. Any relatively sunken part of the earth's surface; especially a low-lying area surrounded by higher ground. A closed depression has no natural outlet for surface drainage.

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.

Disintegration moraine. A drift topography characterized by chaotic mounds and pits, generally randomly oriented, developed in supraglacial drift by collapse and flow as the underlying stagnant ice melted. Slopes may be steep and unstable. Abrupt changes between materials of differing lithology are common.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

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

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

Drainageway. A relatively small, linear depression that, at some time, moves concentrated water and either does not have a defined channel or has only a small defined channel.

Drumlin. A low, smooth, elongated oval hill, mound, or ridge of compact glacial till. The longer axis is parallel to the path of the glacier and commonly has a blunt nose pointing in the direction from which the ice approached.

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.

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.

End moraine. A ridgelike accumulation that is being or was produced at the outer margin of an actively flowing glacier at any given time.

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

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

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

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

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

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

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

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

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

Esker. A narrow, winding ridge of stratified gravelly and sandy drift deposited by a stream flowing in a tunnel beneath a glacier.

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*.

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

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

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

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

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

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.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Geomorphology. The science that treats the general configuration of the earth's surface; specifically, the study of the classification, description, nature, origin, and development of landforms and their relationships to underlying structures, and the history of geologic changes as recorded by these surface features. The term is especially applied to the genetic interpretation of landforms.

Glacial drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Glacial outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur as kames, eskers, deltas, and outwash plains.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are interbedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

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

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

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

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

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.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

Herbaceous peat. An accumulation of organic material, decomposed to some degree, that is predominantly the remains of sedges, reeds, cattails, and other herbaceous plants.

High-chroma zones. Zones having chroma of 3 or more. Typical color in areas of iron concentrations.

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.

Ice-walled lake plain. A relict surface marking the floor of an extinct lake basin that was formed on solid ground and surrounded by stagnant ice in a stable or unstable superglacial environment on stagnation moraines. As the ice melted, the lake plain became perched above the adjacent landscape. The lake plain is well sorted, generally fine textured, stratified deposits.

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

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

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

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

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.

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 concentrations. High-chroma zones having a high content of iron and manganese oxide because of chemical oxidation and accumulation, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic concentration.

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

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame. An irregular, short ridge or hill of stratified glacial drift.

Kame moraine. An end moraine that contains numerous kames. A group of kames along the front of a stagnant glacier, commonly comprising the slumped remnants of a formerly continuous outwash plain built up over the foot of rapidly wasting or stagnant ice.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

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

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

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

Lake bed. The bottom of a lake; a lake basin.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Lakeshore. A narrow strip of land in contact with or bordering a lake; especially the beach of a lake.

Lamella. A thin (commonly less than 1 cm thick), discontinuous or continuous, generally horizontal layer of fine material (especially clay and iron oxides) that has been pedogenically concentrated (illuviated within a coarser textured eluviated layer several centimeters to several decimeters thick).

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

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

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.

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

Low strength. The soil is not strong enough to support loads.

Low-chroma zones. Zones having chroma of 2 or less. Typical color in areas of iron depletions.

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.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

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.

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

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

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

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

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

Moderately 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.

Moraine. An accumulation of earth, stones, and other debris deposited by a glacier. Some types are terminal, lateral, medial, and ground.

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).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mucky peat. Unconsolidated soil material consisting primarily of organic matter that is in an intermediate stage of decomposition such that a significant part of the material can be recognized and a significant part of the material cannot be recognized.

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

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

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

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

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

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

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

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

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

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

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

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

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

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 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.

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

Pitted outwash plain. An outwash plain marked by many irregular depressions, such as kettles, shallow pits, and potholes, which formed by melting of incorporated ice masses; common in Wisconsin and Minnesota.

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.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

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

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

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

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

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

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

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

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

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

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

Rise. A slight increase in elevation of the land surface, typically with a broad summit and gently sloping sides.

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

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

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

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

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

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

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

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

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

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

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

Seepage (in tables). The movement of water through the soil adversely affects the specified use.

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.

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

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

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

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

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

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

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

Sinkhole. A depression in the landscape where limestone has been dissolved.

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.

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.

Sloughed till. Water-saturated till that has flowed slowly downhill from its original place of deposit by glacial ice. It may rest on other till, on glacial outwash, or on a glaciolacustrine deposit.

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

Stagnation moraine. A body of drift released by the melting of a glacier that ceased flowing. Commonly, but not always, occurs near ice margins; composed of till, ice-contact stratified drift, and small areas of glacial lake sediment. Typical landforms are knob-and-kettle topography, locally including ice-walled lake plains.

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.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

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

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsidence. The potential decrease in surface elevation as a result of the drainage of wet soils that have organic layers or semifluid mineral layers. Subsidence, as a result of drainage, is attributed to (1) shrinkage from drying, (2) consolidation because of the loss of ground-water buoyancy, (3) compaction from tillage or manipulation, (4) wind erosion, (5) burning, and (6) biochemical oxidation.

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 or loosen a layer that restricts roots.

Substratum. The part of the soil below the solum.

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

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

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

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

Swale. A slight depression in the midst of generally level land. A shallow depression in an undulating ground moraine caused by uneven glacial deposition.

Terminal moraine. A belt of thick glacial drift that generally marks the termination of important glacial advances.

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

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

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

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

Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

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

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

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

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

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.

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.

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

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

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

Windthrow. The uprooting and tipping over of trees by the wind.

Woody peat. An accumulation of organic material that is predominantly composed of trees, shrubs, and other woody plants.