United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with Illinois Agricultural Experiment Station

Soil Survey of Rock Island County, Illinois

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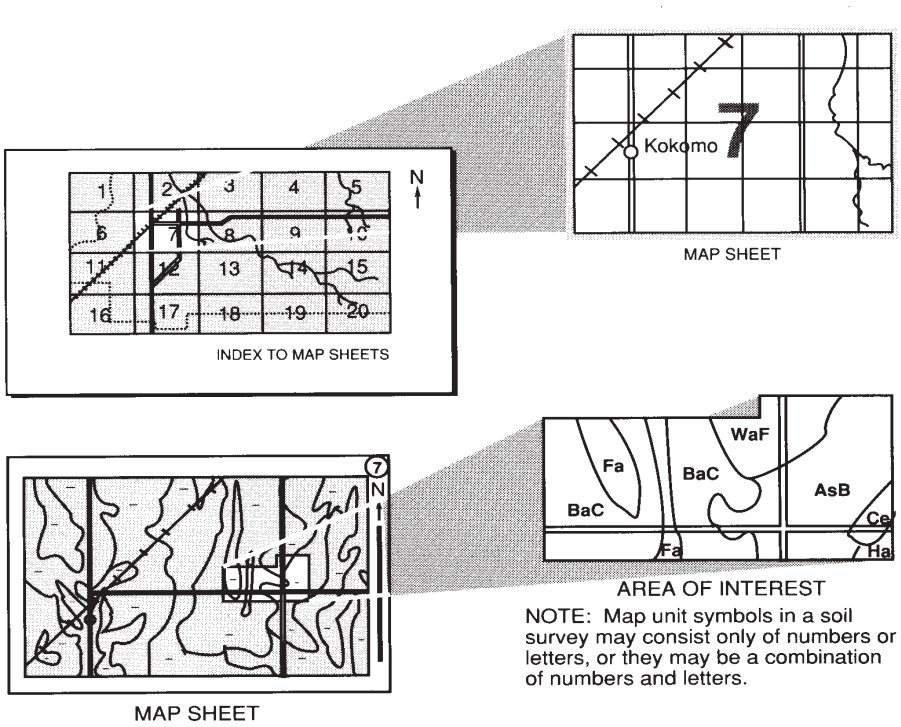
How To Use This Soil Survey

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 **Numerical Index to Map Units**, 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.



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

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

Major fieldwork for this soil survey was completed in 1998. Soil names and descriptions were approved in 1998. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1998. This survey was made cooperatively by the Natural Resources Conservation Service and the Illinois Agricultural Experiment Station. It is part of the technical assistance furnished to the Rock Island County Soil and Water Conservation District. Financial assistance was provided by the Rock Island County Board and the Illinois Department of Agriculture.

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

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Cover: A view from the loess hill bluffs overlooking the Mississippi River Valley.

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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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 J. Gradle
State Conservationist
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Soil Survey of
Rock Island County, Illinois

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United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with the Illinois Agricultural Experiment Station

Rock Island County is in northwestern Illinois (fig. 1). It has a total area of about 288,910 acres, or 451 square miles. It is bounded by Whiteside and Henry Counties on the east, by Mercer County on the south, and by the Mississippi River on the west and north.

This soil survey updates the survey of Rock Island County published in 1977 (Acker, 1977). It provides additional information and has larger maps, which show the soils in greater detail.

General Nature of the Survey Area

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

Settlement, Industry, and Farming

This section was originally written by the late Emil Kubalek, former district conservationist, Rock Island County.

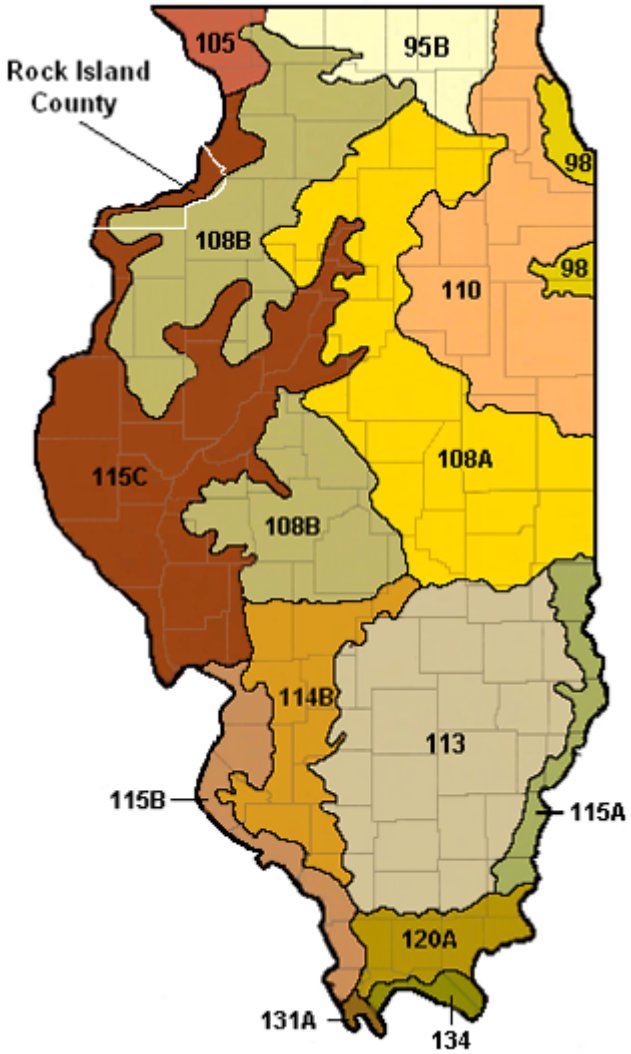
Rock Island County was established in 1831. In 2000, the population of the county was 149,374 and that of Rock Island, the county seat, was 39,684 (U.S. Department of Commerce, 2002).

The center of the county is part of the metropolitan complex known as the Quad Cities. This metropolitan area includes Davenport and Bettendorf in Iowa and Rock Island and Moline in Illinois.

The county has a well developed transportation system. Interstate Highway 74 and U.S. Highways 6, 67, and 150 bisect the county from north to south. Interstate 80 and Interstate 280 cross the county from east to west. The county also has several State roads. The main secondary roads are blacktop. Railroads furnish freight service to the county. Facilities for loading commodities onto river barges are available along the Mississippi River. The Quad City Airport offers connections to all points throughout the United States.

The Quad Cities is considered the “tractor capital of the world.” The county has several small industries and is also the home of the U.S. Army Weapons Command, Rock Island Arsenal. Several limestone quarries and gravel pits provide crushed rock for roads, finely ground material for limestone application on fields, and sand and gravel for building materials. Hybrid seed corn is produced in the county. Cordova Township also has a large industrial complex. The nuclear generating station in Cordova Township provides power for much of east-central Iowa and northwestern Illinois and generates power for the Chicago metropolitan region.

The Quad Cities area offers many educational



LEGEND

95B—Southern Wisconsin and Northern Illinois Drift Plain

98—Southern Michigan and Northern Indiana Drift Plain

105—Northern Mississippi Valley Loess Hills

108A and 108B—Illinois and Iowa Deep Loess and Drift

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113—Central Claypan Area

114B—Southern Illinois and Indiana Thin Loess and Till Plain

115A, 115B, and 115C—Central Mississippi Valley Wooded Slopes

120A—Kentucky and Indiana Sandstone and Shale Hills and Valleys

131A—Southern Mississippi Valley Alluvium

134—Southern Mississippi Valley Silty Uplands

Figure 1.—Location of Rock Island County and major land resource areas (MLRAs) in Illinois.

facilities. Augustana College, Western Illinois University, and Blackhawk Junior College are on the Illinois side of the Mississippi River. St. Ambrose College and Scott County Junior College are on the Iowa side of the river.

Farming has been a major enterprise in Rock Island County since its settlement. In 2000, there were 318 farms in the county (Illinois Agricultural Statistics Service, 2001). Crops and livestock are raised in the survey area.

Corn and soybeans are the main crops. In 2000, the acreage used for corn was 65,000 and the acreage used for soybeans was 55,000 (Illinois Agricultural Statistics Service, 2001). Small grain and hay also are grown in the county, and there are several apple orchards.

The total number of cattle in 2000 was 11,000, and the total number of swine was 35,900 (Illinois Agricultural Statistics Service, 2001). Sheep and chickens also are raised.

Relief, Physiography, and Drainage

Dr. Richard C. Anderson, retired, Department of Geology, Augustana College, helped prepare this section.

The topography of Rock Island County consists of upland plains, highly dissected valley sides, terraces, and flood plains (fig. 2). Although the county was covered by glaciers that greatly modified the pre-existing landscape, the present topography is almost entirely the result of stream erosion (Willman and Frye, 1970). Thus the upland plains represent a gently rolling surface produced by glacial deposition, and the

flood plains and dissected valley sides are the result of subsequent stream erosion (Leighton and Brophy, 1961).

The upland plains are at elevations of 750 to 790 feet between the Mississippi River and Copperas and Mill Creeks. They are at an elevation of about 810 feet south of Copperas and Mill Creeks and at an elevation of about 700 feet in Coe Township at the northern end of the county. The upland areas are remnants of a once-continuous glacial plain that extended far to the south and east (Leighton and Brophy, 1961). Although largely of glacial origin, the upland areas are covered with 30 feet or more of wind-deposited loess. In most places the loess is simply a veneer without a topographic expression of its own, but in Coe Township it has been deposited in long, narrow ridges as much as 50 feet high that give the topography a distinct northwest-southeast orientation. Sand dunes are on uplands in the extreme western part of the county and in Coe Township.

The flood plains are chiefly along the Mississippi and Rock Rivers and on the Meredosia bottom lands. The elevation on the flood plains ranges from 540 feet at the southwestern end of the county to 610 feet on the sand plains in the northern part. Flood plains are the floors of the valleys cut by the streams. The lower areas are subject to periodic flooding. The flood plains are underlain by water-deposited sand, silt, and clay. They are relatively shallow over limestone and shale bedrock. In the extreme northern end of the county, however, bedrock is at a depth of more than 100 feet. Sand and silt terraces are common on the flood plains.

Erosion by tributaries of the Mississippi and Rock Rivers has produced highly dissected topography adjacent to these main streams. In many places the local relief varies by more than 200 feet. Steep slopes cause landslides and soil instability.

The Mississippi River serves as the water source for Rock Island, Moline, and East Moline, and the smaller towns and rural areas are supplied by wells pumping from limestone crevices at depths of 100 to 300 feet.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Moline during the period 1971 to 2000. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

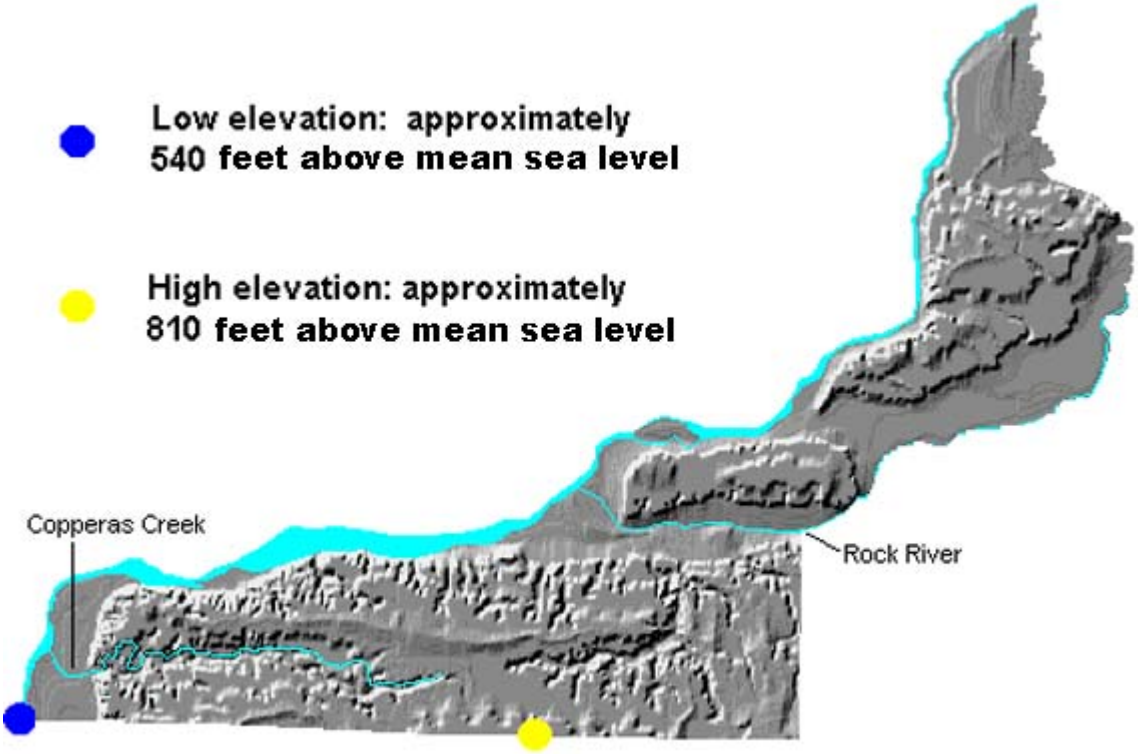

Figure 2.—A physiographic map of Rock Island County.

In winter, the average temperature is 25 degrees F and the average daily minimum temperature is 16 degrees. The lowest temperature on record, which occurred at Moline on February 3, 1996, is -28 degrees. In summer, the average temperature is 73 degrees and the average daily maximum temperature is 84 degrees. The highest recorded temperature, which occurred at Moline on August 18, 1936, is 106 degrees.

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

Total annual precipitation is 38.04 inches. Of this total, 24.30 inches, or about 64 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 11.85 inches. The heaviest 1-day rainfall during the period of record was 6.21 inches.

The average seasonal snowfall is 33.7 inches. The greatest snow depth at any one time during the period of record was 29 inches. On average, 47 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

How This Survey Was Made

This survey was made to provide updated information about the soils and miscellaneous areas in Rock Island County, which is a subset of Major Land Resource Areas 108B and 115C (fig. 1). Major land resource areas (MLRAs) are geographically associated land resource units that share a common land use, elevation, topography, climate, water, soils, and vegetation (USDA, 1981). 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 Island County subset but that is representative of the MLRA.

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 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 seasonal high water table within certain depths in most years, but they cannot predict that the water table will always be at a specific level in the soil on a specific date.

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

Formation and Classification of the Soils

This section relates the soils in the survey area to the major factors of soil formation and describes the system of soil classification.

Factors of Soil Formation

The principal factors of soil formation are parent material, climate, plant and animal life, topography, and time (Jenny, 1941). The relative importance of each factor differs from place to place, and each factor modifies the effect of the other four. In some cases one factor may dominate the formation of a soil. Human activities, such as clearing forests, cultivating the soils, and using fertilizers, also change the course of soil formation.

Parent Material

Peoria loess is the predominant parent material of the soils in Rock Island County (University of Illinois, 1971). The Mississippi River Valley was the main source of the loess. The loess is about 30 feet thick on nearly level uplands. Muscatune and Rozetta soils formed in these thick deposits of loess. In areas on slopes where the loess is thin or has been removed by erosion, the soils formed in such parent material as Illinoian till or Pennsylvania shale. Hickory soils formed in Illinoian till, and Marseilles soils formed in Pennsylvania shale.

Terraces are in the valleys of the Mississippi and Rock Rivers and in the valleys of the larger creeks. On some of these terraces, Niota and Moline soils formed in fine textured sediment. On other terraces, Sparta and Dickinson soils formed in sandy parent material.

Medium and moderately fine textured soils formed in alluvium in the valleys of the Mississippi and Rock Rivers. Coffeen and Sawmill soils are common in these river valleys. In the smaller valleys, soils formed mainly in recent medium textured sediment washed from the uplands. Dorchester, Radford, and Orion soils are examples.

Living Organisms

Plants have had a greater effect than animals on the formation of soils in the survey area, but the animals and organisms that live on and in the soils also have been important. The changes they bring about depend mainly on the kind of life processes distinctive to each. The kinds of plants and animals that live on and in the soils are affected, in turn, by the climate, the parent material, the topography, and the age of the soil.

Some soils in the county formed under trees, and others formed under prairie grasses. Most of the sloping soils formed mainly under such trees as oak and hickory. The nearly level soils formed under prairie grasses. These soils have a darker, thicker surface layer than that of the soils that formed under forest vegetation and have a higher content of organic matter.

Climate

Climate affects the formation of soils through its influence on the rate of weathering of parent material. The humid, temperate climate of the county contributes to the relatively rapid breakdown of soil minerals, to the formation of clay, and to the movement of these materials downward in the soil profile. Most of the upland soils in the county have considerably more clay in the subsoil than in the surface layer.

Topography

Relief influences the amount of runoff, the degree of erosion, and the amount of water infiltrating and percolating through the soil profile. Where the soils formed in uniform, permeable parent materials, such as loess, natural drainage is closely associated with slope. The moderately well drained and well drained soils are in the more rolling areas, and the somewhat poorly drained to very poorly drained soils are mainly

on flats or in depressions. Slopes in the county range from less than 2 percent on the bottom land and in the nearly level uplands to more than 60 percent on the steeper parts of the uplands that border valleys.

Time

The length of time necessary for the development of a soil depends on the other factors of soil formation. Soils that formed in parent material low in calcium (lime) develop more readily and become acid more readily than soils that formed in material high in calcium. Permeable soils are leached of calcium and other soluble minerals much more rapidly than slowly permeable soils. Soils form more quickly under forest vegetation than under prairie vegetation because grasses are more efficient in recycling calcium and other bases from the subsoil to the surface layer. Soils generally form more quickly in a humid climate than in a dry climate.

In general, the longer the soils have been exposed to weathering processes, the more strongly developed they are and the more evidence they show of horizon differentiation. Most of the soils on uplands are moderately developed. The soils in the western and northern parts of the county and on terraces, however, are only weakly developed. Because there has not been enough time for changes to take place, most of the soils on bottom land have no horizon differentiation or have only weakly expressed horizon differentiation.

Organic matter has accumulated in all of the soils. Soils that formed under prairie vegetation have a thicker, darker surface layer than that of the soils that formed under forest vegetation. In the poorly drained soils, iron compounds have been reduced and moved downward in the profile. This process results in gray colors in the subsoil. Some of this iron has accumulated as concretions or small, round pellets. In the well drained soils, the iron compounds are oxidized and are generally more diffuse. They result in a yellowish brown subsoil.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 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 4 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, mineral content, cation-exchange capacity, temperature regime, thickness of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-silty, mixed, superactive, 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 Sable series is an example of a soil series in this survey area.

Soil Series and Detailed Soil Map Units

In this section, arranged in alphabetical order, each soil series recognized in the survey area is described. Each series description is followed by detailed descriptions of the associated soil map units.

Characteristics of the soil and the material in which it formed are identified for each soil series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in "Keys to Soil Taxonomy" (Soil Survey Staff, 1998). Unless otherwise stated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

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 description. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the headings "Use and Management of the Soils" and "Soil Properties."

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

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

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

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives some of the soil properties and qualities that may affect planning for specific uses.

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is

divided into *soil phases*. Most of the areas shown on the soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Hickory silt loam, 10 to 18 percent slopes, eroded, is a phase of the Hickory 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. Sable 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 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. Marseilles-Hickory silt loams, 35 to 60 percent slopes, is an example.

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

Table 5 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.

Ambraw Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls

Typical Pedon

Ambraw clay loam, 0 to 2 percent slopes, rarely flooded; 2,400 feet north and 160 feet east of the southwest corner of sec. 11, T. 19 N., R. 3 E.; in Whiteside County, Illinois; USGS Erie Northwest topographic quadrangle; lat. 41 degrees 38 minutes 57 seconds N. and long. 90 degrees 07 minutes 54 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) clay loam, very dark grayish brown (10YR 3/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; slightly acid; abrupt smooth boundary.

A—10 to 20 inches; very dark gray (10YR 3/1) clay loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; many distinct black (10YR 2/1) organic coatings on faces of peds; few fine prominent yellowish brown (10YR 5/6) iron oxide masses in the matrix; neutral; clear smooth boundary.

Bg1—20 to 27 inches; dark gray (10YR 4/1) clay loam; moderate medium and fine subangular blocky structure; friable; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine concretions of iron oxide throughout the matrix; common fine prominent strong brown (7.5YR 4/6) iron oxide masses in the matrix; neutral; clear smooth boundary.

Bg2—27 to 32 inches; dark gray (10YR 4/1) clay loam; weak medium prismatic structure; friable; few faint concretions of iron oxide throughout the matrix; many medium prominent yellowish brown (10YR 5/6) and few fine prominent strong brown (7.5YR 4/6) iron oxide masses in the matrix; slightly acid; clear smooth boundary.

Bg3—32 to 36 inches; gray (5Y 5/1) clay loam; weak medium subangular blocky structure; friable; very dark gray (10YR 3/1) krotovina 1 inch wide at a depth of 34 to 35 inches; few fine concretions of iron oxide throughout the matrix; many medium prominent yellowish brown (10YR 5/6) and few fine prominent strong brown (7.5YR 4/6) iron oxide masses in the matrix; neutral; abrupt smooth boundary.

Bg4—36 to 45 inches; gray (5Y 5/1) clay loam with thin strata of gray (10YR 5/1) sandy clay loam; weak medium subangular blocky structure; friable; few fine soft masses of iron oxide throughout the matrix; few fine prominent brown (7.5YR 5/4) and common fine prominent yellowish brown (10YR 5/6) iron oxide masses in the matrix; slightly acid; gradual smooth boundary.

Cg—45 to 60 inches; stratified grayish brown (2.5Y 5/2) clay loam, very dark grayish brown (2.5Y 3/2) sandy clay loam, and brown (10YR 5/3) loamy sand; massive; friable; few fine prominent yellowish brown (10YR 5/6) iron oxide masses in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to free carbonates: More than 50 inches
Thickness of the solum: 40 to 60 inches

Ap or A horizon:
Hue—10YR, 2.5Y, or N
Value—2 or 3
Chroma—0 to 2

Texture—clay loam, loam, sandy loam, sandy clay loam, or silty clay loam

Bg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—loam, clay loam, sandy clay loam, sandy loam, or silt loam

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—stratified sand, loamy sand, sandy loam, loam, silt loam, and clay loam

8302A—Ambraw loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Composition

Ambraw and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that contain more clay in the lower part
- Soils that have a thicker surface layer

Dissimilar soils:
- Moderately well drained soils on footslopes

Properties and Qualities of the Ambraw Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.4 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Occasional, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Atlas Series

Taxonomic classification: Fine, smectitic, mesic Aeric Chromic Vertic Epiaqualfs
Map units in which this series occurs: 946D3, 946F3

Typical Pedon

Atlas silt loam, 5 to 10 percent slopes, eroded, at an elevation of 665 feet; 1,200 feet west and 50 feet south of the northeast corner of sec. 7, T. 1 N., R. 6 W.; in Warren County, Illinois; USGS Coatsburg topographic quadrangle; lat. 40 degrees 05 minutes 40 seconds N. and long. 91 degrees 07 minutes 52 seconds W., NAD 27:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; friable; common very fine and fine roots; common medium prominent brown (7.5YR 5/8) and few fine distinct yellowish brown (10YR 5/6) masses of iron throughout; few fine prominent black (2.5Y 2/1) masses of iron and manganese throughout; slightly acid; clear smooth boundary.

BE—7 to 13 inches; brown (10YR 5/3) silty clay loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; friable; common fine roots; few fine distinct light brownish gray (10YR 6/2) clay depletions throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron throughout; slightly acid; clear wavy boundary.

2Btg1—13 to 26 inches; dark gray (10YR 4/1) silty clay loam; moderate thick platy structure parting to weak fine subangular blocky; firm; common fine and few medium roots; common distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; few fine prominent yellowish brown (10YR 5/6) masses of iron and few fine distinct white (10YR 8/1) masses of barite throughout; moderately acid; clear wavy boundary.

2Btg2—26 to 37 inches; 87 percent dark gray (10YR 4/1) and 10 percent gray (10YR 5/1) silty clay;

weak medium prismatic structure; firm; common fine and medium roots; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; common fine prominent yellowish brown (10YR 5/6) masses of iron and few fine distinct white (10YR 8/1) masses of barite throughout; 1 percent rounded gravel and 1 percent subangular limestone-cherty gravel; neutral; clear wavy boundary.

2Btg3—37 to 47 inches; gray (2.5Y 5/1) silty clay; weak coarse prismatic structure; firm; common fine roots; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; few fine prominent yellowish brown (10YR 5/6) masses of iron throughout; few fine faint gray (10YR 6/1) iron depletions and few fine distinct white (10YR 8/1) masses of barite throughout; 1 percent angular gravel; neutral; clear wavy boundary.

2Btg4—47 to 61 inches; gray (2.5Y 5/1) clay loam; weak coarse prismatic structure; firm; common very fine roots; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; few fine distinct black (2.5Y 2/1) masses of iron and manganese and few fine distinct white (10YR 8/1) barite crystals throughout; 1 percent limestone-cherty gravel and 1 percent rounded igneous-granite gravel; neutral; clear wavy boundary.

2BCg—61 to 80 inches; light brownish gray (2.5Y 6/2) clay loam; weak coarse prismatic structure; firm; few fine distinct yellowish brown (10YR 5/6) and common medium prominent brownish yellow (10YR 6/8) masses of iron throughout; 2 percent limestone-cherty gravel; neutral.

Range in Characteristics

Depth to the base of the argillic horizon: More than 42 inches

Ap or A horizon:
Hue—10YR
Value—2 to 5
Chroma—1 to 4
Texture—silt loam, loam, silty clay loam, or clay loam

E or BE horizon:
Hue—10YR
Value—4 or 5
Chroma—1 to 4
Texture—silt loam or silty clay loam

Bt, Btg, or 2Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—clay loam, clay, silty clay loam, or silty clay
Content of rock fragments—0 to 5 percent

2Cg horizon (if it occurs):
Hue—10YR, 7.5YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 6
Texture—silty clay loam, clay loam, or loam
Content of rock fragments—2 to 15 percent

Atterberry Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs

Typical Pedon (Official Series Description)

Atterberry silt loam, 0 to 2 percent slopes; 1,650 feet north and 1,120 feet east of the southwest corner of sec. 34, T. 16 N., R. 9 E.; in Bureau County, Illinois; USGS Princeton South topographic quadrangle; lat. 41 degrees 19 minutes 30 seconds N. and long. 89 degrees 26 minutes 47 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; few fine roots; neutral; abrupt smooth boundary.

E—9 to 13 inches; light brownish gray (10YR 6/2) silt loam; moderate thin platy structure; friable; few fine roots; common fine faint grayish brown (10YR 5/2) redoximorphic depletions; slightly acid; clear smooth boundary.

BE—13 to 17 inches; brown (10YR 5/3) silt loam; moderate medium platy structure parting to moderate very fine subangular blocky; friable; few fine roots; common faint brown (10YR 4/3) clay films on faces of peds and common distinct light gray (10YR 7/2) (dry) redoximorphic clay depletions on faces of peds; few fine dark brown (7.5YR 3/2) concretions of iron and manganese oxide; few fine faint grayish brown (10YR 5/2) iron depletions; slightly acid; clear smooth boundary.

Bt—17 to 24 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; few fine roots; many faint dark grayish brown (10YR 4/2) clay films and common faint light gray (10YR 7/2) (dry) redoximorphic clay depletions on faces of peds; common fine rounded dark brown (7.5YR 3/2) concretions of iron and manganese oxide; common fine faint grayish brown (10YR 5/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) iron concentrations; strongly acid; clear smooth boundary.

Btg1—24 to 33 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct grayish brown (10YR 5/2) clay films and few distinct light gray (10YR 7/2) (dry) redoximorphic clay depletions on faces of peds; common fine rounded dark brown (7.5YR 3/2) concretions of iron and manganese oxide; common fine faint light brownish gray (2.5Y 6/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) iron concentrations; strongly acid; clear smooth boundary.

Btg2—33 to 40 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films and few distinct light gray (10YR 7/2) (dry) redoximorphic clay depletions on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; common fine prominent rounded dark brown (7.5YR 3/2) concretions of iron and manganese oxide; many fine prominent yellowish brown (10YR 5/6) iron concentrations; strongly acid; clear smooth boundary.

Btg3—40 to 48 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate coarse prismatic structure; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; many fine prominent yellowish brown (10YR 5/6) iron concentrations; strongly acid; clear smooth boundary.

BCg—48 to 55 inches; light brownish gray (2.5Y 6/2) silt loam; weak coarse prismatic structure; friable; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; many medium prominent yellowish brown (10YR 5/6) iron concentrations; moderately acid; clear smooth boundary.

Cg—55 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; many medium prominent yellowish brown (10YR 5/6) iron concentrations; slightly acid.

Range in Characteristics

Thickness of the solum: 42 to 72 inches

Ap or A horizon:
Value—2 or 3
Chroma—1 or 2
Reaction—moderately acid to neutral

E horizon:
Value—4 to 6
Chroma—1 or 2
Reaction—strongly acid to neutral

Bt or Btg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam or silt loam
Reaction—strongly acid to neutral

C or Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Reaction—moderately acid to slightly alkaline

61A—Atterberry silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Composition

Atterberry and similar soils: 98 percent
Dissimilar soils: 2 percent

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Eroded soils that have slopes of 2 to 5 percent; near the head of drainageways

Dissimilar soils:
- The well drained Fayette soils on shoulders
- The well drained Rozetta soils on summits
- The poorly drained Sable soils in depressions

Properties and Qualities of the Atterberry Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.7 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 0.5 foot, January to May
Flooding: None

Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland where drained
Hydric soil status: Not hydric

Biggsville Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludolls

Typical Pedon (Official Series Description)

Biggsville silt loam, 0 to 2 percent slopes, at an elevation of 630 feet; 1,520 feet west and 200 feet south of the northeast corner of sec. 30, T. 19 N., R. 3 E.; in Rock Island County, Illinois; USGS Hillsdale topographic quadrangle; lat. 41 degrees 36 minutes 40 seconds N. and long. 90 degrees 12 minutes 00 seconds W., NAD 27:

Ap—0 to 8 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; moderate very fine and fine granular structure; friable; common fine roots; neutral; abrupt smooth boundary.

AB—8 to 16 inches; very dark grayish brown (10YR 3/2) and brown (10YR 4/3) silt loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure parting to moderate fine granular; friable; few fine roots; neutral; gradual smooth boundary.

Bw1—16 to 32 inches; brown (10YR 4/3) and dark yellowish brown (10YR 4/4) silt loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; slightly acid; abrupt smooth boundary.

Bw2—32 to 47 inches; brown (10YR 4/3) silt loam; moderate medium prismatic structure; friable; common medium distinct brown (7.5YR 4/4) and yellowish brown (10YR 5/6) masses of iron within peds; common medium distinct grayish brown (10YR 5/2) iron depletions within peds; few fine black (7.5YR 2.5/1) iron and manganese oxide stains; slightly acid; gradual smooth boundary.

Cg—47 to 80 inches; grayish brown (10YR 5/2), brown (7.5YR 4/4), and yellowish brown (10YR 5/6) silt loam; massive; friable; few fine black (7.5YR 2.5/1) iron and manganese oxide stains; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of the cambic horizon: More than 42 inches

Ap or A horizon:
Value—2 or 3
Chroma—1 to 3
Reaction—moderately acid to moderately alkaline

Bw or BC horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Reaction—moderately acid to neutral

C or Cg horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 6
Reaction—slightly acid to moderately alkaline

671A—Biggsville silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Composition

Biggsville and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that do not have a seasonal high water table within a depth of 6 feet
- Soils that have a surface layer more than 24 inches thick
- Soils that are underlain by sand within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Joy soils on summits

Properties and Qualities of the Biggsville Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches

Available water capacity to a depth of 60 inches: About 12.8 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

671B—Biggsville silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Composition

Biggsville and similar soils: 96 percent
Dissimilar soils: 4 percent

Minor Components

Similar soils:
• Soils that do not have a seasonal high water table within a depth of 6 feet
• Soils that have a surface layer more than 24 inches thick
• Soils that are underlain by sand within a depth of 60 inches

Dissimilar soils:
• The somewhat poorly drained Joy soils on summits
• The poorly drained Denny soils in depressions

Properties and Qualities of the Biggsville Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.8 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Birds Series

Taxonomic classification: Fine-silty, mixed, superactive, nonacid, mesic Typic Fluvaquents

Typical Pedon

Birds silt loam, undrained, 0 to 2 percent slopes, frequently flooded; 2,050 feet north and 110 feet west of the southeast corner of sec. 36, T. 5 N., R. 4 W.; in McDonough County, Illinois; USGS Fandon topographic quadrangle; lat. 40 degrees 22 minutes 26 seconds N. and long. 90 degrees 47 minutes 30 seconds W., NAD 27:

Ap—0 to 9 inches; dark gray (10YR 4/1) silt loam, pale brown (10YR 6/3) dry; thin strata of dark gray (10YR 4/1), very dark gray (10YR 3/1), and light yellowish brown (10YR 6/4) silt loam; moderate fine granular structure; friable; few fine distinct yellowish brown (10YR 5/8) iron masses in the matrix; slightly effervescent; moderately alkaline; abrupt smooth boundary.

Cg1—9 to 22 inches; gray (10YR 5/1) silt loam; thin strata of light gray (10YR 7/1) and dark gray (10YR 4/1) silt loam; massive; friable; few fine distinct light brownish gray (10YR 6/2) iron depletions and few fine distinct yellowish brown (10YR 5/8) iron masses in the matrix; few fine rounded black (7.5YR 2.5/1) concretions of iron-manganese oxide throughout the matrix; slightly effervescent; moderately alkaline; clear smooth boundary.

Cg2—22 to 37 inches; gray (10YR 5/1) silt loam; thin strata of dark gray (10YR 4/1) silt loam; massive; friable; common fine distinct light brownish gray (10YR 6/2) iron depletions and common fine

distinct yellowish brown (10YR 5/8) iron masses in the matrix; few fine rounded black (7.5YR 2.5/1) concretions of iron-manganese oxide throughout the matrix; neutral; clear smooth boundary.

Cg3—37 to 60 inches; light brownish gray (10YR 6/2) silt loam; thin strata of dark gray (10YR 4/1) silt loam; massive; friable; common fine distinct dark gray (10YR 4/1) iron depletions and common fine and medium distinct yellowish brown (10YR 5/8) iron masses in the matrix; few fine rounded black (7.5YR 2.5/1) concretions of iron-manganese oxide throughout the matrix; slightly acid.

Range in Characteristics

Ap, A, or ACg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 or 2
Texture—silt loam; strata of silty clay loam, clay loam, loam, or sandy loam below a depth of 40 inches in some pedons

1334A—Birds silt loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Birds and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a thicker or darker surface layer

Dissimilar soils:
- The poorly drained Sawmill soils on toeslopes
- Well drained soils on footslopes

Properties and Qualities of the Birds Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.9 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, November to June
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 5w
Prime farmland status: Not prime farmland
Hydric soil status: Hydric

Bold Series

Taxonomic classification: Coarse-silty, mixed, superactive, calcareous, mesic Typic Udorthents
Map unit in which this series occurs: 962F

Typical Pedon

Bold silt loam, in an area of Sylvan-Bold complex, severely eroded, 10 to 18 percent slopes; 600 feet north and 900 feet east of the southwest corner of sec. 7, T. 16 N., R. 3 E.; in Henry County, Illinois; USGS Geneseo topographic quadrangle; lat. 41 degrees 23 minutes 04 seconds N. and long. 90 degrees 11 minutes 57 seconds W., NAD 27:

Ap—0 to 8 inches; mixed brown (10YR 4/3), dark grayish brown (10YR 4/2), and yellowish brown (10YR 5/4) silt loam, pale brown (10YR 6/3) and light yellowish brown (10YR 6/4) dry; weak very fine and fine granular structure; friable; slightly effervescent; moderately alkaline; abrupt smooth boundary.

C1—8 to 16 inches; yellowish brown (10YR 5/6) silt loam; massive; friable; strongly effervescent; moderately alkaline; abrupt smooth boundary.

C2—16 to 37 inches; light brownish gray (10YR 6/2) and yellowish brown (10YR 5/6) silt loam; massive; friable; strongly effervescent; moderately alkaline; clear smooth boundary.

C3—37 to 60 inches; yellowish brown (10YR 5/6) and light brownish gray (10YR 6/2) silt loam; massive; friable; strongly effervescent; moderately alkaline; clear wavy boundary.

C4—60 to 80 inches; light brownish gray (10YR 6/2)

and yellowish brown (10YR 5/6) silt loam; massive; few coarse prominent strong brown (7.5YR 5/8) iron concentrations; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: 6 to more than 30 feet
Thickness of the solum: 3 to 12 inches

Ap horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 6

C horizon:
Hue—10YR
Value—4 to 7
Chroma—2 to 8

Buckhart Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls

Typical Pedon (Official Series Description)

Buckhart silt loam, 2 to 5 percent slopes, at an elevation of 603 feet; 360 feet west and 540 feet north of the southeast corner of sec. 24, T. 14 N., R. 3 W.; in Christian County, Illinois; USGS Grove City topographic quadrangle; lat. 39 degrees 33 minutes 53 seconds N. and long. 89 degrees 22 minutes 06 seconds W., NAD 27:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; few very fine roots; moderately acid; clear smooth boundary.

A—8 to 15 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure parting to moderate medium granular; friable; few very fine roots; moderately acid; clear smooth boundary.

Bt1—15 to 26 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure parting to moderate medium granular; friable; few very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds and few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and/or pores; slightly acid; clear smooth boundary.

Bt2—26 to 37 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine irregular prominent strong brown (7.5YR 5/6) masses of iron and manganese along pores and few fine irregular prominent light brownish gray (2.5Y 6/2) iron depletions along pores; neutral; clear smooth boundary.

Bt3—37 to 52 inches; brown (10YR 5/3) silt loam; weak medium subangular blocky structure; friable; few very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine irregular prominent strong brown (7.5YR 5/6) masses of iron and manganese along pores, few fine rounded prominent black (7.5YR 2.5/1) iron-manganese nodules throughout, and common fine distinct irregular light brownish gray (2.5Y 6/2) iron depletions along pores; slightly acid; clear smooth boundary.

BCt—52 to 67 inches; light olive brown (2.5Y 5/3) silt loam; weak coarse subangular blocky structure; friable; few very fine roots; few distinct dark grayish brown (10YR 4/2) clay films in root channels and/or pores; common fine irregular prominent strong brown (7.5YR 5/6) masses of iron and manganese along pores, common fine irregular light brownish gray (2.5Y 6/2) iron depletions along pores, and few fine rounded prominent black (7.5YR 2.5/1) iron-manganese nodules throughout; neutral; gradual smooth boundary.

C—67 to 80 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; common medium irregular distinct strong brown (7.5YR 5/6) masses of iron and manganese throughout, common medium irregular prominent light brownish gray (2.5Y 6/2) iron depletions throughout, and few fine rounded prominent black (7.5YR 2.5/1) iron-manganese nodules throughout; neutral.

Range in Characteristics

Thickness of the loess: More than 80 inches
Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of the argillic horizon: 40 to 55 inches
Depth to carbonates (if they occur): More than 40 inches

Ap and A horizons:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or silty clay loam

Bt or Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6

Texture—silty clay loam or silt loam
Reaction—moderately acid to neutral

BC or BCg horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 4
Texture—silt loam or silty clay loam
Reaction—neutral or slightly alkaline

C or Cg horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 6
Reaction—neutral to moderately alkaline

705A—Buckhart silt loam, 0 to 2 percent slopes

Setting

Landform: Knolls on ground moraines
Position on the landform: Summits

Composition

Buckhart and similar soils: 93 percent
Dissimilar soils: 7 percent

Minor Components

Similar soils:
- Soils that have a seasonal high water table at a depth of less than 2 feet
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:
- The poorly drained Sable soils on toeslopes
- The poorly drained Denny soils in depressions

Properties and Qualities of the Buckhart Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.2 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2 feet, February to April
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Burkhardt Series

Taxonomic classification: Sandy, mixed, mesic Typic Hapludolls

Typical Pedon

Burkhardt sandy loam, in an area of Burkhardt-Saude complex, 0 to 2 percent slopes; 58 feet west and 602 feet north of the southeast corner of sec. 33, T. 21 N., R. 2 E.; in Rock Island County, Illinois; USGS Comanche topographic quadrangle; lat. 41 degrees 51 minutes 55 seconds N. and long. 90 degrees 15 minutes 55 seconds W., NAD 27:

A1—0 to 7 inches; very dark gray (10YR 3/1) and very dark grayish brown (10YR 3/2) sandy loam; moderate fine and medium granular structure; very friable; moderately acid; clear smooth boundary.

A2—7 to 13 inches; very dark gray (10YR 3/1) and very dark grayish brown (10YR 3/2) sandy loam; moderate medium subangular blocky structure parting to moderate fine and medium granular; very friable; moderately acid; clear smooth boundary.

Bw—13 to 20 inches; brown (10YR 4/3), dark brown (10YR 3/3), and very dark gray (10YR 3/1) sandy loam; moderate medium and coarse subangular blocky structure; very friable; moderately acid; clear smooth boundary.

2BC—20 to 24 inches; dark yellowish brown (10YR 4/4), dark brown (10YR 3/3), and brown (10YR 4/3) gravelly loamy sand; weak coarse subangular blocky structure; very friable; moderately acid; gradual smooth boundary.

2C—24 to 60 inches; yellowish brown (10YR 5/4) and dark brown (10YR 3/3) medium and coarse sand and fine gravel; single grain; moderately acid.

Range in Characteristics

Thickness of the solum: 10 to 20 inches

Ap or A horizon:
Hue—7.5YR or 10YR

Value—2 or 3
Chroma—1 to 3
Texture—sandy loam, loam, or gravelly sandy loam

Bw or Bt horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—sandy loam, loam, gravelly sandy loam, or gravelly loam

2Bt or 2BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—4 to 6
Texture—sand, coarse sand, loamy sand, or loamy coarse sand or the gravelly analogs of these textures

2C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—stratified sand, coarse sand, gravelly sand, or gravelly coarse sand

961A—Burkhardt-Saude complex, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Composition

Burkhardt and similar soils: 50 percent
Saude and similar soils: 50 percent

Minor Components

Similar soils:
- Soils that have less gravel in the lower part
- Soils that are underlain by limestone bedrock within a depth of 60 inches

Properties and Qualities of the Burkhardt Soil

Parent material: Outwash
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 4.1 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Low
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderately high

Properties and Qualities of the Saude Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 6.7 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Burkhardt—2s; Saude—2s
Prime farmland status: Prime farmland
Hydric soil status: Burkhardt—not hydric; Saude—not hydric

Calco Series

Taxonomic classification: Fine-silty, mixed, superactive, calcareous, mesic Cumulic Endoaquolls

Typical Pedon

Calco silty clay loam, 0 to 2 percent slopes, frequently flooded; 1,100 feet east and 2,600 feet south of the northwest corner of sec. 19, T. 19 N., R. 4 E.; in Whiteside County, Illinois; USGS Spring Hill topographic quadrangle; lat. 41 degrees 37 minutes 14 seconds N. and long. 90 degrees 05 minutes 22 seconds W., NAD 27:

A1—0 to 17 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; moderate medium granular structure; friable; few snail-shell fragments; slightly effervescent; slightly alkaline; gradual smooth boundary.

A2—17 to 30 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; moderate medium and fine subangular blocky structure; friable; few snail-shell fragments; slightly effervescent; slightly alkaline; gradual smooth boundary.

A3—30 to 37 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; weak medium and fine subangular blocky structure; friable; few snail-shell fragments; violently effervescent; slightly alkaline; gradual smooth boundary.

Bg—37 to 49 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak medium subangular blocky structure; friable; few snail-shell fragments; violently effervescent; slightly alkaline; clear smooth boundary.

Cg—49 to 60 inches; dark gray (5Y 4/1) loam; massive; friable; few thin lenses of sand; few snail-shell fragments; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 30 to 50 inches
Thickness of the solum: 40 to 60 inches

Ap or A horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 or 3
Chroma—0 or 1
Texture—silty clay loam or silt loam

Bg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 or 1
Texture—silty clay loam

Cg horizon:
Hue—2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 1
Texture—loam, clay loam, silt loam, or silty clay loam

1400A—Calco silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Calco and similar soils: 99 percent
Dissimilar soils: 1 percent

Minor Components

Similar soils:
- Soils that are not calcareous
- Soils that have a surface layer less than 24 inches thick
- Soils that contain less silt and more sand throughout
- Soils that contain less clay throughout

Dissimilar soils:
- Moderately well drained soils on flood plains
- The poorly drained Millington and Otter soils on toeslopes

Properties and Qualities of the Calco Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.8 inches
Content of organic matter in the surface layer: 5 to 7 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, November to June
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 5w
Prime farmland status: Not prime farmland
Hydric soil status: Hydric

3400A—Calco silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Calco and similar soils: 85 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that are not calcareous
- Soils that have a surface layer less than 24 inches thick
- Soils that contain less silt and more sand throughout
- Soils that contain less clay throughout

Dissimilar soils:
- Moderately well drained soils on flood plains
- Well drained soils on low terrace footslopes

Properties and Qualities of the Calco Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.7 inches
Content of organic matter in the surface layer: 5 to 7 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

8400A—Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Composition

Calco and similar soils: 85 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that are not calcareous
- Soils that have a surface layer less than 24 inches thick
- Soils that contain less silt and more sand throughout
- Soils that contain less clay throughout

Dissimilar soils:
- Moderately well drained soils on flood plains

Properties and Qualities of the Calco Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.7 inches
Content of organic matter in the surface layer: 5 to 7 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Occasional, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Chute Series

Taxonomic classification: Mixed, mesic Typic Udipsamments
Map unit in which this series occurs: 959G

Typical Pedon

Chute fine sand, 7 to 15 percent slopes, severely

eroded; 380 feet north and 2,000 feet west of the southeast corner of sec. 17, T. 17 N., R. 6 E.; in Bureau County, Illinois; USGS Mineral topographic quadrangle; lat. 41 degrees 27 minutes 11 seconds N. and long. 89 degrees 49 minutes 38 seconds W., NAD 27:

A—0 to 4 inches; brown (10YR 5/3) fine sand, light yellowish brown (10YR 6/4) dry; weak coarse subangular blocky structure; very friable; few fine roots; strongly effervescent; slightly alkaline; gradual smooth boundary.

C—4 to 60 inches; light yellowish brown (10YR 6/4) fine sand; single grain; loose; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the solum: Typically less than 15 inches (A and AC horizons)

A, Ap, or AC horizon (if it occurs):
Hue—10YR
Value—3 to 6
Chroma—2 to 4
Texture—loamy fine sand, fine sandy loam, fine sand, or sand

C horizon:
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture—fine sand, loamy fine sand, or sand

Coatsburg Series

Taxonomic classification: Fine, smectitic, mesic Vertic Argiaquolls
Map unit in which this series occurs: 944D2

Typical Pedon (Official Series Description)

Coatsburg silt loam, 5 to 10 percent slopes, eroded; 2,550 feet east and 2,400 feet north of the southwest corner of sec. 20, T. 2 N., R. 5 W.; in Adams County, Illinois; USGS Augusta topographic quadrangle; lat. 40 degrees 08 minutes 31 seconds N. and long. 91 degrees 70 minutes 25 seconds W., NAD 27:

Ap—0 to 6 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; friable; many fine and medium roots; moderately acid; abrupt smooth boundary.

AB—6 to 10 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak medium subangular blocky structure parting to moderate fine subangular blocky; firm; common fine roots; few patchy prominent light gray (10YR 7/1) (dry) clay depletions on faces of peds; common fine prominent irregular strong brown (7.5YR 5/6) masses of iron oxide throughout; many fine prominent irregular light olive brown (2.5Y 5/4) masses of iron oxide throughout; moderately acid; clear wavy boundary.

2Btg1—10 to 14 inches; dark grayish brown (10YR 4/2) silty clay loam; weak medium subangular blocky structure; firm; few fine roots; common continuous distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common discontinuous distinct dark gray (10YR 4/1) clay films on faces of peds; common fine prominent irregular strong brown (7.5YR 5/6) and many fine prominent irregular light olive brown (2.5Y 5/4) masses of iron oxide throughout; moderately acid; clear wavy boundary.

2Btg2—14 to 19 inches; grayish brown (10YR 5/2) silty clay; weak coarse prismatic structure parting to weak medium subangular blocky; firm; few fine and medium roots; common discontinuous distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; many fine prominent irregular strong brown (7.5YR 5/6) masses of iron oxide throughout; common fine faint irregular light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear wavy boundary.

2Btg3—19 to 26 inches; grayish brown (10YR 5/2) silty clay loam; weak very coarse prismatic structure; firm; few fine roots; few patchy distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common discontinuous distinct gray (10YR 5/1) clay films on faces of peds; common fine and medium prominent irregular strong brown (7.5YR 5/6) masses of iron oxide throughout; many fine faint irregular light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear wavy boundary.

2Btg4—26 to 38 inches; grayish brown (10YR 5/2) silty clay loam; weak very coarse prismatic structure; firm; few very fine roots; few discontinuous distinct gray (10YR 5/1) clay films on faces of peds and in pores; common fine and medium prominent irregular black (2.5Y 2.5/1) masses of iron and manganese oxide throughout; common fine and medium prominent irregular strong brown (7.5YR 5/6) masses of iron oxide throughout; many fine and medium faint irregular light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear wavy boundary.

2Btg5—38 to 45 inches; light brownish gray (10YR 6/2) silty clay loam; moderate very coarse prismatic structure; firm; few discontinuous distinct

dark gray (10YR 4/1) clay films lining root channels and pores; common discontinuous distinct grayish brown (10YR 5/2) clay films on faces of peds; common patchy prominent light gray (10YR 7/2) clay depletions on faces of peds; common medium prominent irregular brownish yellow (10YR 6/8) masses of iron oxide throughout; slightly acid; clear wavy boundary.

2Btg6—45 to 62 inches; gray (10YR 6/1) silty clay loam; moderate very coarse prismatic structure; firm; many continuous prominent light gray (10YR 7/2) clay depletions on faces of peds; common continuous distinct gray (10YR 5/1) clay films on faces of peds; few medium prominent irregular black (2.5Y 2.5/1) masses of iron and manganese oxide throughout; common medium and coarse prominent irregular brownish yellow (10YR 6/6) masses of iron oxide throughout; slightly acid; clear wavy boundary.

2Btg7—62 to 70 inches; light brownish gray (10YR 6/2) silty clay; weak very coarse prismatic structure parting to moderate medium subangular blocky; very firm; few continuous distinct gray (10YR 6/1) clay films on faces of peds and in pores; common fine prominent irregular black (2.5Y 2.5/1) masses of iron and manganese oxide throughout; many medium prominent irregular strong brown (7.5YR 5/6) masses of iron oxide throughout; 2 percent pressure faces throughout; slightly acid; gradual wavy boundary.

2BCg—70 to 80 inches; gray (10YR 6/1) silty clay; weak very coarse prismatic structure; firm; common fine prominent irregular black (2.5Y 2.5/1) masses of iron and manganese oxide throughout; many coarse prominent irregular brownish yellow (10YR 6/6) masses of iron oxide throughout; slightly acid.

Range in Characteristics

Thickness of the loess: Less than 20 inches
Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of the argillic horizon: 50 to 80 inches

Ap, A, or AB horizon:
Value—2 or 3
Chroma—1 or 2
Texture—silt loam, silty clay loam, or clay loam
Reaction—strongly acid to slightly alkaline (in areas that have been limed)

Bt, Btg, 2Bt, or 2Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 2
Texture—clay, clay loam, silty clay, or silty clay loam
Reaction—strongly acid to slightly acid

2BCg or 2Cg horizon (if it occurs):
Hue—10YR, 7.5YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 8
Texture—clay, clay loam, silty clay, silty clay loam, or loam
Reaction—moderately acid to slightly alkaline

Coffeen Series

Taxonomic classification: Coarse-silty, mixed, superactive, mesic Fluvaquentic Hapludolls

Typical Pedon

Coffeen silt loam, 0 to 2 percent slopes, frequently flooded; 860 feet north and 1,740 feet west of the southeast corner of sec. 24, T. 20 N., R. 3 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 42 minutes 09 seconds N. and long. 90 degrees 05 minutes 56 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; neutral; abrupt smooth boundary.

A—9 to 17 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium and fine subangular blocky structure parting to moderate fine granular; friable; neutral; clear smooth boundary.

Bw1—17 to 24 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; common fine faint dark grayish brown (10YR 4/2) iron depletions and common fine faint dark yellowish brown (10YR 4/4) iron masses in the matrix; neutral; clear smooth boundary.

Bw2—24 to 33 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; common fine faint grayish brown (10YR 5/2) iron depletions and common fine faint brown (10YR 5/3) iron masses in the matrix; slightly alkaline; clear smooth boundary.

BCg—33 to 46 inches; grayish brown (2.5Y 5/2) silt loam; weak medium subangular blocky structure; friable; common fine prominent strong brown (7.5YR 4/6) and dark yellowish brown (10YR 4/4) iron masses in the matrix; common fine rounded

iron-manganese concretions; slightly alkaline; gradual smooth boundary.

Cg—46 to 60 inches; grayish brown (2.5Y 5/2) and brown (10YR 5/3) silt loam; massive; friable; few fine rounded iron-manganese concretions; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches
Thickness of the solum: 30 to 64 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3

Bw or Bg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 or 3
Texture—silt loam; thin lenses of loam or sandy loam in some pedons

C or Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 8
Chroma—1 to 3
Texture—silt loam; strata of loam or sandy loam in some pedons

3428A—Coffeen silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Coffeen and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have a light-colored layer of overwash material
- Soils that are underlain by sand within a depth of 60 inches

Dissimilar soils:
- The well drained Raddle soils on flood plains

Properties and Qualities of the Coffeen Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.5 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

7428A—Coffeen silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Composition

Coffeen and similar soils: 85 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have a light-colored layer of overwash material
- Soils that are underlain by sand within a depth of 60 inches

Dissimilar soils:
- The poorly drained Sawmill soils in the lower positions on flood plains

Properties and Qualities of the Coffeen Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.5 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Frequency and most likely period of flooding: Rare, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Coloma Series

Taxonomic classification: Mixed, mesic Lamellic Udipsamments

Typical Pedon

Coloma sand, 1 to 7 percent slopes; 1,500 feet east and 1,800 feet south of the northwest corner of sec. 20, T. 14 N., R. 5 W.; in Mercer County, Illinois; USGS Joy topographic quadrangle; lat. 41 degrees 11 minutes 49 seconds N. and long. 90 degrees 59 minutes 23 seconds W., NAD 27:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) sand, light grayish brown (10YR 6/2) dry; weak medium granular structure; very friable; neutral; clear wavy boundary.
Bw1—9 to 16 inches; brown (10YR 4/3) sand; single grain; loose; neutral; gradual wavy boundary.
Bw2—16 to 29 inches; dark yellowish brown (10YR 4/4) sand; single grain; loose; slightly acid; gradual wavy boundary.
Bw3—29 to 50 inches; yellowish brown (10YR 5/4) sand; single grain; loose; slightly acid; abrupt smooth boundary.
E&Bt1—50 to 65 inches; about 95 percent yellowish brown (10YR 5/4) sand (E); single grain; loose; about 5 percent brown (7.5YR 4/4) loamy sand (Bt) consisting of several thin lamellae (total thickness less than 1 inch); weak fine and medium subangular blocky structure; very friable; neutral; clear smooth boundary.
E&Bt2—65 to 80 inches; about 90 percent yellowish brown (10YR 5/4) sand (E); single grain; loose; about 10 percent brown (7.5YR 4/4) loamy sand (Bt) consisting of several thin lamellae (total thickness less than 2 inches); weak fine and medium subangular blocky structure; very friable; neutral.

Range in Characteristics

Depth to first lamellae: 40 to 60 inches

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—1 to 3
Texture—sand or loamy sand

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—sand or loamy sand

E part of E&Bt horizon:
Hue—5YR, 7.5YR, or 10YR
Value—4 to 7
Chroma—3 to 6
Texture—sand, loamy sand, or sandy loam

Bt part of E&Bt horizon:
Hue—5YR, 7.5YR, or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—sandy loam, loamy sand, or sand

C horizon (if it occurs):
Hue—5YR, 7.5YR, or 10YR
Value—4 to 7
Chroma—3 to 6
Texture—sand

689B—Coloma sand, 1 to 7 percent slopes

Setting

Landform: Dunes
Position on the landform: Shoulders

Composition

Coloma and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have more clay in the upper part
- Soils that have less textural banding in the lower part
- Soils that have a darker surface layer

Properties and Qualities of the Coloma Soil

Parent material: Eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 4.2 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 4s
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

689D—Coloma sand, 7 to 15 percent slopes

Setting

Landform: Dunes
Position on the landform: Shoulders

Composition

Coloma and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have more clay in the upper part
- Soils that have less textural banding in the lower part
- Soils that have a darker surface layer

Properties and Qualities of the Coloma Soil

Parent material: Eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 4.1 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 6s
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Coyne Series

Taxonomic classification: Coarse-loamy, mixed, active, mesic Typic Argiudolls

Typical Pedon (Official Series Description)

Coyne fine sandy loam, 0 to 2 percent slopes; 244 feet east and 847 feet south of the center of sec. 10, T. 20 N., R. 2 E.; in Rock Island County, Illinois; USGS Cordova topographic quadrangle; lat. 41 degrees 44 minutes 04 seconds N. and long. 90 degrees 15 minutes 21 seconds W., NAD 27:

Ap—0 to 9 inches; very dark gray (10YR 3/1) fine sandy loam, gray (10YR 5/1) dry; weak coarse subangular blocky structure parting to moderate very fine and fine granular; very friable; slightly acid; abrupt smooth boundary.

A1—9 to 13 inches; black (10YR 2/1) fine sandy loam, dark gray (10YR 4/1) dry; weak coarse subangular blocky structure parting to moderate very fine and fine granular; very friable; slightly acid; clear smooth boundary.

A2—13 to 23 inches; very dark gray (10YR 3/1) and very dark grayish brown (10YR 3/2) fine sandy loam, gray (10YR 5/1) and grayish brown (10YR 5/2) dry; moderate fine granular structure; very friable; slightly acid; clear smooth boundary.

BA—23 to 28 inches; intermingled very dark grayish

brown (10YR 3/2), dark brown (10YR 3/3), and dark grayish brown (10YR 4/2) fine sandy loam; weak coarse subangular blocky structure parting to weak very fine and fine granular; very friable; moderately acid; clear smooth boundary.

Bw—28 to 42 inches; brown (7.5YR 4/4) fine sandy loam; weak coarse subangular blocky structure; very friable; few fine black (10YR 2/1) iron and manganese concretions; moderately acid; clear smooth boundary.

2Bt1—42 to 52 inches; reddish brown (5YR 4/4) silty clay loam; strong medium and coarse subangular blocky structure; firm; many distinct dark reddish brown (5YR 3/3) clay films on faces of peds; moderately acid; abrupt smooth boundary.

2Bt2—52 to 55 inches; reddish brown (5YR 4/4) loam; strong medium and coarse subangular blocky structure; firm; many distinct dark reddish brown (5YR 3/3) clay films on faces of peds; moderately acid; abrupt smooth boundary.

3C—55 to 60 inches; brown (7.5YR 4/4) sand and gravel; single grain; loose; moderately acid.

Range in Characteristics

Thickness of the solum: 48 to 72 inches
Depth to the argillic horizon: More than 40 inches

A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—loam, fine sandy loam, or loamy fine sand
Reaction—moderately acid to neutral

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 5
Texture—loam or fine sandy loam
Reaction—moderately acid to neutral

2Bt horizon:
Hue—5YR or 2.5YR
Value—4 to 6
Chroma—3 to 6
Texture—loam, silt loam, silty clay loam, or silty clay
Reaction—moderately acid to neutral

3C horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 to 8
Texture—sand or sand and gravel with strata of clay loam, loam, silty clay loam, or silt loam
Reaction—moderately acid to moderately alkaline

764A—Coyne fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Lake plains
Position on the landform: Summits

Composition

Coyne and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have less sand and more clay in the underlying material
- Soils that have less silt and clay and more sand in the upper part
- Soils that have a perched seasonal high water table within a depth of 60 inches

Dissimilar soils:
- Somewhat poorly drained soils on summits

Properties and Qualities of the Coyne Soil

Parent material: Lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid to moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.6 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

764C—Coyne fine sandy loam, 5 to 10 percent slopes

Setting

Landform: Lake plains
Position on the landform: Shoulders

Composition

Coyne and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have less sand and more clay in the underlying material
- Soils that have less silt and clay and more sand in the upper part
- Soils that have a perched seasonal high water table within a depth of 60 inches

Dissimilar soils:
- Somewhat poorly drained soils on summits

Properties and Qualities of the Coyne Soil

Parent material: Lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid to moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.6 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Denny Series

Taxonomic classification: Fine, smectitic, mesic Mollic Albaqualfs

Typical Pedon

Denny silt loam, 0 to 2 percent slopes, at an elevation of 720 feet; 225 feet north and 1,680 feet east of the southwest corner of sec. 25, T. 7 N., R. 3 W.; in McDonough County, Illinois; USGS Good Hope topographic quadrangle; lat. 40 degrees 33 minutes 31 seconds N. and long. 90 degrees 41 minutes 14 seconds W., NAD 27:

Ap—0 to 8 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak fine granular structure; very friable; few very fine roots throughout; moderately acid; abrupt smooth boundary.

Eg1—8 to 14 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak thick platy structure parting to weak thin platy; very friable; few very fine roots throughout; few very fine vesicular pores throughout; few distinct very dark gray (10YR 3/1) organic coatings in root channels; common faint grayish brown (10YR 5/2) clay depletions on faces of peds; common fine distinct dark yellowish brown (10YR 3/6) masses that have accumulated iron and manganese and are throughout the horizon; few fine black (7.5YR 2.5/1) iron and manganese concretions in the matrix; moderately acid; clear smooth boundary.

Eg2—14 to 21 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; weak thick platy structure parting to moderate medium platy; friable; few very fine roots throughout; few fine tubular pores and few very fine vesicular pores throughout; few distinct very dark gray (10YR 3/1) organic coatings in root channels; common fine distinct dark brown (10YR 3/3) masses that have accumulated iron and manganese and are throughout the horizon; common fine black (7.5YR 2.5/1) iron and manganese concretions in the matrix; moderately acid; abrupt smooth boundary.

Btg1—21 to 29 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine and medium subangular blocky structure; firm; few very fine roots between peds; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few distinct very dark gray (10YR 3/1) organic coatings in root channels; many fine distinct dark yellowish brown (10YR 4/6) and common fine faint yellowish brown (10YR 5/4) masses that have accumulated iron and manganese and are throughout the horizon; common fine black (7.5YR 2.5/1) iron and manganese concretions in the matrix; moderately acid; clear smooth boundary.

Btg2—29 to 38 inches; grayish brown (10YR 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky;

firm; few very fine roots between peds; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few distinct very dark gray (10YR 3/1) organic coatings in root channels; many fine distinct dark yellowish brown (10YR 4/6) and common fine distinct yellowish brown (10YR 5/8) masses that have accumulated iron and manganese and are throughout the horizon; common fine black (7.5YR 2.5/1) iron and manganese concretions in the matrix; moderately acid; gradual smooth boundary.

Btg3—38 to 46 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate coarse prismatic structure parting to moderate coarse subangular blocky; firm; very few fine roots between peds; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few distinct very dark gray (10YR 3/1) organic coatings in root channels; many fine prominent dark yellowish brown (10YR 4/6) and common fine prominent strong brown (7.5YR 5/6) masses that have accumulated iron and manganese and are throughout the horizon; common fine black (7.5YR 2.5/1) iron and manganese concretions in the matrix; moderately acid; gradual wavy boundary.

Cg1—46 to 63 inches; light brownish gray (2.5Y 6/2) silty clay loam; massive; firm; few very fine roots between peds; few very fine vesicular pores throughout; very few distinct very dark gray (10YR 3/1) organic coatings in root channels; many fine prominent dark yellowish brown (10YR 4/6) and common fine prominent strong brown (7.5YR 5/6) masses that have accumulated iron and manganese and are throughout the horizon; few medium black (7.5YR 2.5/1) iron and manganese concretions in the matrix; slightly acid; diffuse wavy boundary.

Cg2—63 to 80 inches; light brownish gray (2.5Y 6/2) silt loam; massive; firm; many very fine vesicular pores throughout; very few distinct very dark gray (10YR 3/1) organic coatings in root channels; many fine prominent dark yellowish brown (10YR 4/6) and common fine prominent strong brown (7.5YR 5/6) masses that have accumulated iron and manganese and are throughout the horizon; few medium black (7.5YR 2.5/1) iron and manganese concretions in the matrix; slightly acid.

Range in Characteristics

Depth to the base of the diagnostic horizon: 40 to 65 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

Eg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Texture—silt loam

Btg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam or silty clay

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silt loam or silty clay loam

45A—Denny silt loam, 0 to 2 percent slopes

Setting

Landform: Depressions

Composition

Denny and similar soils: 98 percent
Dissimilar soils: 2 percent

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have less clay in the subsoil
- Soils that have a seasonal high water table below a depth of 1 foot

Dissimilar soils:
- The moderately well drained Buckhart soils on summits
- The well drained Osco soils on summits

Properties and Qualities of the Denny Soil

Parent material: Loess
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.6 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: High

Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.5 foot during wet periods
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Dickinson Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludolls

Typical Pedon

Dickinson sandy loam, 0 to 2 percent slopes; 360 feet north and 1,720 feet west of the center of sec. 17, T. 17 N., R. 6 E.; in Bureau County, Illinois; USGS Mineral topographic quadrangle; lat. 41 degrees 27 minutes 37 seconds N. and long. 89 degrees 50 minutes 09 seconds W., NAD 27:

Ap—0 to 8 inches; very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; very friable; few fine roots; moderately acid; abrupt smooth boundary.
A1—8 to 15 inches; very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure; very friable; few fine roots; moderately acid; clear smooth boundary.
A2—15 to 20 inches; very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; very friable; few fine roots; common very dark brown (10YR 2/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.
Bw—20 to 31 inches; brown (10YR 4/3) sandy loam; weak medium prismatic structure parting to weak medium subangular blocky; very friable; few fine roots; many distinct dark brown (10YR 3/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.
Bt—31 to 36 inches; yellowish brown (10YR 5/6) loamy sand; weak medium prismatic structure parting to weak medium subangular blocky; very friable; common distinct brown (10YR 4/3) clay films bridging sand grains; slightly acid; clear smooth boundary.
BC—36 to 47 inches; yellowish brown (10YR 5/6) sand; weak coarse prismatic structure; very friable; moderately acid; clear smooth boundary.
C—47 to 60 inches; yellowish brown (10YR 5/6) sand; single grain; loose; strong brown (7.5YR 5/6) bands 1/2 inch to 2 inches thick at depths of 52, 56, and 58 inches; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—fine sandy loam, sandy loam, or loam

Bw horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—sandy loam or fine sandy loam

BC and/or C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—loamy sand, sand, loamy fine sand, or fine sand

87A—Dickinson sandy loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Composition

Dickinson and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have more sand and gravel
- Soils that have more clay

Dissimilar soils:
- The somewhat poorly drained Hoopeston soils on footslopes

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands over outwash

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 5.5 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

87C2—Dickinson sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform: Dunes
Position on the landform: Backslopes

Composition

Dickinson and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have more sand and gravel
- Soils that have more clay

Dissimilar soils:
- The somewhat poorly drained Hoopeston soils on footslopes

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 5.4 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Dorchester Series

Taxonomic classification: Fine-silty, mixed, superactive, calcareous, mesic Typic Udifluvents

Typical Pedon

Dorchester silt loam, 0 to 2 percent slopes; 1,600 feet east and 1,650 feet south of the northwest corner of sec. 36, T. 10 N., R. 6 E.; in Peoria County, Illinois; USGS Oak Hill topographic quadrangle; lat. 40 degrees 48 minutes 31 seconds N. and long. 89 degrees 46 minutes 11 seconds W., NAD 27:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silt loam, light gray (10YR 6/1) dry; weak medium platy structure parting to weak very fine subangular blocky; friable; few very fine roots; few faint very dark grayish brown (10YR 3/2) organic stains on faces of peds; slightly effervescent; slightly alkaline; abrupt smooth boundary.

C—9 to 32 inches; stratified dark grayish brown (10YR 4/2), grayish brown (10YR 5/2), brown (10YR 5/3), very dark gray (10YR 3/1), and very dark grayish brown (10YR 3/2) silt loam; few thin strata of loam; massive with moderate thin bedding planes resulting from stratification; friable; few very fine roots; slightly effervescent; slightly alkaline; abrupt smooth boundary.

2Ab1—32 to 43 inches; black (10YR 2/1) silt loam; weak fine subangular blocky structure parting to weak very fine granular; friable; slightly alkaline; gradual smooth boundary.

2Ab2—43 to 60 inches; very dark gray (10YR 3/1) silt loam; moderate fine subangular blocky structure; friable; many faint black (10YR 2/1) organic stains on faces of peds; few fine distinct brown (10YR

4/3) redoximorphic features below a depth of 48 inches; slightly alkaline.

Range in Characteristics

Thickness of the solum: Less than 10 inches
Depth to the 2Ab horizon: 20 to 45 inches

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam, loam, or silty clay loam

C horizon:
Hue—10YR
Value—3 to 5
Chroma—2 or 3
Texture—silt loam; thin strata of loam in some pedons

2Ab horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—clay loam, silt loam, or silty clay loam

3239A—Dorchester silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Dorchester and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that are not calcareous
- Soils that do not have a buried surface layer within a depth of 60 inches
- Soils that contain more sand throughout
- Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Orion soils on footslopes
- The poorly drained Sawmill soils in the lower positions on flood plains

Properties and Qualities of the Dorchester Soil

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 13.1 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

7239A—Dorchester silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Composition

Dorchester and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that are not calcareous
- Soils that do not have a buried surface layer within a depth of 60 inches
- Soils that contain more sand throughout
- Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Orion soils on footslopes
- The poorly drained Sawmill soils in the lower positions on flood plains

Properties and Qualities of the Dorchester Soil

Parent material: Alluvium

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 13.1 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Frequency and most likely period of flooding: Rare, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Elkhart Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Elkhart soil in map unit 567C2 has a thinner dark surface layer than is defined as the range for the series. This soil is classified as a Mollic Hapludalf.

Typical Pedon (Official Series Description)

Elkhart silt loam, 5 to 10 percent slopes, at an elevation of 570 feet; 2,060 feet south and 1,248 feet west of the northeast corner of sec. 32, T. 19 N., R. 3 W.; in Logan County, Illinois; USGS Broadwell topographic quadrangle; lat. 40 degrees 03 minutes 26 seconds N. and long. 89 degrees 26 minutes 58 seconds W., NAD 27:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; weak fine and medium granular structure; friable; common very fine roots; slightly acid; abrupt smooth boundary.

A—8 to 10 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; friable; common very fine roots; slightly acid; clear smooth boundary.

BA—10 to 15 inches; dark brown (10YR 3/3) silty clay loam, brown (10YR 4/3) dry; moderate very fine and fine subangular blocky structure; friable; common very fine roots; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bt1—15 to 22 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; firm; few very fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; slightly acid; clear smooth boundary.

Bt2—22 to 28 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; few very fine roots; few distinct dark brown (10YR 3/3) organo-clay films on faces of peds; slightly acid; clear smooth boundary.

BCt—28 to 31 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium and coarse subangular blocky structure; friable; few very fine roots; few faint brown (10YR 4/3) clay films on faces of peds; few fine black (5YR 2.5/1) very weakly cemented concretions of manganese with diffuse boundaries in ped interiors; neutral; clear smooth boundary.

C—31 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few very fine roots in the upper 10 inches; common fine prominent strong brown (7.5YR 5/8) masses of iron in ped interiors; common medium distinct gray (10YR 6/1) iron depletions along root channels and pores; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of the argillic horizon: 20 to 40 inches
Depth to carbonates: 20 to 40 inches

Ap, A, or AB horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam
Reaction—moderately acid to slightly alkaline

BA or Bt horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—silty clay loam or silt loam
Reaction—moderately acid to neutral

BC horizon:
Hue—7.5YR, 10YR, or 2.5Y

Value—4 to 6
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—slightly acid to moderately alkaline

C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—silt or silt loam
Reaction—slightly alkaline or moderately alkaline

567C2—Elkhart silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Composition

Elkhart and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that are not calcareous within a depth of 40 inches
- Soils that are underlain by clayey glacial till at a depth of more than 40 inches

Dissimilar soils:
- The somewhat poorly drained Radford soils on toeslopes
- The somewhat poorly drained Muscatune soils on summits

Properties and Qualities of the Elkhart Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.4 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

567D2—Elkhart silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Elkhart and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that are not calcareous within a depth of 40 inches
- Soils that are underlain by clayey glacial till at a depth of more than 40 inches

Dissimilar soils:
- The somewhat poorly drained Radford soils on toeslopes

Properties and Qualities of the Elkhart Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.4 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High

Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Fayette Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Fayette silt loam, 10 to 18 percent slopes, eroded; 2,100 feet north and 1,700 feet west of the southeast corner of sec. 31, T. 12 N., R. 3 W.; in Warren County, Illinois; USGS Rozetta topographic quadrangle; lat. 40 degrees 59 minutes 13 seconds N. and long. 90 degrees 46 minutes 18 seconds W., NAD 27:

Ap—0 to 5 inches; mixed dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4) silt loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; common fine roots throughout; moderately acid; clear smooth boundary.

EB—5 to 9 inches; mixed brown (10YR 5/3) and yellowish brown (10YR 5/4) silt loam; weak medium platy structure parting to moderate fine subangular blocky; friable; common fine roots between peds; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt1—9 to 13 inches; dark yellowish brown (10YR 4/4) silt loam; moderate fine and medium subangular blocky structure; friable; few fine roots between peds; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—13 to 27 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; gradual smooth boundary.

Bt3—27 to 38 inches; yellowish brown (10YR 5/4) silty clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; few prominent dark brown (7.5YR 3/2) accumulations of iron-manganese on faces of peds; moderately acid; gradual wavy boundary.

BC—38 to 55 inches; yellowish brown (10YR 5/4) silt loam; moderate medium and coarse subangular blocky structure; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; few prominent dark brown (7.5YR 3/2) accumulations of iron-manganese on faces of peds; moderately acid; clear wavy boundary.

C—55 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few prominent dark brown (7.5YR 3/2) concretions of iron and manganese throughout the matrix; moderately acid.

Range in Characteristics

Thickness of the solum: 36 to 70 inches
Depth to free carbonates: More than 40 inches

Ap or A horizon:
Hue—10YR
Value—2 to 4
Chroma—1 to 3

E horizon (if it occurs):
Value—3 to 5
Chroma—1 to 4

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6

BC and C horizons:
Hue—10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam

280B—Fayette silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Composition

Fayette and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer

- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that are calcareous within a depth of 40 inches
- Soils that have loamy or sandy layers within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Atterberry and Stronghurst soils on summits

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.6 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

280B2—Fayette silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Composition

Fayette and similar soils: 94 percent
Dissimilar soils: 6 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that are calcareous within a depth of 40 inches
- Soils that have loamy or sandy layers within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Atterberry and Stronghurst soils on summits

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.4 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

280C2—Fayette silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders and backslopes

Composition

Fayette and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that are calcareous within a depth of 40 inches
- Soils that have loamy or sandy layers within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils on summits

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.4 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

280C3—Fayette silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Composition

Fayette and similar soils: 94 percent
Dissimilar soils: 6 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that are calcareous within a depth of 40 inches
- Soils that have loamy or sandy layers within a depth of 60 inches

Dissimilar soils:
- Moderately well drained loess soils that are underlain by paleosol till within a depth of 60 inches; on shoulders and backslopes
- The somewhat poorly drained Stronghurst soils on summits

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.4 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 4e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

3646L—Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Composition

Fluvaquents and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have more sand
- Soils that have more clay

Dissimilar soils:
- The somewhat poorly drained Hoopeston soils on summits

Properties and Qualities of the Fluvaquents

Parent material: Alluvium

Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.9 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface all year
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 5w
Prime farmland status: Not prime farmland
Hydric soil status: Hydric

Greenbush Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs

Typical Pedon (Official Series Description)

Greenbush silt loam, 2 to 5 percent slopes, at an elevation of 700 feet; 1,500 feet west and 1,500 feet north of the southeast corner of sec. 18, T. 8 N., R. 1 W.; in Warren County, Illinois; USGS Greenbush topographic quadrangle; lat. 40 degrees 40 minutes 40 seconds N. and long. 90 degrees 32 minutes 45 seconds W., NAD 27:

Ap—0 to 6 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; slightly acid; abrupt smooth boundary.

E—6 to 10 inches; dark grayish brown (10YR 4/2) silt loam; weak thin platy structure; friable; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; moderately acid; abrupt smooth boundary.

BE—10 to 17 inches; brown (10YR 4/3) silt loam; moderate medium platy structure parting to weak fine subangular blocky; friable; few distinct very dark gray (10YR 3/1) organic coatings and common distinct gray (10YR 6/1) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—17 to 29 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium angular blocky; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct gray (10YR 6/1) silt coatings on faces of peds; strongly acid; gradual smooth boundary.

Bt2—29 to 38 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate fine angular blocky; friable; common faint brown (10YR 4/3) clay films on faces of peds; many faint light gray (10YR 7/2) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron; common medium prominent light olive gray (5Y 6/2) iron depletions within peds; common prominent black (7.5YR 2.5/1) manganese oxide stains; strongly acid; gradual wavy boundary.

Bt3—38 to 53 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate fine angular blocky; friable; common faint brown (10YR 4/3) clay films on faces of peds; many distinct light gray (10YR 7/2) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron; common medium prominent light olive gray (5Y 6/2) iron depletions within peds; common prominent black (7.5YR 2.5/1) manganese oxide stains; strongly acid; gradual wavy boundary.

BCt—53 to 75 inches; brown (10YR 5/3) and light olive gray (5Y 6/2) silt loam; weak medium and coarse prismatic structure parting to weak fine and medium angular blocky; friable; few faint brown (10YR 4/3) clay films on faces of peds; few faint light gray (10YR 7/2) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron within peds; common prominent black (7.5YR 2.5/1) manganese oxide stains; moderately acid; gradual wavy boundary.

C—75 to 100 inches; yellowish brown (10YR 5/4) and light olive gray (5Y 6/2) silt loam; massive; friable; many medium distinct light brownish gray (10YR 6/2) iron depletions within peds; many prominent black (7.5YR 2.5/1) manganese oxide stains; moderately acid.

Range in Characteristics

Depth to carbonates: More than 60 inches
Depth to the base of the argillic horizon: 36 to 70 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2

E horizon:
Hue—10YR
Value—3 to 5
Chroma—2 or 3

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam

C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam

675A—Greenbush silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Composition

Greenbush and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The somewhat poorly drained Atterberry soils on summits
- The poorly drained Denny soils in depressions

Properties and Qualities of the Greenbush Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.6 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

675B—Greenbush silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Composition

Greenbush and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The somewhat poorly drained Atterberry soils on summits
- The poorly drained Denny soils in depressions

Properties and Qualities of the Greenbush Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.8 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: None or slight

Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Hickory Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Hickory silt loam, 18 to 35 percent slopes; 320 feet south and 2,520 feet west of the northeast corner of sec. 18, T. 15 N., R. 6 E.; in Bureau County, Illinois; USGS Neponset topographic quadrangle; lat. 41 degrees 19 minutes 59 seconds N. and long. 89 degrees 50 minutes 50 seconds W., NAD 27:

A—0 to 4 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; common fine and medium roots throughout; 1 percent gravel; slightly acid; clear smooth boundary.

Bt1—4 to 13 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak fine subangular blocky structure; friable; common fine roots between peds; common prominent brown (7.5YR 4/4) clay films on faces of peds; 2 percent gravel; few fine rounded black (7.5YR 2.5/1) concretions of iron-manganese in the matrix; slightly acid; clear smooth boundary.

2Bt2—13 to 23 inches; dark yellowish brown (10YR 4/4) clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots between peds; many distinct brown (7.5YR 4/4) clay films on faces of peds; 5 percent gravel; few fine rounded black (7.5YR 2.5/1) concretions of iron-manganese in the matrix; neutral; clear smooth boundary.

2Bt3—23 to 31 inches; dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; firm; few very fine and fine roots between peds; many distinct brown (7.5YR 4/4) clay films on faces of peds; 3 percent gravel; few fine rounded black (7.5YR 2.5/1) concretions of iron-manganese in the matrix; neutral; gradual wavy boundary.

2Bt4—31 to 40 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium and coarse subangular blocky structure; firm; few very fine and fine roots between peds; common distinct brown (7.5YR 4/4) clay films on faces of peds; few fine rounded black (7.5YR 2.5/1) concretions of iron-manganese in the matrix; 5 percent gravel; neutral; clear smooth boundary.

2BC—40 to 54 inches; brown (7.5YR 4/4) clay loam; weak coarse subangular blocky structure; firm; few distinct dark reddish brown (5YR 3/3) clay films on faces of peds; few fine rounded black (7.5YR 2.5/1) concretions of iron-manganese in the matrix; 5 percent gravel; slightly acid; clear smooth boundary.

2C—54 to 60 inches; yellowish brown (10YR 5/4) clay loam; massive; firm; common distinct brown (7.5YR 4/4) clay films on rocks and along pores; few medium faint yellowish brown (10YR 5/6) iron masses in the matrix; 4 percent gravel; effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: Less than 20 inches
Depth to the argillic horizon: More than 40 inches
Depth to carbonates: More than 40 inches
Thickness of the solum: Less than 80 inches

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—2 or 3
Texture—silt loam or loam

E horizon (if it occurs):
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or loam

Bt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture—clay loam, silty clay loam, loam, or gravelly clay loam

CB or C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—5 to 7
Chroma—1 to 8
Texture—loam, clay loam, or sandy loam or the gravelly analogs of these textures

8D2—Hickory silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Hickory and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 40 inches
- Soils that have a surface layer of clay loam and that are more eroded
- Soils that contain more sand and less clay in the lower part

Dissimilar soils:
- Soils that contain more than 20 inches of loess over clayey paleosol till
- The well drained Marseilles soils on backslopes and footslopes

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.2 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

8D3—Hickory clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Hickory and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 40 inches
- Soils that have less clay in the surface layer
- Soils that have more sand and less clay in the lower part

Dissimilar soils:
- Soils that contain more than 20 inches of loess over clayey paleosol till
- The well drained Marseilles soils on backslopes and footslopes

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.4 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 4e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

8F—Hickory silt loam, 18 to 35 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Hickory and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 40 inches
- Soils that have a surface layer of clay loam and that are more eroded
- Soils that have more sand and less clay in the lower part

Dissimilar soils:
- Soils that contain more than 20 inches of loess over clayey paleosol till
- The well drained Marseilles soils on footslopes

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.5 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 6e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

8F3—Hickory clay loam, 18 to 35 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Hickory and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 40 inches
- Soils that have less clay in the surface layer
- Soils that have more sand and less clay in the lower part

Dissimilar soils:
- Soils that contain more than 20 inches of loess over clayey paleosol till
- The well drained Marseilles soils on backslopes

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.9 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 6e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

898F3—Hickory-Sylvan complex, 18 to 35 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Hickory—lower part of backslopes; Sylvan—upper part of backslopes

Composition

Hickory and similar soils: 50 percent
Sylvan and similar soils: 35 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that have less clay in the surface layer

Dissimilar soils:
- The somewhat poorly drained Atlas soils on backslopes

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.1 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.1 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: Hickory—6e; Sylvan—6e
Prime farmland status: Not prime farmland
Hydric soil status: Hickory—not hydric; Sylvan—not hydric

898G—Hickory-Sylvan silt loams, 35 to 60 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Hickory—lower part of backslopes; Sylvan—upper part of backslopes

Composition

Hickory and similar soils: 60 percent
Sylvan and similar soils: 25 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that have a surface layer of clay loam or silty clay loam and that are more eroded

Dissimilar soils:
- The somewhat poorly drained Atlas soils on backslopes

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.1 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight

Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.1 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Hickory—7e; Sylvan—7e
Prime farmland status: Not prime farmland
Hydric soil status: Hickory—not hydric; Sylvan—not hydric

946D3—Hickory-Atlas complex, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Hickory—lower and middle parts of backslopes; Atlas—upper and middle parts of backslopes

Composition

Hickory and similar soils: 50 percent
Atlas and similar soils: 35 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 40 inches
- Soils that have less clay in the surface layer

Dissimilar soils:
- Soils that contain more than 20 inches of loess over the glacial till
- The well drained Marseilles soils on backslopes
- The somewhat poorly drained Orion and Radford soils on footslopes

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.9 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Atlas Soil

Parent material: Paleosol that formed in till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 8 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 0.5 foot, January to May
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: Hickory—4e; Atlas—6e
Prime farmland status: Not prime farmland
Hydric soil status: Hickory—not hydric; Atlas—not hydric

946F3—Hickory-Atlas complex, 18 to 35 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Hickory—lower and middle parts of backslopes; Atlas—upper and middle parts of backslopes

Composition

Hickory and similar soils: 50 percent
Atlas and similar soils: 40 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 40 inches
- Soils that have less clay in the surface layer

Dissimilar soils:
- Soils that contain deposits of loess over the glacial till
- The well drained Marseilles soils on backslopes
- The somewhat poorly drained Orion and Radford soils on toeslopes

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.9 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Atlas Soil

Parent material: Paleosol that formed in till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 8 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 0.5 foot, January to May
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: Hickory—6e; Atlas—6e
Prime farmland status: Not prime farmland
Hydric soil status: Hickory—not hydric; Atlas—not hydric

960D2—Hickory-Sylvan-Fayette silt loams, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Hickory—lower part of backslopes; Sylvan—middle part of backslopes; Fayette—upper part of backslopes

Composition

Hickory and similar soils: 35 percent
Sylvan and similar soils: 35 percent
Fayette and similar soils: 30 percent

Minor Components

Similar soils:
- Soils that have a surface layer of clay loam or silty clay loam and that are more eroded

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.2 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.4 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Hickory—3e; Sylvan—3e; Fayette—3e
Prime farmland status: Not prime farmland
Hydric soil status: Hickory—not hydric; Sylvan—not hydric; Fayette—not hydric

960D3—Hickory-Sylvan-Fayette complex, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Hickory and similar soils: 35 percent
Sylvan and similar soils: 35 percent
Fayette and similar soils: 30 percent

Minor Components

Similar soils:
- Soils that have less clay in the surface layer

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.4 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium

Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.2 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very slight

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.4 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: Hickory—4e; Sylvan—4e; Fayette—4e
Prime farmland status: Not prime farmland
Hydric soil status: Hickory—not hydric; Sylvan—not hydric; Fayette—not hydric

960F—Hickory-Sylvan-Fayette silt loams, 18 to 30 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Hickory—lower part of backslopes; Sylvan—middle part of backslopes; Fayette—upper part of backslopes

Composition

Hickory and similar soils: 40 percent
Sylvan and similar soils: 40 percent
Fayette and similar soils: 20 percent

Minor Components

Similar soils:
- Soils that have a surface layer of clay loam or silty clay loam and that are more eroded

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.4 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.2 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate

Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.6 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Hickory—6e; Sylvan—6e; Fayette—6e
Prime farmland status: Not prime farmland
Hydric soil status: Hickory—not hydric; Sylvan—not hydric; Fayette—not hydric

Hoopeston Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Aquic Hapludolls

Typical Pedon

Hoopeston sandy loam, 0 to 2 percent slopes; 2,530 feet south and 1,060 feet east of the northwest corner of sec. 14, T. 19 N., R. 4 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 38 minutes 04 seconds N. and long. 90 degrees 00 minutes 45 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) sandy loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to weak fine granular; very friable; common very fine roots throughout; neutral; clear smooth boundary.

A—10 to 14 inches; very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; weak medium and fine subangular blocky structure; very friable; common very fine roots throughout; common faint very dark brown (10YR 2/2) organic coatings on faces of peds; neutral; clear smooth boundary.

Bw1—14 to 21 inches; brown (10YR 5/3) sandy loam; weak medium subangular blocky structure; very friable; few very fine roots between peds; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in root channels; common fine faint dark grayish brown (10YR 4/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

Bw2—21 to 38 inches; brown (10YR 5/3) sandy loam; weak coarse subangular blocky structure; very friable; few very fine roots between peds; common fine faint grayish brown (10YR 5/2) iron depletions and common fine distinct yellowish brown (10YR 5/8) iron masses in the matrix; slightly acid; abrupt smooth boundary.

C—38 to 60 inches; pale brown (10YR 6/3) sand; single grain; loose; common fine faint light brownish gray (10YR 6/2) iron depletions and common fine prominent yellowish brown (10YR 5/8) iron masses in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to free carbonates: More than 40 inches
Thickness of the solum: 20 to 54 inches

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 to 3
Texture—sandy loam, fine sandy loam, or loam

Bw, Bt, Bg, and/or Btg horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—sandy loam or fine sandy loam; strata of loamy sand, loamy fine sand, loam, sandy clay loam, silt loam, or sand in some pedons

Cg and/or C horizon:
Hue—7.5YR to 5Y
Value—3 to 6
Chroma—1 to 8

Texture—loamy sand, sand, loamy fine sand, or fine sand; loamy strata in some pedons

172A—Hoopeston sandy loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Composition

Hoopeston and similar soils: 92 percent
Dissimilar soils: 8 percent

Minor Components

Similar soils:
- Soils that have more clay and less sand
- Soils that have less clay and more sand
- Soils that have a seasonal high water table within a depth of 1 foot

Dissimilar soils:
- The well drained Dickinson soils and other well drained soils; on summits
- Poorly drained soils on toeslopes

Properties and Qualities of the Hoopeston Soil

Parent material: Outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 7.3 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, January to June
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Joslin Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls

Typical Pedon

Joslin silt loam, 2 to 5 percent slopes; 1,980 feet north and 578 feet east of the southwest corner of the southeast quarter of sec. 8, T. 18 N., R. 1 E.; in Whiteside County, Illinois; USGS Silvis topographic quadrangle; lat. 41 degrees 33 minutes 54 seconds N. and long. 90 degrees 24 minutes 09 seconds W., NAD 27:

Ap—0 to 9 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine and medium granular structure; friable; few sand grains; slightly alkaline; abrupt smooth boundary.

A—9 to 15 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine and medium granular structure; friable; few sand grains; neutral; clear smooth boundary.

BA—15 to 20 inches; mixed brown (10YR 4/3) and very dark gray (10YR 3/1) silt loam; moderate fine and medium subangular blocky structure; friable; few black (10YR 2/1) organic stains along root channels; light gray (10YR 7/1) (dry) silt coatings on faces of peds; few sand grains; slightly acid; clear smooth boundary.

Bt1—20 to 28 inches; brown (10YR 4/3) silt loam; moderate medium and coarse subangular blocky structure; friable; common faint dark brown (10YR 3/3) clay films on faces of peds; common very dark gray (10YR 3/1) organic stains along root channels; few wormcasts; 20 percent sand; few pebbles; slightly acid; gradual smooth boundary.

Bt2—28 to 37 inches; yellowish brown (10YR 5/4) silt loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; common prominent brown (7.5YR 4/2) clay films on faces of peds; few black (10YR 2/1) organic stains along root channels; 12 percent sand; moderately acid; gradual smooth boundary.

Bt3—37 to 43 inches; yellowish brown (10YR 5/4) silt loam; weak coarse prismatic structure; friable; common prominent brown (7.5YR 4/2) clay films on faces of peds; few black (10YR 2/1) organic stains along root channels; few strata of reddish brown (5YR 4/4) silty clay; 3 percent sand; slightly acid; clear smooth boundary.

2Bt4—43 to 50 inches; reddish brown (5YR 4/4) silty clay; moderate medium and coarse prismatic structure; very firm; few distinct weak red (2.5YR 4/2) clay films on faces of peds; few root channels

filled with brownish yellow (10YR 6/6) material; neutral; abrupt smooth boundary.

2Bt5—50 to 53 inches; reddish brown (5YR 4/4) silty clay; moderate medium and coarse angular blocky structure; very firm; few distinct weak red (2.5YR 4/2) clay films on faces of peds; many medium prominent weak red (2.5YR 5/2) mottles; neutral; abrupt smooth boundary.

3C—53 to 85 inches; variegated grayish brown (10YR 5/2), yellowish brown (10YR 5/6), and strong brown (7.5YR 5/6) silt loam; massive; friable; few strata of reddish brown (5YR 4/4) silty clay; few prominent concretions of iron and manganese oxides throughout the matrix; slightly alkaline.

Range in Characteristics

Thickness of the solum: 48 to 72 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or loam

Bw or Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 5
Texture—silt loam or loam

2Bt or 2BC horizon:
Hue—2.5YR
Value—4 to 6
Chroma—4 to 6
Texture—silty clay loam, silty clay, or clay

3C horizon:
Texture—silt loam, silty clay loam, loam, or clay loam; stratified in some pedons

525A—Joslin loam, bedrock substratum, 0 to 2 percent slopes

Setting

Landform: Lake plains

Composition

Joslin and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have bedrock at a depth of less than 40 inches or more than 60 inches
- Soils that have more clay and less sand in the underlying material
- Soils that have less silt and clay and more sand in the upper part
- Soils that have a perched seasonal high water table within a depth of 60 inches

Properties and Qualities of the Joslin Soil

Parent material: Lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity to a depth of 60 inches: About 9.6 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

763A—Joslin silt loam, 0 to 2 percent slopes

Setting

Landform: Lake plains

Composition

Joslin and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a thinner or lighter colored surface layer
- Soils that have less sand and more clay in the underlying material
- Soils that have less silt and clay and more sand in the upper part
- Soils that have a perched seasonal high water table within a depth of 60 inches

Dissimilar soils:
- Somewhat poorly drained soils on summits

Properties and Qualities of the Joslin Soil

Parent material: Lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.5 inches
Content of organic matter in the surface layer: 4 to 5 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

763B—Joslin silt loam, 2 to 5 percent slopes

Setting

Landform: Lake plains

Composition

Joslin and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a thinner or lighter colored surface layer
- Soils that have less sand and more clay in the underlying material
- Soils that have less silt and clay and more sand in the upper part
- Soils that have a perched seasonal high water table within a depth of 60 inches

Dissimilar soils:
- Somewhat poorly drained soils on summits

Properties and Qualities of the Joslin Soil

Parent material: Lacustrine deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.5 inches
Content of organic matter in the surface layer: 4 to 5 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Joy Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Hapludolls

Typical Pedon

Joy silt loam, 0 to 2 percent slopes; 1,900 feet east and 2,600 feet north of the southwest corner of sec. 26, T. 18 N., R. 3 E.; in Whiteside County, Illinois; USGS Spring Hill topographic quadrangle; lat. 41 degrees 31 minutes 01 second N. and long. 90 degrees 06 minutes 59 seconds W., NAD 27:

Ap—0 to 5 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; moderately acid; abrupt smooth boundary.

A1—5 to 13 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to moderate medium granular; friable; slightly acid; clear smooth boundary.

A2—13 to 17 inches; very dark grayish brown (10YR 3/2) silt loam; moderate fine subangular blocky structure parting to moderate medium granular; friable; neutral; clear smooth boundary.

Bt1—17 to 21 inches; brown (10YR 4/3) silt loam; moderate medium and fine subangular blocky structure; friable; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; neutral; clear smooth boundary.

Bt2—21 to 27 inches; mixed grayish brown (10YR 5/2) and brown (10YR 5/3) silty clay loam; moderate medium and fine subangular blocky structure; friable; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few prominent black (7.5YR 2.5/1) coatings of iron-manganese on faces of peds; common medium distinct yellowish brown (10YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

Bt3—27 to 34 inches; yellowish brown (10YR 5/4) silt loam; moderate fine and medium subangular blocky structure; friable; common faint brown (10YR 5/3) clay films on faces of peds; few prominent black (7.5YR 2.5/1) coatings of iron-manganese on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions and yellowish brown (10YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

Bt4—34 to 49 inches; mixed light brownish gray (2.5Y 6/2) and yellowish brown (10YR 5/6) silt loam; weak fine prismatic structure parting to weak fine and medium subangular blocky; friable; few faint grayish brown (10YR 5/2) clay films on faces of peds; few prominent black (7.5YR 2.5/1) coatings of iron-manganese on faces of peds; neutral; gradual smooth boundary.

Cg—49 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; common prominent black (7.5YR 2.5/1) coatings of iron-manganese along cleavage planes; many medium prominent yellowish brown (10YR 5/6) iron masses in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to free carbonates: More than 40 inches
Thickness of the solum: 36 to 60 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam

Bw, Bg, or Bt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silty clay loam

C or Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 to 4
Texture—silt loam, very fine sandy loam, or loam

275A—Joy silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Composition

Joy and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have less silt and more sand throughout

Dissimilar soils:
- The well drained Biggsville soils on summits
- The excessively drained Oakville soils on shoulders
- The well drained Port Byron soils on shoulders
- The poorly drained Sable soils in depressions

Properties and Qualities of the Joy Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.9 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, March to June
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Landes Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Fluventic Hapludolls

Typical Pedon

Landes fine sandy loam, 0 to 2 percent slopes, rarely flooded; 99 feet south and 990 feet west of the northeast corner of sec. 4, T. 18 N., R. 11 W.; in Bureau County, Illinois; USGS Clearlake topographic quadrangle; lat. 40 degrees 02 minutes 51 seconds N. and long. 90 degrees 19 minutes 58 seconds W., NAD 27:

Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 4/3) dry; weak fine subangular blocky structure parting to weak fine granular; friable; few very fine roots; few fine very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; abrupt smooth boundary.

A—5 to 14 inches; very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; friable; few very fine roots; neutral; clear smooth boundary.

AB—14 to 19 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak fine and medium subangular blocky structure; friable; few very fine roots; many faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.

Bw1—19 to 23 inches; brown (10YR 4/3) loam; weak fine and medium subangular blocky structure; friable; few very fine roots; many faint dark brown (10YR 3/3) and few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.

Bw2—23 to 28 inches; brown (10YR 4/3) fine sandy loam; weak medium subangular blocky structure; friable; few very fine roots; common faint dark brown (10YR 3/3) organic coatings on faces of peds; neutral; clear smooth boundary.

Bw3—28 to 32 inches; brown (10YR 4/3) and dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; very friable; few very fine roots; common faint dark brown (10YR 3/3) organic coatings on faces of peds; less than 2 percent fine gravel; neutral; clear smooth boundary.

BC—32 to 36 inches; dark yellowish brown (10YR 4/4) and brown (10YR 4/3) loamy sand; weak medium subangular blocky structure; very friable; few very fine roots; 5 percent fine gravel; neutral; clear smooth boundary.

C—36 to 60 inches; yellowish brown (10YR 5/4) sand; single grain; loose; 2 percent fine gravel; neutral.

Range in Characteristics

Depth to carbonates (if they occur): More than 40 inches

Depth to the base of the cambic horizon: 22 to 40 inches

Ap, A, and/or AB horizon:
- Hue—10YR
- Value—2 or 3
- Chroma—1 to 3
- Texture—fine sandy loam, very fine sandy loam, sandy loam, loam, loamy fine sand, loamy very fine sand, loamy sand, or silt loam
- Content of rock fragments—0 to 20 percent

Bw horizon:
- Hue—10YR
- Value—3 to 6
- Chroma—2 to 4
- Texture—loam, fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand, or loamy very fine sand
- Content of rock fragments—0 to 10 percent

BC and C horizons:
- Hue—2.5YR to 10YR
- Value—4 to 6
- Chroma—1 to 4
- Texture—sand, fine sand, very fine sand, loamy sand, loamy fine sand, loamy very fine sand, sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam; stratified in some pedons
- Content of rock fragments—0 to 10 percent

7304A—Landes fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Natural levees on flood plains

Composition

Landes and similar soils: 94 percent
Dissimilar soils: 6 percent

Minor Components

Similar soils:
- Soils that have a surface layer less than 10 inches thick
- Soils that contain more sand in the upper part
- Soils that have a seasonal high water table within a depth of 48 inches

Dissimilar soils:
- The somewhat poorly drained Orion and Radford soils on footslopes

Properties and Qualities of the Landes Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 7.7 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Frequency and most likely period of flooding: Rare, November to June
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Lawler Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Aquic Hapludolls

Typical Pedon

Lawler loam, 0 to 2 percent slopes; 2,180 feet west and 160 feet north of the southeast corner of sec. 28, T. 20 N., R. 6 E.; in Whiteside County, Illinois; USGS Tampico topographic quadrangle; lat. 41 degrees 41 minutes 09 seconds N. and long. 89 degrees 48 minutes 50 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) loam, dark grayish brown (10YR 4/2) dry; weak fine and medium granular structure; friable; few very fine roots throughout; moderately acid; abrupt smooth boundary.

AB—10 to 15 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; few fine roots throughout; many faint black (10YR 2/1) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bw1—15 to 21 inches; brown (10YR 5/3) silt loam; moderate medium subangular blocky structure; friable; few fine roots between peds; many faint dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/8) iron masses in the matrix; moderately acid; clear smooth boundary.

Bw2—21 to 26 inches; brown (10YR 5/3) silt loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions; common fine distinct yellowish brown (10YR 5/8) iron masses in the matrix; strongly acid; clear smooth boundary.

Bg—26 to 36 inches; grayish brown (10YR 5/2) loam; moderate medium and coarse subangular blocky structure; friable; few fine roots between peds; few fine rounded black (7.5YR 2.5/1) concretions of iron and manganese oxide in the matrix; common fine prominent yellowish brown (10YR 5/8) iron masses in the matrix; moderately acid; abrupt smooth boundary.

2C—36 to 54 inches; brown (7.5YR 5/4) coarse sand; single grain; loose; common fine prominent yellowish brown (10YR 5/8) iron oxide in the matrix; about 5 percent gravel; slightly acid; abrupt smooth boundary.

2Cg—54 to 60 inches; dark grayish brown (2.5YR 4/2) coarse sand; single grain; loose; about 5 percent gravel; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to sandy sediments: 24 to 40 inches
Thickness of the solum: 24 to 40 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—loam or silt loam

AB or BA horizon:
Hue—10YR
Value—3
Chroma—1 or 2
Texture—loam or clay loam

Bw, Bg, and/or BC horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—clay loam, loam, silt loam, or sandy clay loam

2C or 2Cg horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 8
Chroma—1 to 6
Texture—loamy coarse sand, loamy sand, coarse sand, or sand or the gravelly or very gravelly analogs of these textures

647A—Lawler loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Composition

Lawler and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have either more sand or more clay in the upper part
- Soils that have less sand and more silt and clay in the lower part

Dissimilar soils:
- The well drained Dickinson soils on summits

Properties and Qualities of the Lawler Soil

Parent material: Eolian deposits over outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 6.5 inches
Content of organic matter in the surface layer: 4 to 5 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2s
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Lawson Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls

Typical Pedon

Lawson silt loam, 0 to 2 percent slopes, occasionally flooded; 318 feet south and 1,040 feet east of the northwest corner of sec. 17, T. 17 N., R. 9 E.; in Bureau County, Illinois; USGS Princeton North topographic quadrangle; lat. 41 degrees 27 minutes 54 seconds N. and long. 89 degrees 29 minutes 14 seconds W., NAD 27:

Ap—0 to 11 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; weak medium granular structure; friable; few fine roots throughout; neutral; clear smooth boundary.
A1—11 to 19 inches; black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; moderate fine granular structure; friable; few fine roots throughout; neutral; gradual smooth boundary.
A2—19 to 28 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; few fine roots throughout; neutral; gradual smooth boundary.
C1—28 to 50 inches; dark grayish brown (10YR 4/2) silt loam; weak medium subangular blocky structure; friable; few fine roots throughout; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; very dark grayish brown (10YR 3/2) krotovina; few fine faint brown (10YR 4/3) and common fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; neutral; gradual smooth boundary.
C2—50 to 60 inches; grayish brown (2.5Y 5/2) silt loam; weak medium subangular blocky structure; friable; few fine roots; very dark grayish brown (10YR 3/2) krotovina; common fine prominent dark grayish brown (10YR 4/2) iron depletions and common fine prominent yellowish brown (10YR 5/6) iron masses in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

C horizon:
Hue—10YR or 2.5Y
Value—3 to 6

Chroma—1 to 3
Texture—silt loam

3451A—Lawson silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Lawson and similar soils: 91 percent
Dissimilar soils: 9 percent

Minor Components

Similar soils:
- Soils that have more sand throughout
- Soils that have a buried surface layer within a depth of 60 inches

Dissimilar soils:
- The well drained Raddle soils on low terrace footslopes
- The poorly drained Sawmill soils in swales

Properties and Qualities of the Lawson Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.1 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

7451A—Lawson silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Composition

Lawson and similar soils: 92 percent
Dissimilar soils: 8 percent

Minor Components

Similar soils:
- Soils that have more sand throughout
- Soils that have a buried surface layer within a depth of 60 inches

Dissimilar soils:
- The poorly drained Millington and Sawmill soils in the lower positions on flood plains

Properties and Qualities of the Lawson Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.1 inches
Content of organic matter in the surface layer: 3 to 7 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Frequency and most likely period of flooding: Rare, November to June
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Marseilles Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Hapludalfs

Typical Pedon (Official Series Description)

Marseilles silt loam, 35 to 60 percent slopes, at an elevation of 685 feet; 1,400 feet south and 1,150 feet east of the northwest corner of sec. 14, T. 2 S., R. 6 W.; in Bureau County, Illinois; USGS Liberty topographic quadrangle; lat. 39 degrees 53 minutes 57 seconds N. and long. 91 degrees 03 minutes 53 seconds W., NAD 27:

A—0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate very fine granular structure; friable; strongly acid; abrupt smooth boundary.

E—3 to 7 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; moderate thin platy and moderate very fine granular structure; friable; very few faint dark grayish brown (10YR 4/2) organic coatings in root channels and/or pores; strongly acid; clear smooth boundary.

BE—7 to 10 inches; yellowish brown (10YR 5/4) silt loam; weak medium platy and moderate very fine and fine subangular blocky structure; friable; very few faint dark grayish brown (10YR 4/2) organic coatings in root channels and/or pores; strongly acid; clear smooth boundary.

2Bt1—10 to 17 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; very few faint dark grayish brown (10YR 4/2) organic coatings in root channels and/or pores and few distinct brown (10YR 5/3) clay films on faces of peds; 1 percent gravel; very strongly acid; clear smooth boundary.

2Bt2—17 to 22 inches; yellowish brown (10YR 5/4) silty clay loam; strong medium subangular blocky structure; firm; common distinct brown (10YR 5/3) clay films and very few faint very pale brown (10YR 7/3) silt coatings on faces of peds; 1 percent gravel; very strongly acid; clear smooth boundary.

2Bt3—22 to 35 inches; light olive brown (2.5Y 5/4) silty clay loam; moderate medium and coarse subangular blocky structure; firm; very few faint brown (10YR 5/3) clay films and very few distinct very pale brown (10YR 7/3) silt coatings on faces of peds; 1 percent gravel; very strongly acid; gradual smooth boundary.

2Cr—35 to 60 inches; 70 percent light olive brown (2.5Y 5/4) and 30 percent olive (5Y 5/3) silty clay and unweathered bedrock; massive; firm; 10 percent shale gravel; very strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 20 to 40 inches

Depth to paralithic contact: 20 to 40 inches

Ap or A horizon:
Hue—10YR
Value—2 to 5
Chroma—2 or 3
Texture—silt loam or silty clay loam

E or BE horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam

2Bt horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—clay loam, silt loam, silty clay loam, or silty clay

2Cr horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 4

913D2—Marseilles-Hickory silt loams, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Marseilles—lower part of backslopes; Hickory—upper part of backslopes

Composition

Marseilles and similar soils: 50 percent
Hickory and similar soils: 40 percent
Dissimilar components: 10 percent

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that formed in calcareous shale

Dissimilar components:
- The somewhat poorly drained Atlas soils on backslopes
- The somewhat poorly drained Orion and Radford soils on footslopes
- Areas of rock outcrop on the lower backslopes

Properties and Qualities of the Marseilles Soil

Parent material: Loess over residuum derived from shale
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Available water capacity to a depth of 60 inches: About 6 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.2 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Marseilles—4e; Hickory—3e
Prime farmland status: Not prime farmland
Hydric soil status: Marseilles—not hydric; Hickory—not hydric

913F—Marseilles-Hickory silt loams, 18 to 35 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Marseilles—lower part of backslopes; Hickory—upper part of backslopes

Composition

Marseilles and similar soils: 41 percent
Hickory and similar soils: 39 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that formed in calcareous shale

Dissimilar soils:
- The somewhat poorly drained Atlas soils on backslopes
- The somewhat poorly drained Orion and Radford soils on footslopes

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum derived from shale
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Available water capacity to a depth of 60 inches: About 6.3 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.4 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Marseilles—7e; Hickory—6e
Prime farmland status: Not prime farmland
Hydric soil status: Marseilles—not hydric; Hickory—not hydric

913G—Marseilles-Hickory silt loams, 35 to 60 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Marseilles—lower part of backslopes; Hickory—upper part of backslopes

Composition

Marseilles and similar soils: 50 percent
Hickory and similar soils: 40 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that formed in calcareous shale

Dissimilar soils:
- The somewhat poorly drained Orion and Radford soils on footslopes

Properties and Qualities of the Marseilles Soil

Parent material: Loess over residuum derived from shale
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Available water capacity to a depth of 60 inches: About 6 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Hickory Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.5 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Marseilles—7e; Hickory—7e
Prime farmland status: Not prime farmland
Hydric soil status: Marseilles—not hydric; Hickory—not hydric

Martinsville Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon (Official Series Description)

Martinsville silt loam, 2 to 5 percent slopes, at an elevation of 705 feet; 200 feet north and 2,440 feet west of the center of sec. 36, T. 21 N., R. 7 E.; in Champaign County, Illinois; USGS Rising topographic quadrangle; lat. 40 degrees 13 minutes 53 seconds N.

and long. 88 degrees 21 minutes 52 seconds W., NAD 27:

Ap—0 to 6 inches; mixed dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4) silt loam, pale brown (10YR 6/3) dry; moderate fine and medium granular structure; friable; slightly acid; abrupt smooth boundary.

E—6 to 9 inches; brown (10YR 4/3) silt loam, light yellowish brown (10YR 6/4) dry; weak medium platy structure parting to moderate medium subangular blocky; friable; light gray (10YR 7/1) silt coatings on faces of peds; few thin dark grayish brown (10YR 4/2) films on faces of peds; neutral; abrupt smooth boundary.

Bt1—9 to 18 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; many thin brown (10YR 4/3) clay films on faces of peds; common fine accumulations of iron and manganese; slightly acid; clear smooth boundary.

2Bt2—18 to 33 inches; dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; friable; common thin brown (10YR 4/3) clay films on faces of peds; common thin accumulations of iron and manganese; slightly acid; clear smooth boundary.

2Bt3—33 to 42 inches; dark yellowish brown (10YR 4/4) sandy loam; weak coarse prismatic structure parting to weak medium subangular blocky; friable; few thin brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

2BC—42 to 48 inches; yellowish brown (10YR 5/4), stratified silt loam and loam; weak coarse prismatic structure; friable; very few thin brown (10YR 4/3) clay films lining pores; moderately acid; clear smooth boundary.

2C—48 to 72 inches; mottled yellowish brown (10YR 5/4) and dark grayish brown (10YR 4/2), stratified silt loam, loam, and sandy loam; massive; friable; slightly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 40 to 70 inches
Thickness of the solum: Less than 80 inches

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 6
Texture—loam, silt loam, fine sandy loam, or sandy loam

Bt, 2Bt, BC, and/or 2BC horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 to 6
Texture—clay loam, loam, sandy clay loam, silty clay loam, or silt loam in the upper part; clay loam, loam, sandy clay loam, silty clay loam, silt loam, sandy loam, fine sandy loam, or very fine sandy loam in the lower part; stratified in some pedons

C or 2C horizon:
Hue—10YR
Value—3 to 6
Chroma—3 to 6
Texture—stratified; dominantly fine sandy loam, sandy loam, loam, or silt loam

570B—Martinsville silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Composition

Martinsville and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have less silt and more sand in the upper part
- Soils that have less sand and more silt in the subsoil

Dissimilar soils:
- The somewhat poorly drained Coffeen and Orion soils on footslopes
- The well drained Raddle soils on shoulders

Properties and Qualities of the Martinsville Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.7 inches
Content of organic matter in the surface layer: 1 to 3 percent

Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

570C3—Martinsville clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Composition

Martinsville and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have less silt and more sand in the upper part
- Soils that have less sand and more silt in the subsoil

Dissimilar soils:
- The somewhat poorly drained Coffeen and Orion soils on footslopes
- The well drained Raddle soils on shoulders

Properties and Qualities of the Martinsville Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.7 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 4e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

570D3—Martinsville clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Composition

Martinsville and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have less silt and more sand in the upper part
- Soils that have less sand and more silt in the subsoil

Dissimilar soils:
- The somewhat poorly drained Coffeen and Orion soils on footslopes
- The well drained Raddle soils on shoulders

Properties and Qualities of the Martinsville Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 9.7 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete

Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 4e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Millington Series

Taxonomic classification: Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls

Typical Pedon

Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded; 700 feet south and 940 feet west of the northeast corner of sec. 25, T. 20 N., R. 4 E.; in Whiteside County, Illinois; USGS Prophetstown topographic quadrangle; lat. 41 degrees 41 minutes 50 seconds N. and 89 degrees 58 minutes 54 seconds W., NAD 27:

A—0 to 19 inches; black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; moderate fine subangular blocky structure; friable; few snail-shell fragments; slightly effervescent; slightly alkaline; clear smooth boundary.

Bg—19 to 35 inches; black (10YR 2/1) loam, very dark gray (10YR 3/1) dry; weak medium subangular blocky structure; friable; few snail-shell fragments; strongly effervescent; slightly alkaline; clear smooth boundary.

Cg—35 to 60 inches; olive gray (5Y 5/2) loam that has few thin strata of sandy loam; massive; friable; common medium prominent strong brown (7.5YR 5/8) iron masses and common medium faint dark gray (5Y 4/1) iron depletions in the matrix; few snail-shell fragments; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 40 inches
Thickness of the solum: 24 to 48 inches

Ap or A horizon:
Hue—10YR or N
Value—2 or 3
Chroma—0 to 2
Texture—loam, silt loam, silty clay loam, or clay loam

Bg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 to 5
Chroma—0 to 2
Texture—loam, silt loam, silty clay loam, or clay loam; strata of sandy loam and/or gravel in some pedons

Cg horizon:
Chroma—0 to 2
Texture—stratified, calcareous sandy loam to silty clay loam

1082A—Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Millington and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that contain more sand in the subsoil
- Soils that are not calcareous
- Soils that consist of marshy organic material

Dissimilar soils:
- The poorly drained Sawmill soils on toeslopes

Properties and Qualities of the Millington Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.4 inches
Content of organic matter in the surface layer: 4 to 6 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, November to June
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 5w
Prime farmland status: Not prime farmland
Hydric soil status: Hydric

3082A—Millington silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Millington and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that contain more sand in the subsoil
- Soils that are not calcareous
- Soils that consist of marshy organic material

Dissimilar soils:
- The poorly drained Sawmill soils on toeslopes
- Well drained soils on footslopes

Properties and Qualities of the Millington Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.4 inches
Content of organic matter in the surface layer: 4 to 6 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

Millsdale Series

Taxonomic classification: Fine, mixed, active, mesic Typic Argiaquolls

Typical Pedon

Millsdale silty clay loam, 0 to 2 percent slopes; 1,095 feet west and 1,760 feet south of the northeast corner of sec. 30, T. 19 N., R. 3 E.; in Rock Island County, Illinois; USGS Hillsdale topographic quadrangle; lat. 41 degrees 36 minutes 32 seconds N. and long. 90 degrees 11 minutes 41 seconds W., NAD 27:

Ap—0 to 8 inches; black (2.5Y 2.5/1) silty clay loam; moderate very fine and fine granular structure; friable; slightly alkaline; abrupt smooth boundary.
A—8 to 15 inches; black (2.5Y 2.5/1) silty clay loam; moderate fine and medium granular structure; friable; slightly alkaline; clear smooth boundary.
BA—15 to 23 inches; black (2.5Y 2.5/1) silty clay; moderate fine and medium subangular blocky structure; firm; discontinuous very dark gray (N 3/0) organic stains on faces of peds; slightly alkaline; clear smooth boundary.
Btg—23 to 27 inches; dark gray (10YR 4/1) silty clay loam; moderate fine and medium subangular blocky structure; firm; common fine distinct yellowish brown (10YR 5/4) redoximorphic features; slightly alkaline; abrupt smooth boundary.
2R—27 to 60 inches; white (10YR 8/1) limestone; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 23 inches
Depth to lithic contact: 20 to 40 inches
Thickness of the solum: 20 to 40 inches

Ap, A, and/or BA horizon:
Hue—10YR, 2.5Y, or N
Value—2 or 3
Chroma—0 to 2
Texture—silty clay loam, clay loam, loam, or silt loam

Btg or Bt horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 2 (upper part); 0 to 4 (lower part)
Texture—clay loam, silty clay loam, silty clay, or clay

2Btg, 2Bt, 2BCg, and/or 2BC horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 to 4
Texture—clay loam, silty clay loam, silty clay, or clay

2C or 2Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 to 4
Texture—loam or clay loam

317A—Millsdale silty clay loam, 0 to 2 percent slopes

Setting

Landform: Lake plains

Composition

Millsdale and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that contain less clay in the subsoil
- Soils that are calcareous
- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches

Properties and Qualities of the Millsdale Soil

Parent material: Lacustrine deposits
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity to a depth of 60 inches: About 4.3 inches
Content of organic matter in the surface layer: 4 to 7 percent
Shrink-swell potential: High
Depth and months of the highest apparent seasonal high water table: At the surface, January to June
Ponding depth: 0.5 foot during wet periods
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

M-W—Miscellaneous water

General Definition

- This map unit consists of manmade areas that are used for industrial, sanitary, or mining applications and that contain water most of the year.

Moline Series

Taxonomic classification: Fine, smectitic, mesic Vertic Endoaquolls

Typical Pedon (Official Series Description)

Moline silty clay, 0 to 2 percent slopes, at an elevation of 577 feet; 60 feet north and 2,600 feet west of the southeast corner of sec. 16, T. 17 N., R. 1 E.; in Henry County, Illinois; USGS Coal Valley topographic quadrangle; lat. 41 degrees 27 minutes 30 seconds N. and long. 90 degrees 23 minutes 00 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silty clay, dark gray (10YR 4/1) dry; moderate medium subangular blocky structure; firm; neutral; clear smooth boundary.

A—7 to 14 inches; black (2.5Y 2.5/1) silty clay, very dark gray (10YR 3/1) dry; strong medium subangular blocky structure; firm; neutral; clear wavy boundary.

Bg1—14 to 24 inches; dark gray (5Y 4/1) clay; strong medium and coarse subangular blocky structure; very firm; common medium black (2.5Y 2.5/1) organic coatings on faces of peds; few medium prominent strong brown (7.5YR 5/6) masses of iron; neutral; clear wavy boundary.

Bg2—24 to 33 inches; grayish brown (2.5Y 5/2) clay; strong medium and coarse subangular blocky structure; very firm; common medium distinct light brownish gray (10YR 6/2) iron depletions; common coarse prominent reddish brown (5YR 4/4) masses of iron; violently effervescent; slightly alkaline; abrupt wavy boundary.

2B1—33 to 52 inches; reddish brown (5YR 4/4) clay; strong medium and coarse subangular blocky structure; very firm; common gray (10YR 6/1) calcium carbonate concretions; many coarse prominent grayish brown (2.5Y 5/2) iron

depletions; violently effervescent; moderately alkaline; clear wavy boundary.

2B2—52 to 65 inches; reddish brown (5YR 4/4) clay; strong medium and coarse subangular blocky structure; very firm; many gray (10YR 6/1) calcium carbonate concretions; moderately effervescent; slightly alkaline; gradual wavy boundary.

2BC—65 to 75 inches; reddish brown (5YR 4/4) clay; several thin (less than 1 cm) olive gray (5Y 5/2) bands of silt loam in the lower part; weak coarse subangular blocky structure; firm; moderately effervescent; slightly alkaline; clear wavy boundary.

3Cg—75 to 100 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; many coarse prominent brownish yellow (10YR 6/8) masses of iron; moderately effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to free carbonates: 20 to 50 inches
Thickness of the solum: 45 to 80 inches

Ap and A horizons:
Hue—10YR, 2.5Y, or N
Value—2 or 3
Chroma—0 to 2
Texture—silty clay or silty clay loam
Reaction—slightly acid to slightly alkaline

Bg horizon:
Hue—5Y or 2.5Y
Value—3 to 5
Chroma—1 or 2
Texture—clay or silty clay
Reaction—slightly acid to slightly alkaline

2B and 2BC horizons:
Hue—2.5YR or 5YR
Value—3 to 5
Chroma—2 to 6
Texture—clay or silty clay; strata of silt, silt loam, and silty clay loam in some pedons
Reaction—neutral to strongly alkaline

3C horizon (if it occurs):
Hue—10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 or 2
Texture—silt loam or silty clay loam; strata of finer or coarser textures in some pedons below a depth of 50 inches
Reaction—slightly alkaline to strongly alkaline

1654A—Moline silty clay, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Moline and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have a surface layer less than 10 inches thick
- Soils that are underlain by bedrock within a depth of 60 inches
- Soils that contain less clay throughout

Properties and Qualities of the Moline Soil

Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 6.3 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Very high
Depth and months of the highest apparent seasonal high water table: At the surface, November to June
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 5w
Prime farmland status: Not prime farmland
Hydric soil status: Hydric

7654A—Moline silty clay, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Composition

Moline and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have a surface layer less than 10 inches thick
- Soils that are underlain by bedrock within a depth of 60 inches
- Soils that contain less clay throughout

Properties and Qualities of the Moline Soil

Parent material: Clayey lacustrine deposits over stratified alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 6.3 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Very high
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.5 foot during wet periods
Frequency and most likely period of flooding: Rare, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Muscatune Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Muscatune silt loam, 0 to 2 percent slopes; 2,500 feet west and 2,240 feet north of the southeast corner of sec. 29, T. 9 N., R. 1 W.; in Warren County, Illinois; USGS Greenbush topographic quadrangle; lat. 40 degrees 44 minutes 11 seconds N. and long. 90 degrees 31 minutes 46 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; very friable; common very fine and fine roots throughout; neutral; abrupt smooth boundary.

A—7 to 13 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; very friable; common very fine and fine roots throughout; neutral; clear smooth boundary.

AB—13 to 20 inches; mixed very dark grayish brown (10YR 3/2) and brown (10YR 4/3) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure parting to weak fine granular; friable; common very fine roots throughout; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; neutral; clear smooth boundary.

Bt1—20 to 28 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; common dark manganese stains; neutral; clear smooth boundary.

Bt2—28 to 38 inches; brown (10YR 5/3) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; common distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) and faint pale brown (10YR 6/3) iron masses in the matrix; common dark manganese stains; neutral; clear smooth boundary.

Btg—38 to 50 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots between peds; common prominent grayish brown (10YR 5/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/6) iron masses in the matrix; common dark manganese stains; slightly acid; clear smooth boundary.

BCg—50 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; weak medium subangular blocky structure; friable; common medium prominent yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/6) iron masses in the matrix; common dark manganese stains; slightly acid; clear smooth boundary.

Cg—60 to 80 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; many medium prominent

yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/6) iron masses in the matrix; few fine round very dark brown (10YR 2/2) soft masses of iron and manganese; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the loess: More than 60 inches
Depth to free carbonates: More than 40 inches
Thickness of the solum: 40 to 64 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam

C horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 4
Texture—silt loam or silty clay loam

51A—Muscatune silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Composition

Muscatune and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a surface layer less than 10 inches thick; on slopes of 2 to 5 percent near the head of drainageways
- Soils that have a seasonal high water table below a depth of 2 feet

Dissimilar soils:
- The poorly drained Denny and Sable soils in depressions
- The well drained Osco soils on shoulders

Properties and Qualities of the Muscatune Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.4 inches
Content of organic matter in the surface layer: 3.5 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Niota Series

Taxonomic classification: Fine, mixed, superactive, mesic Vertic Albaqualfs

Typical Pedon

Niota silt loam, 0 to 2 percent slopes; 600 feet north and 1,320 feet east of the southwest corner of sec. 30, T. 19 N., R. 3 E.; in Whiteside County, Illinois; USGS Hillsdale topographic quadrangle; lat. 41 degrees 36 minutes 01 second N. and long. 90 degrees 12 minutes 17 seconds W., NAD 27:

A—0 to 7 inches; black (10YR 2/1) silt loam, gray (10YR 5/1) dry; moderate very fine and fine granular structure; friable; many fine roots throughout; neutral; clear smooth boundary.

E—7 to 14 inches; mixed grayish brown (10YR 5/2) and dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate thin platy structure parting to moderate fine granular; friable; common fine roots throughout; common distinct light gray (10YR 7/1) (dry) clay depletions on faces of peds; few fine dark concretions of iron and manganese in the matrix; strongly acid; abrupt smooth boundary.

2Bt—14 to 24 inches; reddish brown (5YR 4/4) silty clay; moderate medium prismatic structure parting

to moderate medium subangular blocky; very firm; few fine roots between peds; many distinct grayish brown (2.5Y 5/2) clay films on faces of peds; very strongly acid; clear smooth boundary.

2Btg1—24 to 37 inches; mixed gray (5Y 5/1) and light gray (5Y 6/1) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; common distinct dark gray (5Y 4/1) clay films on faces of peds; few fine dark concretions of iron and manganese in the matrix; few fine and medium prominent yellowish red (5Y 4/6) masses of iron in the matrix; very strongly acid; gradual smooth boundary.

3Btg2—37 to 53 inches; light gray (5Y 6/1) silt loam; weak coarse prismatic structure parting to weak medium subangular blocky; friable; common distinct reddish gray (5YR 5/2) clay films on faces of peds; many prominent black (7.5YR 2.5/1) iron and manganese stains on faces of peds; many fine dark concretions of iron and manganese in the matrix; few fine and medium prominent yellowish red (5Y 4/6) masses of iron in the matrix; very strongly acid; clear smooth boundary.

3Cg—53 to 60 inches; light gray (5Y 6/1) silt loam; massive; friable; many fine dark concretions of iron and manganese in the matrix; many fine and medium prominent yellowish red (5Y 4/6) masses of iron in the matrix; slightly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Thickness of the loess: Less than 20 inches
Depth to lacustrine sediments: 10 to 20 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2

Eg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 3

2Bt or 2Btg horizon:
Hue—2.5YR to 5Y or N
Value—4 to 6
Chroma—0 to 4
Texture—silty clay, clay, or silty clay loam

3Btg or 3BCg horizon (if it occurs):
Hue—7.5YR to 5Y or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam, silty clay loam, or loam

3Cg horizon:
Texture—silt loam; strata of loam, clay loam, sandy loam, silty clay loam, or loamy fine sand in some pedons

261A—Niota silt loam, 0 to 2 percent slopes

Setting

Landform: Lake plains
Position on the landform: Summits

Composition

Niota and similar soils: 98 percent
Dissimilar soils: 2 percent

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have a seasonal high water table at a depth of more than 1 foot

Dissimilar soils:
- The well drained Coyne soils on backslopes
- The well drained Joslin and Raddle soils on summits

Properties and Qualities of the Niota Soil

Parent material: Glaciolacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 8.3 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: High
Depth and months of the highest apparent seasonal high water table: At the surface, January to June
Ponding depth: 0.2 foot during wet periods
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and high for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w

Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Oakville Series

Taxonomic classification: Mixed, mesic Typic Udipsamments

Typical Pedon

Oakville fine sand, 7 to 15 percent slopes; 716 feet south and 1,056 feet east of the northwest corner of sec. 18, T. 17 N., R. 6 E.; in Bureau County, Illinois; USGS Mineral topographic quadrangle; lat. 41 degrees 27 minutes 54 seconds N. and long. 89 degrees 51 minutes 12 seconds W., NAD 27:

Ap—0 to 5 inches; brown (10YR 4/3) fine sand, yellowish brown (10YR 5/4) dry; weak fine granular structure; very friable; common fine roots throughout; neutral; abrupt smooth boundary.
Bw—5 to 23 inches; strong brown (7.5YR 5/6) fine sand; weak medium subangular blocky structure; very friable; few fine roots throughout; neutral; clear smooth boundary.
BC—23 to 36 inches; yellowish brown (10YR 5/6) fine sand; very weak medium subangular blocky structure; very friable; few fine roots throughout; neutral; clear smooth boundary.
C—36 to 60 inches; yellowish brown (10YR 5/6) fine sand; single grain; loose; neutral.

Range in Characteristics

Thickness of the solum: 22 to 40 inches

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—1 to 4
Texture—fine sand, sand, loamy fine sand, or loamy sand

Bw horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 or 4
Texture—fine sand, loamy sand, or sand

C horizon:
Hue—10YR
Value—4 to 7
Chroma—3 to 6
Texture—fine sand

741F—Oakville fine sand, 20 to 30 percent slopes

Setting

Landform: Dunes
Position on the landform: Backslopes

Composition

Oakville and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that are calcareous within a depth of 60 inches
- Soils that contain more gravel in all or part of the profile

Dissimilar soils:
- Poorly drained soils on toeslopes
- The well drained Tell soils on shoulders and summits

Properties and Qualities of the Oakville Soil

Parent material: Eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 4.1 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 7s
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

917C2—Oakville-Tell complex, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains

Position on the landform: Oakville—summits and shoulders; Tell—shoulders and backslopes

Composition

Oakville and similar soils: 50 percent
Tell and similar soils: 40 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that are calcareous within a depth of 60 inches
- Soils that contain more gravel in all or part of the profile
- Soils that have more clay in the upper part

Dissimilar soils:
- The somewhat poorly drained Joy soils on footslopes

Properties and Qualities of the Oakville Soil

Parent material: Eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 4.6 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: High

Properties and Qualities of the Tell Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 7.4 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Oakville—6s; Tell—3e
Prime farmland status: Not prime farmland
Hydric soil status: Oakville—not hydric; Tell—not hydric

917D2—Oakville-Tell complex, 10 to 18 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Oakville—upper and middle parts of backslopes; Tell—middle and lower parts of backslopes

Composition

Oakville and similar soils: 50 percent
Tell and similar soils: 45 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that are calcareous within a depth of 60 inches
- Soils that contain more gravel in all or part of the profile
- Soils that have more clay in the upper part

Dissimilar soils:
- The somewhat poorly drained Joy soils on footslopes
- Poorly drained soils on toeslopes

Properties and Qualities of the Oakville Soil

Parent material: Eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 4.3 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low

Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: High

Properties and Qualities of the Tell Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 8.1 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Oakville—6s; Tell—4e
Prime farmland status: Not prime farmland
Hydric soil status: Oakville—not hydric; Tell—not hydric

Orion Series

Taxonomic classification: Coarse-silty, mixed, superactive, nonacid, mesic Aquic Udifluvents

Typical Pedon

Orion silt loam, 0 to 2 percent slopes, frequently flooded; 270 feet south and 1,000 feet east of the northwest corner of sec. 17, T. 22 N., R. 6 E.; in Whiteside County, Illinois; USGS Milledgeville topographic quadrangle; 41 degrees 54 minutes 06 seconds N. and long. 89 degrees 50 minutes 13 seconds W., NAD 27:

A—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; massive; friable; many thin strata of brown (10YR 4/3) and very dark gray (10YR 3/1) silt loam; neutral; abrupt smooth boundary.

C1—5 to 15 inches; dark grayish brown (10YR 4/2) silt loam; massive; friable; many thin strata of pale brown (10YR 6/3) and yellowish brown (10YR 5/4) silt loam; few fine prominent brown (7.5YR 4/4) masses of iron in the matrix; neutral; clear wavy boundary.

C2—15 to 29 inches; dark grayish brown (10YR 4/2) silt loam; massive; friable; many thin strata of dark yellowish brown (10YR 4/4), yellowish brown (10YR 5/6), and pale brown (10YR 6/3) silt loam; few very dark gray (10YR 3/1) wormcasts; few fine prominent brown (7.5YR 4/4) masses of iron in the matrix; neutral; abrupt wavy boundary.

Ab1—29 to 39 inches; black (2.5Y 2.5/1) silt loam; weak thick platy structure parting to weak medium and fine subangular blocky; friable; neutral; clear smooth boundary.

Ab2—39 to 51 inches; black (2.5Y 2.5/1) silty clay loam; strong medium and fine angular blocky structure; friable; neutral; clear smooth boundary.

Ab3—51 to 60 inches; very dark gray (10YR 3/1) silty clay loam; moderate medium and fine subangular blocky structure; friable; neutral.

Range in Characteristics

Depth to the dark buried soil: 20 to 40 inches
Thickness of the surface layer: 5 to 10 inches

Ap or A horizon:
Hue—10YR
Value—3 to 6
Chroma—2 or 3
Texture—silt loam; stratified in some pedons

C horizon:
Hue—10YR
Value—3 to 5
Chroma—2 or 3
Texture—silt loam; stratified in some pedons

Ab horizon:
Hue—10YR or 2.5Y
Value—2 or 3
Chroma—1 or 2
Texture—silty clay loam or silt loam; stratified in some pedons

3415A—Orion silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Orion and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that contain more sand in the lower part
- Soils that have a buried surface layer at a depth of more than 40 inches
- Soils that have a seasonal high water table within a depth of 1 foot

Dissimilar soils:
- The poorly drained Sawmill soils in the lower positions on flood plains

Properties and Qualities of the Orion Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.3 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

7415A—Orion silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Composition

Orion and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that contain more sand in the lower part
- Soils that have a buried surface layer at a depth of more than 40 inches
- Soils that have a seasonal high water table within a depth of 1 foot

Properties and Qualities of the Orion Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.7 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Frequency and most likely period of flooding: Rare, November to June
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

802B—Orthents, loamy, undulating

Setting

Landform: Ground moraines

Composition

Orthents and similar soils: 85 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that typically have a surface layer of silt loam or silty clay loam
- Soils that have a perched seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Muscatune soils on summits

Properties and Qualities of the Orthents

Parent material: Mine spoil or earthy fill
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.9 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Osco Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Osco soil in map unit 86C2 has a thinner dark surface layer than is defined as the range for the series. This soil is classified as a Mollic Hapludalf.

Typical Pedon (Official Series Description)

Osco silt loam, 2 to 5 percent slopes, at an elevation of 858 feet; 316 feet north and 88 feet west of the southeast corner of sec. 23, T. 24 N., R. 6 E.; in Carroll County, Illinois; USGS Lanark topographic quadrangle; lat. 42 degrees 03 minutes 15 seconds N. and long. 89 degrees 45 minutes 52 seconds W., NAD 27:

Ap—0 to 10 inches; very dark brown (10YR 2/2) silt loam, very dark grayish brown (10YR 3/2) dry; moderate fine granular structure; friable; common fine roots; slightly acid; abrupt smooth boundary.

A—10 to 14 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium and coarse granular structure; friable; common fine roots; strongly acid; clear smooth boundary.

BA—14 to 20 inches; dark yellowish brown (10YR 3/4) and dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; friable; common fine roots; few distinct light brownish gray (10YR 6/2) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.

Bt1—20 to 26 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; few distinct gray (10YR 6/1) (dry) silt coatings and common faint dark brown (10YR 3/3) clay films on faces of peds; strongly acid; clear smooth boundary.

Bt2—26 to 37 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots; common distinct light brownish gray (10YR 6/2) (dry) silt coatings and many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine faint brown (10YR 5/3) and common medium prominent strong brown (7.5YR 5/8) redoximorphic concentrations; many prominent very dark gray (N 3/0) and dark brown (7.5YR 3/2) manganese concretions; strongly acid; clear smooth boundary.

Bt3—37 to 45 inches; light yellowish brown (10YR 6/4) silty clay loam; moderate coarse subangular blocky structure; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) redoximorphic depletions and few medium prominent strong brown (7.5YR 5/8) redoximorphic concentrations; strongly acid; gradual smooth boundary.

BC—45 to 55 inches; yellowish brown (10YR 5/4) and brown (10YR 4/3) silty clay loam; weak coarse angular blocky structure; friable; few fine distinct light brownish gray (10YR 6/2) redoximorphic depletions; strongly acid; gradual smooth boundary.

C—55 to 60 inches; yellowish brown (10YR 5/4) and brown (10YR 4/3) silt loam; massive; friable; many fine distinct yellowish brown (10YR 5/6) redoximorphic concentrations and common medium distinct grayish brown (10YR 5/2) redoximorphic depletions; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches
Thickness of the solum: 40 to more than 60 inches
Depth to free carbonates: More than 48 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—silty clay loam or silt loam

C or Cg horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 to 6
Texture—silt loam

86B—Osco silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Composition

Osco and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have more sand in the lower part
- Soils that have a seasonal high water table within a depth of 4 feet

Dissimilar soils:
- The poorly drained Denny and Sable soils in depressions

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.9 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

86C2—Osco silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Composition

Osco and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have more sand in the lower part
- Soils that have a seasonal high water table within a depth of 4 feet

Dissimilar soils:
- The poorly drained Denny and Sable soils in depressions

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.7 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete

Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Otter Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls

Typical Pedon

Otter silt loam, 0 to 2 percent slopes; 1,960 feet west and 2,540 feet south of the northeast corner of sec. 35, T. 22 N., R. 5 E.; in Whiteside County, Illinois; USGS Morrison topographic quadrangle; lat. 41 degrees 51 minutes 06 seconds N. and long. 89 degrees 53 minutes 18 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; slightly acid; abrupt smooth boundary.

A1—10 to 16 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to moderate medium granular; friable; slightly acid; clear smooth boundary.

A2—16 to 21 inches; black (2.5Y 2.5/1) silt loam, very dark gray (10YR 3/1) dry; weak fine subangular blocky structure parting to moderate medium granular; friable; few fine distinct grayish brown (2.5Y 5/2) iron depletions and few fine prominent yellowish brown (10YR 5/8) iron masses in the matrix; few fine prominent dark reddish brown (5YR 2.5/2) coatings of iron on faces of peds; slightly acid; clear smooth boundary.

A3—21 to 35 inches; black (2.5Y 2.5/1) mucky silt loam, black (2.5Y 2.5/1) dry; weak medium subangular blocky structure; friable; few fine prominent strong brown (7.5YR 4/6) iron masses in the matrix; few fine prominent dark reddish brown (5YR 2.5/2) coatings of iron on faces of peds; slightly acid; clear smooth boundary.

AB—35 to 43 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak coarse subangular blocky structure; friable; few fine prominent dark reddish brown (5YR 2.5/2) coatings of iron on faces of peds; common medium faint dark gray (10YR 4/1) iron depletions and few fine prominent brown (7.5YR 4/4) iron masses in the matrix; neutral; clear smooth boundary.

Bg—43 to 50 inches; grayish brown (2.5Y 5/2) silt loam; weak coarse subangular blocky structure; friable; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels; common medium prominent yellowish brown (10YR 5/6) and few medium prominent brown (7.5YR 4/4) iron masses in the matrix; neutral; clear smooth boundary.

Cg—50 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; common fine prominent yellowish brown (10YR 5/6) iron masses in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 50 inches
Thickness of the solum: 24 to 50 inches

Ap, A, or AB horizon:
Hue—7.5YR, 10YR, 2.5Y, or N
Value—2 or 3
Chroma—0 to 2
Texture—silt loam

Bg horizon:
Hue—7.5YR, 10YR, 2.5Y, or N
Value—2 to 6
Chroma—0 to 4
Texture—silt loam, loam, sandy loam, or silty clay loam

Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 to 6
Chroma—0 to 4
Texture—silt loam or loam; strata of silty clay loam or sandy loam in some pedons

1076A—Otter silt loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Otter and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 60 inches
- Soils that contain more clay in all or part of the profile
- Soils that consist of marshy organic material

Dissimilar soils:
- The poorly drained Sawmill soils on toeslopes

Properties and Qualities of the Otter Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.5 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, November to June
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 5w
Prime farmland status: Not prime farmland
Hydric soil status: Hydric

3076A—Otter silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Otter and similar soils: 85 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 60 inches
- Soils that contain more clay in all or part of the profile

Dissimilar soils:
- The poorly drained Sawmill soils on toeslopes

Properties and Qualities of the Otter Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 13.1 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

7076A—Otter silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Composition

Otter and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that are calcareous within a depth of 60 inches
- Soils that contain more clay in all or part of the profile

Dissimilar soils:
- Well drained soils on footslopes
- The poorly drained Sawmill soils on toeslopes

Properties and Qualities of the Otter Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.9 inches
Content of organic matter in the surface layer: 3 to 10 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Rare, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

864—Pits, quarries

General Definition

• This map unit consists of open excavations from which soil and the underlying material have been removed and in which bedrock is exposed. Limestone was the principal quarry rock.

865—Pits, gravel

General Definition

• This map unit consists of open excavations from which soil and the underlying material have been removed and used, without crushing, as a source of sand or gravel.

800C—Psamments, sloping

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Composition

Psamments and similar soils: 100 percent

Minor Components

Similar soils:
• The excessively drained Oakville soils on shoulders and backslopes

Properties and Qualities of the Psamments

Parent material: Outwash or eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 4.2 inches
Content of organic matter in the surface layer: 0.0 to 0.5 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Not rated
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: Not assigned
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Raddle Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludolls

Typical Pedon

Raddle silt loam, 0 to 2 percent slopes; 1,780 feet west and 2,020 feet north of the southeast corner of sec. 23, T. 19 N., R. 4 E.; in Whiteside County, Illinois; Spring Hill topographic quadrangle; lat. 41 degrees 37 minutes 03 seconds N. and long. 90 degrees 00 minutes 13 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; slightly acid; abrupt smooth boundary.

A1—10 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure parting to weak fine granular; friable; many faint very dark gray (10YR 3/1) organic coatings on faces of peds; moderately acid; clear smooth boundary.

A2—16 to 21 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate fine and medium subangular blocky structure; friable; clay films on faces of peds; very dark grayish brown (10YR 3/2) organic coatings on faces of peds; moderately acid; clear smooth boundary.

BA—21 to 26 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; common faint dark brown (10YR 3/3) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—26 to 34 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; friable; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; gradual smooth boundary.

Bt2—34 to 51 inches; dark yellowish brown (10YR 4/4) silt loam; moderate coarse subangular blocky structure; friable; few faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

BC—51 to 61 inches; yellowish brown (10YR 5/4) silt loam; weak coarse angular blocky structure; friable; few fine black (7.5YR 2.5/1) iron-manganese stains on faces of peds; few fine distinct light brownish gray (10YR 6/2) iron depletions; moderately acid; clear smooth boundary.

C—61 to 80 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few fine prominent black (7.5YR 2.5/1) soft masses of iron-manganese in the matrix; few fine distinct light brownish gray (10YR 6/2) iron depletions; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the solum: 40 to more than 80 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam

Bt or Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 or 4
Texture—silt loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—2 to 4
Texture—silt loam; thin strata of sandy loam, loam, clay loam, or silty clay loam in some pedons

430A—Raddle silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Summits

Composition

Raddle and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a surface layer either less than 10 inches thick or more than 24 inches thick
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have less silt and more sand in the surface layer

Dissimilar soils:
- Somewhat poorly drained soils on footslopes

Properties and Qualities of the Raddle Soil

Parent material: Slope alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 13 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

430B—Raddle silt loam, 2 to 5 percent slopes

Setting

Landform: Terraces
Position on the landform: Shoulders and backslopes

Composition

Raddle and similar soils: 89 percent
Dissimilar soils: 11 percent

Minor Components

Similar soils:
- Soils that have a surface layer either less than 10 inches thick or more than 24 inches thick
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have less silt and more sand in the surface layer

Dissimilar soils:
- The somewhat poorly drained Orion soils and other somewhat poorly drained soils; on footslopes

Properties and Qualities of the Raddle Soil

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.8 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Radford Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Fluvaquentic Hapludolls

Typical Pedon

Radford silt loam, 0 to 2 percent slopes, occasionally flooded; 1,109 feet west and 1,254 feet south of the northeast corner of sec. 23, T. 17 N., R. 8 E.; in Bureau County, Illinois; USGS Buda Northeast topographic quadrangle; lat. 41 degrees 26 minutes 54 seconds N. and long. 89 degrees 32 minutes 04 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; common fine roots; moderately acid; abrupt smooth boundary.

A—9 to 21 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; common fine roots; few fine dark masses of iron and manganese throughout; slightly acid; gradual smooth boundary.

C—21 to 29 inches; stratified very dark gray (10YR 3/1) silt loam and brown (10YR 5/3) silty clay loam; weak medium subangular blocky structure; friable; few fine roots; common fine dark masses of iron and manganese throughout; slightly acid; clear smooth boundary.

Ab1—29 to 36 inches; black (10YR 2/1) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; few medium faint very dark grayish brown (10YR 3/2) masses of iron and manganese in the matrix; few very fine dark masses of iron and manganese throughout; slightly acid; clear smooth boundary.

Ab2—36 to 43 inches; black (10YR 2/1) silty clay loam; weak medium subangular blocky structure; friable; few fine faint very dark grayish brown (10YR 3/2) masses of iron and manganese in the matrix; few very fine dark masses of iron and manganese throughout; neutral; clear smooth boundary.

Bgb—43 to 60 inches; black (10YR 2/1) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine faint dark gray (10YR 4/1) iron depletions in the matrix; few very fine dark masses of iron and manganese throughout; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Depth to the buried soil: 20 to 40 inches

Ap or A horizon:
Value—2 or 3
Chroma—1 or 2

C horizon:
Hue—10YR
Value—2 to 6
Chroma—1 or 2
Texture—silt loam

Ab horizon:
Hue—10YR or N
Value—2 or 3
Chroma—0 or 1
Texture—silt loam, silty clay loam, clay loam, or loam

Bgb horizon (if it occurs):
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 2

3074A—Radford silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Radford and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a buried surface layer within a depth of 20 inches
- Soils that have more sand and less silt in the control section
- Soils that have a seasonal high water table within a depth of 1 foot

Dissimilar soils:
- Soils that are less frequently flooded
- The poorly drained Sawmill soils on flood plains

Properties and Qualities of the Radford Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.3 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1 foot, January to May
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

Rozetta Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon (Official Series Description)

Rozetta silt loam, 0 to 2 percent slopes, at an elevation of 890 feet; 150 feet south and 500 feet east of the center of sec. 18, T. 27 N., R. 6 E.; in Stephenson County, Illinois; USGS Pearl City topographic quadrangle; lat. 42 degrees 20 minutes 00 seconds N. and long. 89 degrees 51 minutes 19 seconds W., NAD 27:

A—0 to 4 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 6/1) dry; weak medium granular structure; friable; many fine roots throughout; moderately acid; clear wavy boundary.

E—4 to 11 inches; dark grayish brown (10YR 4/2) silt loam; weak medium platy structure; friable; many fine roots throughout; strongly acid; clear smooth boundary.

BE—11 to 14 inches; brown (10YR 4/3) silty clay loam; weak medium subangular blocky structure; firm; many fine roots between peds; few faint brown (10YR 5/3) (dry) clay depletions on faces of peds; strongly acid; clear smooth boundary.

Bt1—14 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; many fine roots between peds; many faint brown (10YR 5/3) clay films on faces of peds; strongly acid; clear smooth boundary.

Bt2—21 to 39 inches; brown (10YR 5/3) silty clay loam; moderate medium and coarse subangular blocky structure; firm; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few medium faint grayish brown (10YR 5/2) iron depletions; common medium faint light yellowish brown (10YR 6/4) and brown (10YR 4/3) masses of iron in the matrix; strongly acid; clear smooth boundary.

Bt3—39 to 50 inches; yellowish brown (10YR 5/4) silty clay loam; weak coarse subangular blocky structure; firm; few faint brown (10YR 4/3) clay films on faces of peds; common medium distinct grayish brown (10YR 5/2) iron depletions; common medium faint pale brown (10YR 6/3) masses of iron in the matrix; moderately acid; clear smooth boundary.

C—50 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; common medium distinct dark grayish brown (10YR 4/2) iron depletions; slightly acid.

Range in Characteristics

Thickness of the solum: 42 to 72 inches

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam

E horizon:
Hue—10YR
Value—4 to 6
Chroma—2 or 3
Texture—silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam

C horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silty clay loam

279A—Rozetta silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Composition

Rozetta and similar soils: 98 percent
Dissimilar soils: 2 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that do not have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The somewhat poorly drained Atterberry and Stronghurst soils on shoulders
- The poorly drained Denny soils in depressions

Properties and Qualities of the Rozetta Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.4 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 1
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

279B—Rozetta silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Composition

Rozetta and similar soils: 91 percent
Dissimilar soils: 9 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have do not have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils on summits
- The well drained Hickory soils on backslopes

Properties and Qualities of the Rozetta Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.3 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February to April
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Sable Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon (Official Series Description)

Sable silty clay loam, 0 to 2 percent slopes; 1,281 feet south and 97 feet west of the northeast corner of sec. 14, T. 9 N., R. 3 W.; in Warren County, Illinois; USGS Kirkwood East topographic quadrangle; lat. 40 degrees 46 minutes 30 seconds N. and long. 90 degrees 41 minutes 32 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium granular structure; firm; moderately acid; abrupt smooth boundary.

A—8 to 19 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate very fine angular blocky structure; firm; few fine rounded dark concretions of iron and manganese oxides; slightly acid; clear smooth boundary.

AB—19 to 23 inches; very dark gray (10YR 3/1) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine angular blocky structure; firm; few faint dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine dark rounded concretions of iron and manganese; clear smooth boundary.

Bg—23 to 29 inches; dark gray (10YR 4/1) silty clay loam; moderate fine and medium subangular blocky structure; firm; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; common fine and medium dark rounded concretions of iron and manganese oxides; common medium distinct brown (10YR 5/3) masses of iron in the matrix; few medium faint dark grayish brown (10YR 4/2) iron depletions; neutral; clear smooth boundary.

Btg1—29 to 38 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium and coarse subangular blocky structure; firm; few distinct dark gray (10YR 4/1) clay films on faces of peds; many fine and medium dark rounded concretions of iron and manganese; many medium prominent yellowish brown (10YR 5/6) masses of iron in the matrix; neutral; clear wavy boundary.

Btg2—38 to 47 inches; gray (N 5/0) silt loam; weak medium prismatic structure parting to weak medium and coarse angular blocky; firm; few prominent grayish brown (10YR 5/2) clay films on faces of peds; common fine dark rounded concretions of iron and manganese; many medium prominent yellowish brown (10YR 5/6) masses of iron in the matrix; slightly alkaline; gradual smooth boundary.

Cg—47 to 60 inches; gray (N 5/0) silt loam; massive; friable; many fine prominent yellowish brown (10YR 5/6) masses of iron in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches
Thickness of the solum: 40 to 60 inches

Ap or A horizon:
Hue—10YR to 5Y or N
Value—2 or 3
Chroma—0 or 1
Texture—silty clay loam or silt loam

Bg or Btg horizon:
Hue—10YR to 5Y or N
Value—3 to 6
Chroma—0 to 2
Texture—silty clay loam or silt loam

C horizon:
Hue—10YR to 5Y or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam or silty clay loam

68A—Sable silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Composition

Sable and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a seasonal high water table at a depth of more than 1 foot
- Soils that are calcareous in the lower part
- Soils that have less clay in the surface layer and more clay in the subsoil

Dissimilar soils:
- The moderately well drained Buckhart soils on shoulders
- The well drained Osco soils on summits

Properties and Qualities of the Sable Soil

Parent material: Loess
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.9 inches
Content of organic matter in the surface layer: 5 to 6 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Saude Series

Taxonomic classification: Coarse-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls

Typical Pedon

Saude loam, 0 to 2 percent slopes; 2,563 feet west and 1,363 feet north of the southeast corner of sec. 10, T. 20 N., R. 2 E.; in Rock Island County, Illinois; USGS Cordova topographic quadrangle; lat. 41 degrees 43 minutes 59 seconds N. and long. 90 degrees 15 minutes 22 seconds W., NAD 27:

Ap—0 to 9 inches; very dark gray (10YR 3/1) loam; moderate medium subangular blocky structure; friable; moderately acid; clear smooth boundary.
A—9 to 14 inches; very dark gray (10YR 3/1) loam; weak coarse subangular blocky structure parting to moderate fine and medium granular; friable; moderately acid; clear smooth boundary.
BA—14 to 22 inches; very dark gray (10YR 3/1), very dark grayish brown (10YR 3/2), and dark brown (7.5YR 3/2) loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; strongly acid; clear smooth boundary.
Bw—22 to 29 inches; brown (7.5YR 4/4) and dark brown (7.5YR 3/4) loam; weak coarse subangular blocky structure; friable; moderate discontinuous dark brown (7.5YR 3/2) organo-clay coatings on faces of peds; strongly acid; clear smooth boundary.
2C—29 to 50 inches; yellowish brown (10YR 5/4) and dark brown (10YR 3/3) medium and coarse sand and fine gravel; single grain; moderately acid.

Range in Characteristics

Depth to sand and gravel: 18 to 36 inches

A or Ap horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—loam or sandy loam

2BC and 2C horizons:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—gravelly coarse sand, coarse sand, loamy sand, or sand

774A—Saude loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Composition

Saude and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have less gravel in the lower part
- Soils that do not have reddish colors
- Soils that have a thinner or lighter colored surface layer

Properties and Qualities of the Saude Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 6.7 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2s
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Sawmill Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls

Typical Pedon (Official Series Description)

Sawmill silty clay loam, 0 to 2 percent slopes, occasionally flooded; 300 feet south and 750 feet east of the northwest corner of sec. 20, T. 15 N., R. 4 W.; in Sangamon County, Illinois; USGS New City topographic quadrangle; lat. 39 degrees 44 minutes 34 seconds N. and long. 89 degrees 34 minutes 15 seconds W., NAD 27:

Ap—0 to 10 inches; very dark gray (10YR 3/1) and very dark grayish brown (10YR 3/2) silty clay loam, gray (10YR 5/1) dry; weak fine subangular blocky structure; firm; few fine roots throughout; few subrounded pebbles 1 to 3 millimeters in diameter; slightly acid; clear smooth boundary.

A1—10 to 17 inches; black (10YR 2/1) and very dark grayish brown (10YR 3/2) silty clay loam, dark gray (10YR 4/1) dry; moderate fine subangular blocky structure; firm; few fine roots between peds; few subrounded pebbles 1 to 3 millimeters in diameter; few fine prominent yellowish brown (10YR 5/6) masses of iron in the matrix; few fine concretions of manganese lining root channels and pores; neutral; clear smooth boundary.

A2—17 to 25 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium angular blocky structure; firm; few fine roots between peds; few fine concretions of manganese lining root channels and pores; few fine prominent yellowish brown (10YR 5/6) masses of iron in the matrix; neutral; clear smooth boundary.

AB—25 to 32 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak medium prismatic structure parting to moderate fine subangular blocky; firm; few fine roots between peds; few fine concretions of manganese lining root channels and pores; few fine prominent yellowish brown (10YR 5/6) masses of iron in the matrix; neutral; clear smooth boundary.

Bg—32 to 40 inches; dark gray (10YR 4/1) silty clay loam; weak medium prismatic structure parting to moderate fine and medium angular blocky; firm; few fine roots between peds; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; few fine concretions of manganese lining root channels and pores; few fine prominent strong brown (7.5YR 5/6) masses of iron in the matrix; slightly alkaline; clear smooth boundary.

Btg1—40 to 49 inches; grayish brown (10YR 5/2) silty

clay loam; moderate medium prismatic structure parting to weak medium angular blocky; firm; common distinct dark gray (10YR 4/1) clay films on faces of peds; few fine concretions of manganese lining root channels and pores; few fine prominent strong brown (7.5YR 5/6) and common fine distinct yellowish brown (10YR 5/4) masses of iron in the matrix; slightly alkaline; clear smooth boundary.

Btg2—49 to 58 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure; firm; few distinct gray (10YR 5/1) clay films on faces of peds; few fine concretions of manganese lining pores; few fine prominent yellowish brown (10YR 5/6) masses of iron in the matrix; slightly alkaline; gradual smooth boundary.

Cg—58 to 65 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; firm; very dark gray (10YR 3/1) channel linings and fillings; many medium prominent yellowish brown (10YR 5/6) masses of iron in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches
Thickness of the solum: 36 to 60 inches

Ap or A horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 or 3
Chroma—0 to 2
Texture—silty clay loam

Bg or Btg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 or 2
Texture—silty clay loam; stratified in some pedons

Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silty clay loam or clay loam; stratified in some pedons

1107A—Sawmill silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Sawmill and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that contain more clay in the subsoil
- Soils that contain less clay in the subsoil

Dissimilar soils:
- The poorly drained Millington soils on toeslopes

Properties and Qualities of the Sawmill Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.5 inches
Content of organic matter in the surface layer: 4 to 5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, November to June
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 5w
Prime farmland status: Not prime farmland
Hydric soil status: Hydric

3107A—Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Sawmill and similar soils: 99 percent
Dissimilar soils: 1 percent

Minor Components

Similar soils:
- Soils that contain more clay in the subsoil
- Soils that contain less clay in the subsoil

Dissimilar soils:
- Well drained soils on footslopes

Properties and Qualities of the Sawmill Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 13 inches
Content of organic matter in the surface layer: 4 to 5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

7107A—Sawmill silty clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Composition

Sawmill and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that contain more clay in the subsoil
- Soils that contain less clay in the subsoil

Dissimilar soils:
- Well drained soils on footslopes

Properties and Qualities of the Sawmill Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.2 inches
Content of organic matter in the surface layer: 4 to 5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Rare, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

8107+—Sawmill silt loam, 0 to 2 percent slopes, occasionally flooded, overwash

Setting

Landform: Flood plains

Composition

Sawmill and similar soils: 85 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that have less clay in the middle and lower parts of the control section
- Soils that are calcareous in the control section

Dissimilar soils:
- Well drained soils on summits

Properties and Qualities of the Sawmill Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.8 inches
Content of organic matter in the surface layer: 4 to 5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Frequency and most likely period of flooding: Occasional, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Seaton Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Seaton silt loam, 2 to 5 percent slopes; 660 feet north and 30 feet east of the center of sec. 8, T. 11 N., R. 4 W.; in Whiteside County, Illinois; USGS Rozetta topographic quadrangle; lat. 40 degrees 57 minutes 44 seconds N. and long. 90 degrees 52 minutes 24 seconds W., NAD 27:

A—0 to 4 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine granular structure; very friable; slightly acid; clear smooth boundary.

E—4 to 9 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak thin platy structure; friable; slightly acid; clear smooth boundary.

BE—9 to 15 inches; yellowish brown (10YR 5/4) silt loam; weak fine and medium subangular blocky structure; friable; few faint dark brown (10YR 3/3) clay films and common faint light yellowish brown (10YR 6/4) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—15 to 21 inches; yellowish brown (10YR 5/4) silt loam; moderate fine and medium subangular blocky structure; friable; few faint dark brown (10YR 3/3) clay films and few faint light yellowish brown (10YR 6/4) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt2—21 to 27 inches; brown (7.5YR 5/4) silt loam; moderate fine and medium subangular blocky structure; firm; few faint dark brown (10YR 3/3) clay films and few faint light yellowish brown (10YR 6/4) silt coatings on faces of peds; strongly acid; clear smooth boundary.

Bt3—27 to 34 inches; yellowish brown (10YR 5/4) silt loam; moderate medium angular blocky structure; firm; common faint dark brown (10YR 3/3) clay films on faces of peds; strongly acid; gradual smooth boundary.

Bt4—34 to 44 inches; brown (10YR 5/3) silt loam; weak medium and coarse prismatic structure; firm; few faint dark brown (10YR 3/3) clay films and few faint light yellowish brown (10YR 6/4) silt coatings on faces of peds; moderately acid; gradual smooth boundary.

BC—44 to 70 inches; brown (10YR 4/3) silt loam; weak very coarse prismatic structure; friable; few faint dark brown (7.5YR 4/2) clay films on vertical faces of peds; moderately acid; gradual smooth boundary.

C—70 to 95 inches; light brownish gray (10YR 6/2) and brown (10YR 5/3) silt loam; massive; friable; common fine faint dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/6) masses of iron; massive; friable; slightly acid.

Range in Characteristics

Thickness of the loess: More than 80 inches
Thickness of the solum: 42 to more than 60 inches

Ap or A horizon:
Hue—10YR
Value—2 to 4
Chroma—2 or 3
Texture—silt loam or silt
Reaction—moderately acid to neutral

E horizon (if it occurs):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or silt
Reaction—moderately acid to neutral

Bt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—3 to 6

Texture—silt loam or silt
Reaction—very strongly acid to neutral

BC horizon (if it occurs):
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 or 4

C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silt
Reaction—moderately acid to moderately alkaline

274B—Seaton silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Composition

Seaton and similar soils: 92 percent
Dissimilar soils: 8 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Joy soils on summits
- The excessively drained Oakville soils on shoulders
- The well drained Thebes soils on shoulders

Properties and Qualities of the Seaton Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.7 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

274B2—Seaton silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Ground moraines

Composition

Seaton and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The excessively drained Oakville soils on backslopes

Properties and Qualities of the Seaton Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.7 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

274C2—Seaton silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Composition

Seaton and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that are more eroded

Dissimilar soils:
- The excessively drained Oakville soils on backslopes
- The well drained Tell and Thebes soils on backslopes and shoulders

Properties and Qualities of the Seaton Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.7 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

274D2—Seaton silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Seaton and similar soils: 98 percent
Dissimilar soils: 2 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that are more eroded

Dissimilar soils:
- The excessively drained Oakville soils on backslopes

Properties and Qualities of the Seaton Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.7 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 4e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

943D2—Seaton-Timula silt loams, 10 to 18 percent slopes, eroded

Setting

Landform: Loess hills
Position on the landform: Seaton—upper and middle parts of backslopes; Timula—nose slopes and the middle and lower parts of backslopes

Composition

Seaton and similar soils: 60 percent
Timula and similar soils: 30 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that are calcareous throughout

Dissimilar soils:
- The somewhat poorly drained Joy soils on summits
- The excessively drained Oakville soils on backslopes

Properties and Qualities of the Seaton Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.6 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.1 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Seaton—3e; Timula—3e
Prime farmland status: Not prime farmland
Hydric soil status: Seaton—not hydric; Timula—not hydric

943F2—Seaton-Timula silt loams, 18 to 35 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Seaton—upper and middle parts of backslopes; Timula—nose slopes and the middle and lower parts of backslopes

Composition

Seaton and similar soils: 45 percent
Timula and similar soils: 40 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that are calcareous throughout

Dissimilar soils:
- The somewhat poorly drained Joy soils on summits
- The well drained Marseilles soils on backslopes
- The excessively drained Oakville soils on backslopes

Properties and Qualities of the Seaton Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.7 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.2 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Seaton—6e; Timula—6e
Prime farmland status: Not prime farmland
Hydric soil status: Seaton—not hydric; Timula—not hydric

Sparta Series

Taxonomic classification: Sandy, mixed, mesic Entic Hapludolls

Typical Pedon

Sparta loamy sand, 0 to 2 percent slopes; 2,150 feet north and 1,939 feet east of the southwest corner of sec. 20, T. 23 N., R. 10 E.; in Ogle County, Illinois; USGS Daysville topographic quadrangle; lat. 41 degrees 57 minutes 58 seconds N. and long. 89 degrees 22 minutes 13 seconds W., NAD 27:

A1—0 to 10 inches; very dark gray (10YR 3/1) loamy sand, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure parting to moderate very fine granular; very friable; many fine roots throughout; neutral; clear smooth boundary.

A2—10 to 17 inches; very dark grayish brown (10YR 3/2) loamy sand, grayish brown (10YR 5/2) dry; very weak medium and coarse subangular blocky structure parting to moderate very fine granular; very friable; common fine roots throughout; neutral; clear smooth boundary.

Bw1—17 to 24 inches; dark yellowish brown (10YR 4/4) sand; weak medium and coarse subangular blocky structure; very friable; few fine roots throughout; few distinct very dark grayish brown (10YR 3/2) organic coatings and few faint dark brown (10YR 3/3) clay bridges on sand grains; strongly acid; clear smooth boundary.

Bw2—24 to 31 inches; brown (7.5YR 5/4) sand; weak medium and coarse subangular blocky structure; very friable; few fine roots throughout; moderately acid; clear smooth boundary.

C—31 to 60 inches; reddish yellow (7.5YR 6/6) sand; single grain; loose; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 or 2
Texture—fine sand, sand, loamy fine sand, or loamy sand

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 to 6
Texture—fine sand, sand, loamy sand, or loamy fine sand

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—fine sand or sand

88A—Sparta loamy sand, 0 to 2 percent slopes

Setting

Landform: Stream terraces and outwash plains
Position on the landform: Summits

Composition

Sparta and similar soils: 91 percent
Dissimilar soils: 9 percent

Minor Components

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have more gravel
- Soils that have more clay in the upper part

Dissimilar soils:
- The well drained Coyne soils on summits
- Poorly drained soils in depressions
- Somewhat poorly drained soils on footslopes

Properties and Qualities of the Sparta Soil

Parent material: Sandy outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 5 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 4s
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Strawn Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Strawn loam, 18 to 60 percent slopes; 1,627 feet south and 2,225 feet east of the northwest corner of sec. 31, T. 16 N., R. 5 W.; in Rock Island County, Illinois; USGS Blanchard Island topographic quadrangle; lat. 41 degrees 20 minutes 34 seconds N. and long. 90 degrees 00 minutes 27 seconds W., NAD 27:

A1—0 to 6 inches; very dark grayish brown (10YR 3/2) loam; strong very fine and fine granular structure; friable; slightly acid; clear smooth boundary.
A2—6 to 12 inches; brown (10YR 4/3) and very dark grayish brown (10YR 3/2) loam; moderate fine and medium subangular blocky structure; friable; moderately acid; clear smooth boundary.
Bt—12 to 23 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium and coarse subangular blocky structure; friable; discontinuous dark brown (10YR 3/3) clay films on faces of peds; neutral; gradual smooth boundary.
C—23 to 60 inches; yellowish brown (10YR 5/4) loam; massive; violently effervescent; moderately alkaline.

Range in Characteristics

Depth to the base of the argillic horizon: 16 to 24 inches
Depth to carbonates: 14 to 24 inches

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—loam or silt loam

E and/or BE horizon (if it occurs):
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam or loam

Bt and/or BC horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—clay loam, silty clay loam, or loam

C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6
Chroma—2 to 6
Texture—loam, clay loam, silt loam, or fine sandy loam

959G—Strawn-Chute complex, 18 to 60 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Strawn—lower and middle parts of backslopes; Chute—middle and upper parts of backslopes

Composition

Strawn and similar soils: 60 percent
Chute and similar soils: 40 percent

Minor Components

Similar soils:
- Soils that are not calcareous
- Soils that have slopes of less than 18 percent

Properties and Qualities of the Strawn Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches

Available water capacity to a depth of 60 inches: About 7.3 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Chute Soil

Parent material: Eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 4.1 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Low
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: Strawn—7e; Chute—7s
Prime farmland status: Not prime farmland
Hydric soil status: Strawn—not hydric; Chute—not hydric

Stronghurst Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs

Typical Pedon

Stronghurst silt loam, 0 to 2 percent slopes; 582 feet south and 78 feet west of the northeast corner of sec. 23, T. 16 N., R. 8 E.; in Bureau County, Illinois; USGS Wyanet topographic quadrangle; lat. 41 degrees 16 minutes 32 seconds N. and long. 89 degrees 31 minutes 47 seconds W., NAD 27:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; very friable; few fine roots; common fine black (5YR 2/1) accumulations of iron and manganese; neutral; abrupt smooth boundary.

E—8 to 13 inches; brown (10YR 5/3) silt loam; moderate thin and very thin platy structure; friable; few fine roots; common fine faint light brownish gray (10YR 6/2) and common fine distinct yellowish brown (10YR 5/6 and 5/8) redoximorphic features; common fine black (5YR 2.5/1) accumulations of iron and manganese; strongly acid; clear smooth boundary.

Bt1—13 to 24 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct grayish brown (10YR 5/2) clay films and many distinct light gray (10YR 7/2) silt coatings on faces of peds; common fine distinct light brownish gray (10YR 6/2), yellowish brown (10YR 5/8), and strong brown (7.5YR 5/6) redoximorphic features; common fine black (10YR 2/1) accumulations of iron and manganese; strongly acid; clear smooth boundary.

Bt2—24 to 30 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2), yellowish brown (10YR 5/8), and strong brown (7.5YR 5/6) redoximorphic features; common fine black (10YR 2/1) accumulations of iron and manganese; strongly acid; clear smooth boundary.

Bt3—30 to 38 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/8), strong brown (7.5YR 5/6), and light brownish gray (2.5YR 6/2) redoximorphic features; common fine black (10YR 2/1) accumulations of iron and manganese; strongly acid; clear smooth boundary.

Bt4—38 to 47 inches; yellowish brown (10YR 5/4) silty clay loam; moderate coarse prismatic structure; friable; few fine roots; few distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2 and 2.5Y 6/2) and yellowish brown (10YR 5/8) redoximorphic features; common fine black (10YR 2/1) accumulations of iron and manganese; strongly acid; gradual smooth boundary.

C—47 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; common fine distinct strong

brown (7.5YR 5/6) and light brownish gray (2.5Y 6/2) redoximorphic features; common fine black (10YR 2/1) accumulations of iron and manganese; moderately acid.

Range in Characteristics

Thickness of the solum: More than 42 inches
Depth to the top of the argillic horizon: 6 to 24 inches

Ap or A horizon:
Value—3 to 6
Chroma—1 or 2

E horizon:
Value—4 to 6
Chroma—2 or 3

Bt or Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silty clay loam or silt loam

C or Cg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam or silty clay loam

278A—Stronghurst silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Composition

Stronghurst and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have an average of more than 35 percent clay in the subsoil
- Soils that have a seasonal high water table within a depth of 1 foot
- Soils that are eroded; on slopes of 2 to 5 percent near the head of drainageways

Dissimilar soils:
- The well drained Fayette and Greenbush soils on shoulders
- The well drained Rozetta soils on summits

Properties and Qualities of the Stronghurst Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 11.9 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 0.5 foot, January to May
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: Not hydric

Sylvan Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Sylvan silt loam, 10 to 18 percent slopes; 140 feet east and 100 feet south of the center of sec. 34, T. 17 N., R. 8 E.; in Bureau County, Illinois; USGS Buda Northeast topographic quadrangle; lat. 41 degrees 25 minutes 55 seconds N. and long. 89 degrees 33 minutes 34 seconds W., NAD 27:

A—0 to 5 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium and fine granular structure; friable; many very fine and fine roots; neutral; clear smooth boundary.

E—5 to 10 inches; mixed dark grayish brown (10YR 4/2) and brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium platy structure parting to moderate medium granular; friable; many very fine roots; few distinct very dark grayish

brown (10YR 3/2) organic coatings and light brownish gray (10YR 6/2) silt coatings on faces of peds; slightly acid; clear smooth boundary.

Bt1—10 to 15 inches; brown (10YR 4/3) silty clay loam; moderate fine and very fine subangular blocky structure; friable; common very fine roots; few distinct dark brown (10YR 3/3) clay films and very few distinct light brownish gray (10YR 6/2) silt coatings on faces of peds; few fine dark accumulations of iron and manganese; neutral; clear smooth boundary.

Bt2—15 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium and fine subangular blocky structure; friable; common very fine roots; common distinct brown (7.5YR 4/4) clay films on faces of peds; few fine dark accumulations of iron and manganese; slightly acid; clear smooth boundary.

Bt3—21 to 27 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; few distinct dark yellowish brown (10YR 4/4) clay films and very few distinct light brownish gray (10YR 6/2) silt coatings on faces of peds; slightly effervescent; few fine dark accumulations of iron and manganese; neutral; clear smooth boundary.

Bt4—27 to 35 inches; yellowish brown (10YR 5/4) silt loam; common fine distinct yellowish brown (10YR 5/6) and few fine distinct light brownish gray (10YR 6/2) relict mottles; weak medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; few prominent light gray (10YR 7/2) silt coatings and common faint brown (7.5YR 4/4) clay films on faces of peds; few fine dark accumulations of iron and manganese; neutral; clear smooth boundary.

BC—35 to 40 inches; yellowish brown (10YR 5/4) silt loam; common medium distinct light brownish gray (10YR 6/2) mottles; weak coarse prismatic structure parting to weak coarse subangular blocky; friable; few very fine roots; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine dark accumulations of iron and manganese; few medium light-colored concretions of calcium carbonate; slightly effervescent; slightly alkaline; gradual wavy boundary.

C1—40 to 54 inches; light yellowish brown (2.5Y 6/4) silt loam; common medium distinct light brownish gray (10YR 6/2) and few fine distinct brownish yellow (10YR 6/6) mottles; appears massive but has planes of weakness; friable; few fine dark accumulations of iron and manganese; common coarse light-colored concretions of calcium carbonate; strongly effervescent; slightly alkaline; gradual wavy boundary.

C2—54 to 60 inches; brownish yellow (10YR 6/6) silt loam; few medium prominent light brownish gray (10YR 6/2) mottles; massive; friable; few fine dark accumulations of iron and manganese; violently effervescent; moderately alkaline.

Range in Characteristics

Depth to carbonates: 22 to 40 inches
Thickness of the solum: 22 to 40 inches

Ap or A horizon:
Value—4 to 6
Chroma—2 to 4
Texture—silt loam

E horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silt loam

C and/or Cg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or silt

19C3—Sylvan silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Composition

Sylvan and similar soils: 92 percent
Dissimilar soils: 8 percent

Minor Components

Similar soils:
- Soils that are not calcareous within a depth of 40 inches
- Soils that are underlain by glacial till within a depth of 60 inches
- Soils having subsurface horizons that are calcareous within a depth of 20 inches

Dissimilar soils:
- The somewhat poorly drained Atlas soils on backslopes
- The well drained Thebes soils on shoulders and backslopes

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 4e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

19D—Sylvan silt loam, 10 to 18 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Sylvan and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that are not calcareous within a depth of 40 inches
- Soils that are underlain by glacial till within a depth of 60 inches
- Soils having subsurface horizons that are calcareous within a depth of 20 inches

Dissimilar soils:
- The somewhat poorly drained Atlas soils on backslopes
- The well drained Thebes soils on shoulders and backslopes

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.2 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

19D3—Sylvan silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Sylvan and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that are not calcareous within a depth of 40 inches
- Soils that are underlain by glacial till within a depth of 60 inches
- Soils having subsurface horizons that are calcareous within a depth of 20 inches

Dissimilar soils:
- The somewhat poorly drained Atlas soils on backslopes
- The well drained Thebes soils on shoulders and backslopes

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.2 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 4e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

19F—Sylvan silt loam, 18 to 35 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Sylvan and similar soils: 85 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that are not calcareous within a depth of 40 inches
- Soils that are underlain by glacial till within a depth of 60 inches
- Soils having subsurface horizons that are calcareous within a depth of 20 inches

Dissimilar soils:
- The somewhat poorly drained Atlas soils on backslopes
- The well drained Thebes soils on shoulders and backslopes

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.3 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 6e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

19F3—Sylvan silty clay loam, 18 to 35 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Sylvan and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that are not calcareous within a depth of 40 inches
- Soils that are underlain by glacial till within a depth of 60 inches
- Soils having subsurface horizons that are calcareous within a depth of 20 inches

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.1 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very slight

Interpretive Groups

Land capability classification: 6e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

962F—Sylvan-Bold silt loams, 18 to 35 percent slopes

Setting

Landform: Loess hills
Position on the landform: Sylvan—upper and middle parts of backslopes; Bold—nose slopes and the middle and lower parts of backslopes

Composition

Sylvan and similar soils: 65 percent
Bold and similar soils: 30 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that are not calcareous within a depth of 40 inches
- Soils that are underlain by glacial till within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Orion and Radford soils on footslopes

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 12.2 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Bold Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 13.2 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Sylvan—6e; Bold—6e
Prime farmland status: Not prime farmland
Hydric soil status: Sylvan—not hydric; Bold—not hydric

Tell Series

Taxonomic classification: Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludalfs
Map units in which this series occurs: 917C2, 917D2

Typical Pedon

Tell silt loam, 0 to 2 percent slopes; 730 feet south and 2,190 feet west of the northeast corner of sec. 7, T. 18 N., R. 6 E.; in Bureau County, Illinois; USGS Yorktown topographic quadrangle; lat. 41 degrees 34 minutes 02 seconds N. and long. 89 degrees 50 minutes 55 seconds W., NAD 27:

Ap—0 to 9 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak medium granular structure; friable; few fine roots throughout; moderately acid; abrupt smooth boundary.

E—9 to 14 inches; brown (10YR 5/3) silt loam; moderate thin platy structure; friable; few fine roots throughout; few faint dark grayish brown (10YR 4/2) organic coatings on faces of peds; moderately acid; abrupt smooth boundary.

BE—14 to 20 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few faint dark brown (10YR 3/3) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bt—20 to 30 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

2BC—30 to 34 inches; yellowish brown (10YR 5/4) sandy loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

2C—34 to 60 inches; yellowish brown (10YR 5/4) loamy sand; single grain; loose; moderately acid.

Range in Characteristics

Thickness of the loess: 20 to 36 inches
Thickness of the solum: 20 to 36 inches

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 5
Texture—silt loam

E horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam or silt loam

2B horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—sandy loam, loam, or sandy clay loam

2C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—sand or loamy sand

Thebes Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon (Official Series Description)

Thebes silt loam, 5 to 10 percent slopes; 1,060 feet west and 1,800 feet south of the northeast corner of sec. 3, T. 13 N., R. 3 W.; in Logan County, Illinois; USGS Aledo East topographic quadrangle; lat. 41 degrees 09 minutes 02 seconds N. and long. 90 degrees 42 minutes 30 seconds W., NAD 27:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; slightly acid; clear smooth boundary.

Bt1—9 to 14 inches; yellowish brown (10YR 5/4) silty clay loam; weak fine and medium subangular blocky structure; friable; few distinct brown (10YR 5/3) clay films on faces of peds; strongly acid; clear wavy boundary.

Bt2—14 to 26 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear wavy boundary.

Bt3—26 to 31 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common distinct brown (10YR 4/3) clay films; few medium distinct pale brown (10YR 6/3) iron depletions and few medium distinct strong brown (7.5YR 4/6) iron concentrations; common dark iron-manganese stains; slightly acid; clear wavy boundary.

2Bt4—31 to 40 inches; dark yellowish brown (10YR 4/4) loam; moderate medium subangular blocky structure; friable; few distinct brown (10YR 4/3) clay films on faces of peds; common coarse

distinct pale brown (10YR 6/3) iron depletions and common coarse distinct strong brown (7.5YR 4/6) iron concentrations; common dark iron-manganese stains; slightly acid; clear wavy boundary.

2BC—40 to 50 inches; yellowish brown (10YR 5/4) and brown (7.5YR 4/4), stratified sandy loam and loamy sand; weak medium subangular blocky structure; friable; few medium distinct pale brown (10YR 6/3) iron depletions; moderately acid; clear wavy boundary.

2C—50 to 80 inches; dark yellowish brown (10YR 4/4), stratified loamy sand and sand; massive; friable; common medium and coarse distinct brown (7.5YR 4/4) iron concentrations; slightly acid.

Range in Characteristics

Thickness of loess or silty material: 20 to 40 inches
Thickness of the solum: 25 to 55 inches

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—silt loam or silty clay loam
Reaction—slightly acid or neutral

E horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—moderately acid or slightly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silt loam
Reaction—very strongly acid to slightly acid

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—loam, sandy loam, fine sandy loam, sandy clay loam, or clay loam
Reaction—very strongly acid to slightly acid

2C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—loamy sand, fine sand, loamy fine sand, or sand that has strata in some pedons
Reaction—very strongly acid to slightly acid

212B—Thebes silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Composition

Thebes and similar soils: 94 percent
Dissimilar soils: 6 percent

Minor Components

Similar soils:
- Soils that have less than 20 inches of loess at the surface
- Soils that contain more sand throughout

Dissimilar soils:
- Somewhat poorly drained soils on footslopes
- Poorly drained soils on toeslopes

Properties and Qualities of the Thebes Soil

Parent material: Loess over eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 8.9 inches
Content of organic matter in the surface layer: 2 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

Timula Series

Taxonomic classification: Coarse-silty, mixed, superactive, mesic Typic Eutrudepts
Map units in which this series occurs: 943D2, 943F2

Typical Pedon

Timula silt loam, in an area of Seaton-Timula silt loams, 18 to 30 percent slopes, eroded; 1,080 feet east and 2,000 feet south of the northwest corner of sec. 29, T. 22 N., R. 5 E.; in Whiteside County, Illinois; USGS Morrison topographic quadrangle; lat. 41 degrees 52 minutes 03 seconds N. and long. 89 degrees 57 minutes 19 seconds W., NAD 27:

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure parting to weak medium granular; friable; few fine roots throughout; few dark yellowish brown (10YR 4/4) fragments of subsoil material; neutral; abrupt smooth boundary.

Bw1—6 to 12 inches; yellowish brown (10YR 5/4) silt loam; moderate medium and fine subangular blocky structure; friable; few fine roots between peds; few faint brown (10YR 4/3) organic coatings and dark yellowish brown (10YR 4/4) films on faces of peds; neutral; clear smooth boundary.

Bw2—12 to 23 inches; yellowish brown (10YR 5/4) silt loam; weak coarse and medium subangular blocky structure; friable; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) films on faces of peds; neutral; clear smooth boundary.

BC—23 to 28 inches; yellowish brown (10YR 5/4) silt loam; weak coarse angular blocky structure; friable; few fine distinct yellowish brown (10YR 5/6) iron oxide masses in the matrix and light brownish gray (10YR 6/2) iron depletions; slightly effervescent; slightly alkaline; gradual smooth boundary.

C—28 to 60 inches; light yellowish brown (2.5Y 6/4) silt loam; massive; friable; common fine prominent yellowish brown (10YR 5/6) iron masses in the matrix and common fine distinct light gray (10YR 7/2) iron depletions; few fine soft masses of iron; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the solum: 18 to 40 inches
Depth to carbonates: 18 to 40 inches

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—1 to 3
Texture—silt loam or silt

E horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or silt

Bw horizon:
Hue—10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam or silt

BC, Bk, or C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—2 to 4
Texture—silt loam or silt

Titus Series

Taxonomic classification: Fine, smectitic, mesic Vertic Endoaquolls

Typical Pedon

Titus silty clay loam, 0 to 2 percent slopes, frequently flooded; 20 feet west and 10 feet north of the southeast corner of sec. 28, T. 20 N., R. 3 E.; in Henry County, Illinois; USGS Erie Northwest topographic quadrangle; lat. 41 degrees 41 minutes 10 seconds N. and long. 90 degrees 09 minutes 01 second W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; weak medium subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; neutral; abrupt smooth boundary.

A1—8 to 17 inches; very dark gray (10YR 3/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium and fine subangular blocky structure; friable; few fine roots throughout; many faint black (10YR 2/1) organic coatings on faces of peds; few prominent dark brown (7.5YR 3/4) concretions of iron throughout; neutral; clear smooth boundary.

A2—17 to 22 inches; very dark gray (10YR 3/1) silty clay loam, dark gray (10YR 4/1) dry; strong medium and fine angular blocky structure; firm; few fine roots between peds; many faint black (10YR 2/1) organic coatings on faces of peds; few prominent reddish brown (5YR 4/4) soft masses of iron and few prominent dark brown (7.5YR 3/4) concretions of iron throughout; neutral; clear smooth boundary.

Bg1—22 to 32 inches; dark gray (10YR 4/1) silty clay; strong medium and fine prismatic structure; firm; few faint very dark gray (10YR 3/1) organic coatings and few prominent dark brown (7.5YR 3/4) coatings of iron-manganese on faces of peds; few prominent reddish brown (5YR 4/4) soft masses of iron and dark brown (7.5YR 3/4)

concretions of iron in the matrix; few fine prominent strong brown (7.5YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

Bg2—32 to 46 inches; dark gray (10YR 4/1) silty clay loam; moderate medium prismatic structure parting to moderate coarse subangular blocky; firm; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; strata of mixed dark gray (10YR 4/1) and strong brown (7.5YR 5/6) silty clay loam 1 inch thick at a depth of 39 inches; common fine prominent strong brown (7.5YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

Bg3—46 to 52 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate coarse and medium subangular blocky structure; friable; few distinct pressure faces; common fine prominent strong brown (7.5YR 4/6 and 5/6) and yellowish brown (10YR 5/4) iron masses in the matrix; neutral; clear smooth boundary.

BCg—52 to 60 inches; stratified grayish brown (2.5Y 5/2) silty clay loam and clay loam; weak coarse angular blocky structure; friable; few fine distinct dark gray (10YR 4/1) iron depletions and common medium prominent strong brown (7.5YR 4/6) and common fine prominent yellowish brown (10YR 5/4) iron masses in the matrix; few prominent dark brown (7.5YR 3/4) concretions of iron throughout; neutral; clear smooth boundary.

Cg—60 to 80 inches; stratified grayish brown (2.5Y 5/2) silty clay loam and clay loam; massive; friable; few fine distinct dark gray (10YR 4/1) iron depletions and common medium prominent strong brown (7.5YR 4/6) and common fine prominent yellowish brown (10YR 5/4) iron oxide masses in the matrix; few hard masses of iron; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the solum: 35 to 60 inches

Ap or A horizon:
Hue—10YR, 5Y, or N
Value—2 or 3
Chroma—0 to 2
Texture—silty clay loam or silty clay

Bg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silty clay loam or silty clay

BCg and/or Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam; thin strata in some pedons

8404A—Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Composition

Titus and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have less clay and more sand in the subsoil

Dissimilar soils:
- Well drained soils on summits
- Soils that are calcareous

Properties and Qualities of the Titus Soil

Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.6 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: High
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Occasional, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Velma Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls

Typical Pedon

Velma silt loam, 10 to 18 percent slopes, eroded; 1,880 feet north and 260 feet east of the southwest corner of sec. 25, T. 14 N., R. 3 E.; in Henry County, Illinois; USGS Galva topographic quadrangle; 41 degrees 10 minutes 12 seconds N. and long. 90 degrees 06 minutes 52 seconds W., NAD 27:

Ap—0 to 10 inches; very dark gray (10YR 3/1) and dark brown (10YR 3/3) silt loam, dark grayish brown (10YR 4/2) dry; weak fine and medium granular structure; friable; strongly acid; abrupt smooth boundary.

AB—10 to 13 inches; dark brown (10YR 3/3) and very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) and brown (10YR 5/3) dry; weak medium subangular blocky structure parting to weak fine and medium granular; friable; strongly acid; clear smooth boundary.

2Bt1—13 to 18 inches; dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable; prominent dark grayish brown (10YR 4/2) clay films; prominent very dark grayish brown (10YR 3/2) organic coatings; strongly acid; abrupt smooth boundary.

2Bt2—18 to 22 inches; yellowish brown (10YR 5/6 and 5/8) clay loam; weak medium subangular blocky structure; friable; prominent brown (10YR 4/3) clay films; strongly acid; clear smooth boundary.

2Bt3—22 to 27 inches; yellowish brown (10YR 5/4) clay loam; moderate medium subangular blocky structure; friable; prominent brown (10YR 4/3) clay films; few fine faint brownish yellow (10YR 6/8) iron accumulations; neutral; clear smooth boundary.

2Bt4—27 to 34 inches; yellowish brown (10YR 5/4 and 5/6) clay loam; moderate medium and coarse subangular and angular blocky structure; firm; prominent brown (10YR 4/3) clay films; few medium distinct light brownish gray (10YR 6/2) iron depletions; neutral; clear smooth boundary.

2BC—34 to 44 inches; pale brown (10YR 6/3) and yellowish brown (10YR 5/6) clay loam; moderate medium and coarse angular blocky structure; firm; neutral; clear smooth boundary.

2C—44 to 60 inches; yellowish brown (10YR 5/4 and 5/6) clay loam; massive; firm; few fine distinct light gray (5Y 7/1) iron depletions; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the loess: 0 to 20 inches
Thickness of the solum: 42 to more than 60 inches
Depth to carbonates: 42 to 60 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or loam

Bt or 2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 8
Texture—clay loam or loam

C or 2C horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—3 to 8
Texture—clay loam, loam, or sandy loam

250D—Velma silt loam, 10 to 18 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Composition

Velma and similar soils: 97 percent
Dissimilar soils: 3 percent

Minor Components

Similar soils:
- Soils that have a lighter colored or thinner surface layer
- Soils that have more than 20 inches of loess at the surface

Dissimilar soils:
- Soils that have a seasonal high water table within a depth of 60 inches
- The somewhat poorly drained Radford soils on toeslopes

Properties and Qualities of the Velma Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.4 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: High for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

944D2—Velma-Coatsburg silt loams, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Velma—lower and middle parts of backslopes; Coatsburg—upper and middle parts of backslopes

Composition

Velma and similar soils: 60 percent
Coatsburg and similar soils: 40 percent

Minor Components

Similar soils:
- Soils that have a lighter colored or thinner surface layer
- Soils that have more than 20 inches of loess at the surface

Properties and Qualities of the Velma Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 10.7 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Properties and Qualities of the Coatsburg Soil

Parent material: Till
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 8.5 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: At the surface, January to May
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: Velma—3e; Coatsburg—4e
Prime farmland status: Not prime farmland
Hydric soil status: Velma—not hydric; Coatsburg—hydric

Wabash Series

Taxonomic classification: Fine, smectitic, mesic Cumulic Vertic Endoaquolls

Typical Pedon

Wabash silty clay, 0 to 2 percent slopes, rarely flooded; 2,620 feet south and 1,340 feet east of the northwest corner of sec. 36, T. 16 N., R. 6 W.; in Mercer County, Illinois; USGS Blanchard Island topographic quadrangle; lat. 41 degrees 20 minutes 02 seconds N. and long. 91 degrees 01 minute 06 seconds W., NAD 27:

Ap—0 to 6 inches; black (2.5Y 2.5/1) silty clay; moderate medium and coarse subangular blocky and angular blocky structure; firm; neutral; abrupt smooth boundary.

A—6 to 15 inches; black (2.5Y 2.5/1) silty clay; moderate medium and coarse subangular blocky and angular blocky structure; firm; neutral; clear smooth boundary.

Bg1—15 to 32 inches; black (2.5Y 2.5/1) clay; moderate medium prismatic structure parting to moderate coarse subangular blocky; firm; olive (5Y 4/4) root linings in the lower part; neutral; clear smooth boundary.

Bg2—32 to 40 inches; mixed black (2.5Y 2.5/1) and dark gray (5Y 4/1) clay; weak medium prismatic structure parting to moderate medium subangular blocky; firm; many fine distinct olive (5Y 4/4) and many fine prominent brownish yellow (10YR 6/8) redoximorphic features; common fine prominent white (10YR 8/1) redoximorphic features lining root channels; neutral; abrupt smooth boundary.

Cg—40 to 63 inches; dark gray (10YR 4/1), olive brown (2.5Y 4/4), olive gray (5Y 5/2), and olive (5Y 5/3) clay loam; weak coarse subangular blocky structure in the upper half; firm; many fine faint olive (5Y 4/4) and many fine distinct brownish yellow (10YR 6/8) redoximorphic features; common fine prominent white (10YR 8/1) redoximorphic features lining root channels; abundant snail shells in the upper half and few in the lower half; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: More than 36 inches

Thickness of the solum: 40 to 60 inches

Ap and A horizons:
Hue—10YR to 5Y or N
Value—2 or 3
Chroma—0 to 2
Texture—silty clay or clay

Bg horizon (upper part):
Hue—10YR to 5Y or N
Value—2 or 3
Chroma—0 to 2

Bg horizon (lower part):
Hue—10YR to 5Y or N
Value—2 to 5
Chroma—0 to 2

3083A—Wabash silty clay, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Composition

Wabash and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have less clay in the subsoil
- Soils that have a surface layer less than 24 inches thick
- Soils that are calcareous in all or part of the control section

Properties and Qualities of the Wabash Soil

Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 6.4 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Very high
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.2 foot during wet periods
Frequency and most likely period of flooding: Frequent, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

7083A—Wabash silty clay, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Composition

Wabash and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have less clay in the subsoil
- Soils that have a surface layer less than 24 inches thick
- Soils that are calcareous in all or part of the control section

Properties and Qualities of the Wabash Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 6.4 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Very high
Depth and months of the highest apparent seasonal high water table: At the surface, January to May
Ponding depth: 0.3 foot during wet periods
Frequency and most likely period of flooding: Rare, November to June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained
Hydric soil status: Hydric

Waukee Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls

Typical Pedon

Waukee loam, 0 to 2 percent slopes; 180 feet north and 360 feet west of the southeast corner of sec. 36, T. 21 N., R. 7 E.; in Whiteside County, Illinois; USGS Sterling topographic quadrangle; lat. 41 degrees 45 minutes 30 seconds N. and long. 89 degrees 37 minutes 57 seconds W., NAD 27:

Ap—0 to 8 inches; very dark brown (10YR 2/2) loam, very dark grayish brown (10YR 3/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; few fine roots throughout; slightly acid; clear smooth boundary.

A—8 to 14 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; moderate fine and medium subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; slightly acid; clear smooth boundary.

BA—14 to 19 inches; brown (10YR 4/3) loam; moderate medium subangular blocky structure; friable; few fine roots between peds; many faint dark brown (10YR 3/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bw1—19 to 27 inches; dark yellowish brown (10YR 4/4) loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few faint brown (10YR 4/3) coatings on faces of peds; slightly acid; abrupt smooth boundary.

Bw2—27 to 34 inches; dark yellowish brown (10YR 4/4) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots between peds; few faint brown (10YR 4/3) coatings on faces of peds; about 5 to 10 percent gravel; moderately acid; abrupt smooth boundary.

2BC—34 to 43 inches; brown (7.5YR 4/4) and yellowish brown (10YR 5/6) loamy coarse sand; weak medium subangular blocky structure; very friable; about 8 to 12 percent gravel; moderately acid; abrupt smooth boundary.

2C1—43 to 56 inches; brown (7.5YR 4/4) and yellowish brown (10YR 5/6) coarse sand; single grain; loose; about 5 to 10 percent gravel; moderately acid; abrupt smooth boundary.

2C2—56 to 60 inches; yellowish brown (10YR 5/8) sand; single grain; loose; few pebbles; slightly acid.

Range in Characteristics

Depth to sand and gravel: 24 to 40 inches
Depth to carbonates: 72 inches or more

A or Ap horizon:
Hue—10YR
Value—2

Chroma—1 or 2
Texture—loam or silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—loam or sandy clay loam that has thin strata of sandy loam in some pedons

2BC and 2C horizons:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Texture—loamy sand, loamy coarse sand, coarse sand, or the gravelly analogs of these textures; some pedons contain thin strata with 20 to 50 percent gravel

727A—Waukee loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Composition

Waukee and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have more sand in the upper part
- Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Hoopeston soils on footslopes
- The poorly drained Lawler soils on toeslopes

Properties and Qualities of the Waukee Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 7.4 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: None or slight
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2s
Prime farmland status: Prime farmland
Hydric soil status: Not hydric

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 forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment. 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, reclamation material, 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, poor*, and *very 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 pasture is suggested in this section. The estimated yields of the main crops 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 the detailed information given in the description of each soil under the heading “Soil Series and Detailed Soil Map Units.” Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Crop Yield Estimates

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 6. 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 also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents (Fehrenbacher and others, 1978). 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; 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 relative 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 yields.—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 6.

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 landshaping that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for forestland or for engineering purposes.

In the capability system, soils 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, soybeans, small grain, and hay. 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 forestland. 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. The local office of the Cooperative Extension Service or the Natural Resources Conservation Service can provide guidance on the use of these soils as cropland.

Areas in class 8 are generally not suited to crops, pasture, or forestland 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 to pasture, forestland, wildlife habitat, or recreation.

The capability classification of the soils in the survey area is given in table 6.

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, should 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 forestland 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 that have a high water table, are subject to flooding, or are droughty may qualify as prime farmland where these limitations are overcome by drainage measures, flood control, or irrigation. 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.

About 157,918 acres in the survey area, or nearly 55 percent of the total acreage, meets the soil requirements for prime farmland.

The map units in the survey area that meet the criteria for prime farmland are listed in table 7. 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 detailed soil maps. The soil qualities that affect use and management are described in the section "Soil Series and Detailed Soil Map Units."

Forestland Management and Productivity

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

Forestland Productivity

In table 8, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

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

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

Forestland Management

In tables 9a, 9b, 9c, 9d, and 9e, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

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

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

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

The paragraphs that follow indicate the soil properties considered in rating the soils for forestland management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of

the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

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

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

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

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

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

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

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

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, yards, fruit trees, gardens, and cropland from wind and snow; help to keep snow on fields; and provide food and cover for wildlife. 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.

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

Table 10 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in table 10 are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery.

Recreation

The soils of the survey area are rated in tables 11a and 11b 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 tables 11a and 11b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

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

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

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

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil

properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

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

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 water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

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. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 12, 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. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, soybeans, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are bromegrass, timothy, orchardgrass, clover, alfalfa, wheatgrass, and birdsfoot trefoil.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestems, indiangrass, blueberry, goldenrod, dandelions, blackberry, ragweed, wheatgrass, and nightshade.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, birch, maple, green ash, willow, and American elm.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and tamarack.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, rushes, sedges, bulrushes, wild rice, arrowhead, waterplantain, cattail, prairie cordgrass, bluejoint grass, asters, and beggarticks.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, wildlife watering developments, beaver ponds, and other wildlife ponds.

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, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. 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 deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, thrushes, woodpeckers, owls, tree squirrels, porcupine, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and “Keys to Soil Taxonomy” (Soil Survey Staff, 1998) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 1998).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

Table 13 identifies hydric soils in Rock Island

County and also nonhydric soils that may have hydric inclusions. This information can help in planning land uses; however, onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils (National Research Council, 1995; Hurt and others, 1998).

Engineering

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

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

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

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

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

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of sand 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 water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

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

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

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

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

Sanitary Facilities

Table 15 shows the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified

use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

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

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

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

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

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

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

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

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final

cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

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

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

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

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

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

Construction Materials

Table 16 gives information about the soils as potential sources of sand, topsoil, reclamation material, and roadfill. 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. Because all of the soils in Rock Island County are poor sources of gravel, this interpretation is not included in table 16. In the table, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand 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, the soil is considered a likely source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

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

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

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have

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

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

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

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

Water Management

Tables 17a and 17b give 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; aquifer-fed excavated ponds; constructing grassed waterways and surface drains; constructing terraces and diversions; and tile drains and underground outlets. 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 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).

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 high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, 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.

Grassed waterways and surface drains are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock affect the construction of grassed waterways and surface drains. A hazard of wind erosion, a low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

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

Tile drains and underground outlets are used in some areas to remove excess subsurface and surface water from the soil. The ratings in the table apply to the soil in its undisturbed condition and do not include consideration of current land use. Depth to bedrock, a dense layer, or a cemented pan, the content of large stones, and the content of clay influence the ease of digging, filling, and compacting. A seasonal high water table, ponding, and flooding may restrict the period when excavations can be made. The slope influences the use of machinery. Soil texture and depth to the water table influence the resistance to sloughing. Subsidence of organic layers influences grade and stability of tile drains.

Soil Properties

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

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

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

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

Engineering Index Properties

Table 18 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

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

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

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

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

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

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

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

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

Liquid limit and *plasticity index* (Atterberg limits)

indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

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

Physical Properties

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

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

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

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

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

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

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

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

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

Erosion factors are shown in table 19 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

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

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

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

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. Descriptions of these groups are available in the "National Soil Survey Handbook" (USDA, 2003).

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

Chemical Properties

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

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

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

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 20, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

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.

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

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

The four hydrologic soil groups are:

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

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

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

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

and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

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

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

Water table refers to a saturated zone in the soil. Table 21 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Also shown in table 21 is the kind of water table—that is, apparent or perched. An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

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 21 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

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

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

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

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

Soil Features

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

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation

or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

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Glossary

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

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

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.

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.

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.

Beach ridge. A low, essentially continuous mound of beach or beach-and-dune material accumulated by the action of waves and currents on the backshore of a beach, beyond the present limit of storm waves or the reach of ordinary tides. The ridges are roughly parallel to the shoreline and represent successive positions of an advancing shoreline.

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.

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

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

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.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

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

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

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

Clayey soil. Silty clay, sandy clay, or clay.

Closed depression. A low area completely surrounded by higher ground and having no natural outlet.

Coarse textured soil. Sand or loamy sand.

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

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.

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.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

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

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. An area of ground at a lower elevation than the surrounding ground and in which water collects and is drained to a closed depression or lake or to a drainageway at a lower elevation. A drainageway may or may not have distinctly incised channels at its upper reaches or throughout its course.

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

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

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

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

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

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

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

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

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.

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

Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

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

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

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.

Glacial drift (geology). 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 (geology). Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till (geology). Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciated uplands. Land areas that were previously covered by continental or alpine glaciers and that are at a higher elevation than the flood plain.

Glaciofluvial deposits (geology). 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 (geology). 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.

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 (geology). 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.

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

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

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

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

B horizon.—The mineral horizon below an A

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

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

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

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

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

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

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

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.

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. Typical methods of irrigation used in the survey area are:

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.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

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

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

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.

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

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume

change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

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

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

Loamy soil. Coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, silt, clay loam, sandy clay loam, or silty clay loam.

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

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

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

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.

MLRA (Major Land Resource Area). A geographic area characterized by a particular pattern of land uses, elevation and topography, soils, climate, water resources, and potential natural 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.)

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.

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

Particle-size control section. The part of the soil profile on which calculations of particle-size classes are based. The thickness can vary depending on specific soil properties, but for many soils the particle-size control section is from 25 to 100 centimeters.

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.

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.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential 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.

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.

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.

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

Rock outcrop. Exposures of bare bedrock other than lava flows and rocklined pits.

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

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

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.

Sandy soil. Sand or loamy sand.

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.

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.

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. Seepage 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.

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.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or

management requirements for the major land uses in the survey area.

Sinkhole. A depression in the landscape where limestone has been dissolved.

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

Slackwater. A still body of water in a stream.

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.

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

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

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

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

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

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

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

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

Stream channel. The hollow bed where a natural stream of surface water flows or may flow; the deepest or central part of the bed, formed by the main current and covered more or less continuously by water.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel. It originally formed near the level of the stream and is the dissected remnants of an abandoned flood plain, streambed, or valley floor that were produced during a former stage of erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

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

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

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

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

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."

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

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

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.

Understory. Any plants in a forest community that grow to a height of less than 5 feet.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

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.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1971-2000 at Moline, Illinois)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January----	29.2	12.3	20.8	58	-19	0	1.58	0.82	2.25	4	9.6
February---	35.2	18.2	26.7	65	-16	0	1.51	.84	2.11	3	7.1
March------	48.0	28.9	38.5	80	3	30	2.92	1.35	4.27	6	4.8
April------	61.5	39.3	50.4	87	18	121	3.82	2.26	5.21	6	1.4
May--------	73.0	50.0	61.5	92	32	362	4.25	2.23	6.03	7	.0
June-------	82.5	59.7	71.1	97	43	636	4.63	2.40	6.58	7	.0
July-------	85.9	64.5	75.2	99	49	784	4.03	1.94	5.84	6	.0
August-----	83.6	62.4	73.0	98	47	712	4.41	1.73	6.66	6	.0
September--	76.2	53.4	64.8	94	33	446	3.16	1.29	4.73	5	.0
October----	64.1	41.6	52.8	86	23	160	2.80	1.26	4.11	5	.2
November---	47.6	30.1	38.8	74	6	25	2.73	1.28	3.97	5	3.2
December---	34.0	18.3	26.1	62	-12	3	2.20	1.07	3.18	4	7.4
Yearly:											
Average---	60.1	39.9	50.0	---	---	---	---	---	---	---	---
Extreme---	104	-28	---	100	-22	---	---	---	---	---	---
Total-----	---	---	---	---	---	3,279	38.04	31.60	44.19	64	33.7

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Moline, Illinois)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 14	Apr. 23	May 8
2 years in 10 later than--	Apr. 10	Apr. 19	May 4
5 years in 10 later than--	Apr. 2	Apr. 11	Apr. 25
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 17	Oct. 6	Sept. 26
2 years in 10 earlier than--	Oct. 22	Oct. 11	Sept. 30
5 years in 10 earlier than--	Nov. 1	Oct. 22	Oct. 8

Table 3.--Growing Season

(Recorded in the period 1971-2000 at Moline, Illinois)

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	194	172	146
8 years in 10	200	179	153
5 years in 10	212	193	165
2 years in 10	224	207	177
1 year in 10	230	215	184

Table 4.--Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	Family or higher taxonomic class
Ambraw	Fine-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls
Atlas	Fine, smectitic, mesic Aeric Chromic Vertic Epiaqualfs
Atterberry	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
Biggsville	Fine-silty, mixed, superactive, mesic Typic Hapludolls
Birds	Fine-silty, mixed, superactive, nonacid, mesic Typic Fluvaquents
Bold	Coarse-silty, mixed, superactive, calcareous, mesic Typic Udorthents
Buckhart	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Burkhardt	Sandy, mixed, mesic Typic Hapludolls
Calco	Fine-silty, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Chute	Mixed, mesic Typic Udipsamments
Coatsburg	Fine, smectitic, mesic Vertic Argiaquolls
Coffeen	Coarse-silty, mixed, superactive, mesic Fluvaquentic Hapludolls
Coloma	Mixed, mesic Lamellic Udipsamments
Coyne	Coarse-loamy, mixed, active, mesic Typic Argiudolls
Denny	Fine, smectitic, mesic Mollic Albaqualfs
Dickinson	Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
Dorchester	Fine-silty, mixed, superactive, calcareous, mesic Typic Udifluvents
*Elkhart	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Fayette	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Fluvaquents	Fine-silty, mixed, active, nonacid, mesic Typic Fluvaquents
Greenbush	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Hickory	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Hoopeston	Coarse-loamy, mixed, superactive, mesic Aquic Hapludolls
Joslin	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Joy	Fine-silty, mixed, superactive, mesic Aquic Hapludolls
Landes	Coarse-loamy, mixed, superactive, mesic Fluventic Hapludolls
Lawler	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Aquic Hapludolls
Lawson	Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls
Marseilles	Fine-silty, mixed, active, mesic Typic Hapludalfs
Martinsville	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Millington	Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Millsdale	Fine, mixed, active, mesic Typic Argiaquolls
Moline	Fine, smectitic, mesic Vertic Endoaquolls
Muscatune	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Niota	Fine, mixed, superactive, mesic Vertic Albaqualfs
Oakville	Mixed, mesic Typic Udipsamments
Orion	Coarse-silty, mixed, superactive, nonacid, mesic Aquic Udifluvents
Orthents	Fine-loamy, mixed, active, nonacid, mesic Typic Udorthents
*Osco	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Otter	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls
Psamments	Mixed, mesic Udipsamments
Raddle	Fine-silty, mixed, superactive, mesic Typic Hapludolls
Radford	Fine-silty, mixed, superactive, mesic Fluvaquentic Hapludolls
Rozetta	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Sable	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Saude	Coarse-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
Sawmill	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls
Seaton	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Sparta	Sandy, mixed, mesic Entic Hapludolls
Strawn	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Stronghurst	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
Sylvan	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Tell	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludalfs
Thebes	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Timula	Coarse-silty, mixed, superactive, mesic Typic Eutrudepts
Titus	Fine, smectitic, mesic Vertic Endoaquolls

Table 4.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Velma	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Wabash	Fine, smectitic, mesic Cumulic Vertic Endoaquolls
Waukee	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls

Table 5.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
8D2	Hickory silt loam, 10 to 18 percent slopes, eroded	511	0.2
8D3	Hickory clay loam, 10 to 18 percent slopes, severely eroded	1,153	0.4
8F	Hickory silt loam, 18 to 35 percent slopes	3,290	1.1
8F3	Hickory clay loam, 18 to 35 percent slopes, severely eroded	1,305	0.5
19C3	Sylvan silty clay loam, 5 to 10 percent slopes, severely eroded	2,479	0.9
19D	Sylvan silt loam, 10 to 18 percent slopes	1,474	0.5
19D3	Sylvan silty clay loam, 10 to 18 percent slopes, severely eroded	8,662	3.0
19F	Sylvan silt loam, 18 to 35 percent slopes	4,586	1.6
19F3	Sylvan silty clay loam, 18 to 35 percent slopes, severely eroded	1,720	0.6
45A	Denny silt loam, 0 to 2 percent slopes	290	0.1
51A	Muscatune silt loam, 0 to 2 percent slopes	14,387	5.0
61A	Atterberry silt loam, 0 to 2 percent slopes	2,924	1.0
68A	Sable silty clay loam, 0 to 2 percent slopes	1,554	0.5
86B	Osco silt loam, 2 to 5 percent slopes	7,336	2.5
86C2	Osco silt loam, 5 to 10 percent slopes, eroded	5,193	1.8
87A	Dickinson sandy loam, 0 to 2 percent slopes	3,605	1.2
87C2	Dickinson sandy loam, 5 to 10 percent slopes, eroded	171	*
88A	Sparta loamy sand, 0 to 2 percent slopes	7,349	2.5
172A	Hoopeston sandy loam, 0 to 2 percent slopes	397	0.1
212B	Thebes silt loam, 2 to 5 percent slopes	651	0.2
250D	Velma silt loam, 10 to 18 percent slopes	318	0.1
261A	Niota silt loam, 0 to 2 percent slopes	1,179	0.4
274B	Seaton silt loam, 2 to 5 percent slopes	1,038	0.4
274B2	Seaton silt loam, 2 to 5 percent slopes, eroded	2,102	0.7
274C2	Seaton silt loam, 5 to 10 percent slopes, eroded	2,371	0.8
274D2	Seaton silt loam, 10 to 18 percent slopes, eroded	993	0.3
275A	Joy silt loam, 0 to 2 percent slopes	757	0.3
278A	Stronghurst silt loam, 0 to 2 percent slopes	2,667	0.9
279A	Rozetta silt loam, 0 to 2 percent slopes	4,627	1.6
279B	Rozetta silt loam, 2 to 5 percent slopes	190	*
280B	Fayette silt loam, 2 to 5 percent slopes	28,659	9.9
280B2	Fayette silt loam, 2 to 5 percent slopes, eroded	3,137	1.1
280C2	Fayette silt loam, 5 to 10 percent slopes, eroded	4,432	1.5
280C3	Fayette silty clay loam, 5 to 10 percent slopes, severely eroded	952	0.3
317A	Millsdale silty clay loam, 0 to 2 percent slopes	498	0.2
430A	Raddle silt loam, 0 to 2 percent slopes	3,526	1.2
430B	Raddle silt loam, 2 to 5 percent slopes	2,393	0.8
525A	Joslin loam, bedrock substratum, 0 to 2 percent slopes	518	0.2
567C2	Elkhart silt loam, 5 to 10 percent slopes, eroded	1,193	0.4
567D2	Elkhart silt loam, 10 to 18 percent slopes, eroded	729	0.3
570B	Martinsville silt loam, 2 to 5 percent slopes	738	0.3
570C3	Martinsville clay loam, 5 to 10 percent slopes, severely eroded	287	*
570D3	Martinsville clay loam, 10 to 18 percent slopes, severely eroded	440	0.2
647A	Lawler loam, 0 to 2 percent slopes	599	0.2
671A	Biggsville silt loam, 0 to 2 percent slopes	983	0.3
671B	Biggsville silt loam, 2 to 5 percent slopes	4,365	1.5
675A	Greenbush silt loam, 0 to 2 percent slopes	2,232	0.8
675B	Greenbush silt loam, 2 to 5 percent slopes	5,703	2.0
689B	Coloma sand, 1 to 7 percent slopes	276	*
689D	Coloma sand, 7 to 15 percent slopes	128	*
705A	Buckhart silt loam, 0 to 2 percent slopes	1,195	0.4
727A	Waukee loam, 0 to 2 percent slopes	1,618	0.6
741F	Oakville fine sand, 20 to 30 percent slopes	248	*
763A	Joslin silt loam, 0 to 2 percent slopes	1,575	0.5
763B	Joslin silt loam, 2 to 5 percent slopes	328	0.1
764A	Coyne fine sandy loam, 0 to 2 percent slopes	4,339	1.5
764C	Coyne fine sandy loam, 5 to 10 percent slopes	483	0.2
774A	Saude loam, 0 to 2 percent slopes	355	0.1
800C	Psamments, sloping	418	0.1
802B	Orthents, loamy, undulating	8,190	2.8
864	Pits, quarries	418	0.1
865	Pits, gravel	156	*

See footnote at end of table.

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

Map symbol	Soil name	Acres	Percent
898F3	Hickory-Sylvan complex, 18 to 35 percent slopes, severely eroded	1,338	0.5
898G	Hickory-Sylvan silt loams, 35 to 60 percent slopes	8,202	2.8
913D2	Marseilles-Hickory silt loams, 10 to 18 percent slopes, eroded	583	0.2
913F	Marseilles-Hickory silt loams, 18 to 35 percent slopes	2,417	0.8
913G	Marseilles-Hickory silt loams, 35 to 60 percent slopes	2,747	1.0
917C2	Oakville-Tell complex, 5 to 10 percent slopes, eroded	1,214	0.4
917D2	Oakville-Tell complex, 10 to 18 percent slopes, eroded	1,075	0.4
943D2	Seaton-Timula silt loams, 10 to 18 percent slopes, eroded	1,931	0.7
943F2	Seaton-Timula silt loams, 18 to 35 percent slopes, eroded	2,729	0.9
944D2	Velma-Coatsburg silt loams, 10 to 18 percent slopes, eroded	288	*
946D3	Hickory-Atlas complex, 10 to 18 percent slopes, severely eroded	1,643	0.6
946F3	Hickory-Atlas complex, 18 to 35 percent slopes, severely eroded	1,452	0.5
959G	Strawn-Chute complex, 18 to 60 percent slopes	950	0.3
960D2	Hickory-Sylvan-Fayette silt loams, 10 to 18 percent slopes, eroded	5,146	1.8
960D3	Hickory-Sylvan-Fayette complex, 10 to 18 percent slopes, severely eroded	1,589	0.5
960F	Hickory-Sylvan-Fayette silt loams, 18 to 30 percent slopes	11,782	4.1
961A	Burkhardt-Saude complex, 0 to 2 percent slopes	771	0.3
962F	Sylvan-Bold silt loams, 18 to 35 percent slopes	1,325	0.5
1076A	Otter silt loam, undrained, 0 to 2 percent slopes, frequently flooded	1,205	0.4
1082A	Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded	537	0.2
1107A	Sawmill silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	1,404	0.5
1334A	Birds silt loam, undrained, 0 to 2 percent slopes, frequently flooded	18	*
1400A	Calco silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	286	*
1654A	Moline silty clay, undrained, 0 to 2 percent slopes, frequently flooded	573	0.2
3074A	Radford silt loam, 0 to 2 percent slopes, frequently flooded	4,669	1.6
3076A	Otter silt loam, 0 to 2 percent slopes, frequently flooded	2,440	0.8
3082A	Millington silt loam, 0 to 2 percent slopes, frequently flooded	1,489	0.5
3083A	Wabash silty clay, 0 to 2 percent slopes, frequently flooded	395	0.1
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded	7,112	2.5
3239A	Dorchester silt loam, 0 to 2 percent slopes, frequently flooded	1,351	0.5
3400A	Calco silty clay loam, 0 to 2 percent slopes, frequently flooded	1,277	0.4
3415A	Orion silt loam, 0 to 2 percent slopes, frequently flooded	9,326	3.2
3428A	Coffeen silt loam, 0 to 2 percent slopes, frequently flooded	662	0.2
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded	4,487	1.6
3646L	Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded, long duration	5,083	1.8
7076A	Otter silt loam, 0 to 2 percent slopes, rarely flooded	343	0.1
7083A	Wabash silty clay, 0 to 2 percent slopes, rarely flooded	565	0.2
7107A	Sawmill silty clay loam, 0 to 2 percent slopes, rarely flooded	4,137	1.4
7239A	Dorchester silt loam, 0 to 2 percent slopes, rarely flooded	397	0.1
7304A	Landes fine sandy loam, 0 to 2 percent slopes, rarely flooded	376	0.1
7415A	Orion silt loam, 0 to 2 percent slopes, rarely flooded	1,520	0.5
7428A	Coffeen silt loam, 0 to 2 percent slopes, rarely flooded	5,896	2.0
7451A	Lawson silt loam, 0 to 2 percent slopes, rarely flooded	501	0.2
7654A	Moline silty clay, 0 to 2 percent slopes, rarely flooded	980	0.3
8107+	Sawmill silt loam, 0 to 2 percent slopes, occasionally flooded, overwash	729	0.3
8302A	Ambraw loam, 0 to 2 percent slopes, occasionally flooded	161	*
8400A	Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded	1,167	0.4
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	48	*
M-W	Miscellaneous water	97	*
W	Water	16,107	5.6
	Total	288,910	100.0

* Less than 0.1 percent.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Corn	Soybeans	Oats	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
8D2:							
Hickory------	3e	72	23	50	26	2.7	4.5
8D3:							
Hickory------	4e	66	22	46	24	2.5	4.2
8F:							
Hickory------	6e	---	---	---	---	2.4	4.0
8F3:							
Hickory------	6e	---	---	---	---	2.1	3.5
19C3:							
Sylvan-------	4e	97	30	57	46	4.4	7.3
19D:							
Sylvan-------	3e	104	33	61	49	4.7	7.8
19D3:							
Sylvan-------	4e	93	29	55	44	4.2	6.9
19F:							
Sylvan-------	6e	---	---	---	---	4.0	6.7
19F3:							
Sylvan-------	6e	---	---	---	---	3.5	5.8
45A:							
Denny--------	3w	113	37	62	47	---	---
51A:							
Muscatune----	1	167	51	95	64	6.2	10.3
61A:							
Atterberry---	1	149	44	85	60	5.6	9.3
68A:							
Sable--------	2w	156	51	85	61	---	---
86B:							
Osco---------	2e	153	46	88	61	5.8	9.7
86C2:							
Osco---------	3e	146	43	84	58	5.5	9.2
87A:							
Dickinson----	2s	99	37	77	45	3.9	6.5
87C2:							
Dickinson----	3e	93	34	72	42	3.7	6.1
88A:							
Sparta-------	4s	85	29	53	37	3.3	5.5

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Oats	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
172A:							
Hoopeston----	2s	105	33	70	47	4.1	6.8
212B:							
Thebes-------	2e	99	35	72	46	4.0	6.6
250D:							
Velma--------	3e	110	36	67	47	4.3	7.1
261A:							
Niota--------	2w	86	30	53	39	3.3	5.5
274B:							
Seaton-------	2e	117	35	68	49	4.7	7.9
274B2:							
Seaton-------	2e	114	34	66	47	4.6	7.7
274C2:							
Seaton-------	3e	110	33	65	46	4.5	7.5
274D2:							
Seaton-------	4e	106	32	62	44	4.3	7.2
275A:							
Joy----------	1	161	48	92	63	6.1	10.2
278A:							
Stronghurst--	2w	138	42	76	55	5.3	8.8
279A:							
Rozetta------	1	131	40	73	54	5.2	8.6
279B:							
Rozetta------	2e	130	40	72	53	5.1	8.6
280B:							
Fayette------	2e	128	39	72	52	5.1	8.6
280B2:							
Fayette------	2e	124	37	70	51	5.0	8.3
280C2:							
Fayette------	3e	121	37	69	50	4.9	8.1
280C3:							
Fayette------	4e	112	34	64	46	4.5	7.5
317A:							
Millsdale----	3w	113	41	65	47	4.4	7.3
430A:							
Raddle-------	1	149	45	83	59	5.8	9.7
430B:							
Raddle-------	2e	148	45	82	58	5.7	9.6
525A:							
Joslin-------	1	135	43	80	55	5.1	8.5

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Oats	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
567C2:							
Elkhart------	3e	124	37	69	50	4.8	8.0
567D2:							
Elkhart------	3e	119	35	66	48	4.6	7.7
570B:							
Martinsville	2e	120	37	65	50	4.8	7.9
570C3:							
Martinsville	4e	105	32	57	44	4.2	7.0
570D3:							
Martinsville	4e	100	31	55	42	4.0	6.6
647A:							
Lawler-------	2s	115	39	61	44	5.0	8.3
671A:							
Biggsville---	1	150	45	88	61	5.6	9.3
671B:							
Biggsville---	2e	149	45	87	60	5.5	9.2
675A:							
Greenbush----	1	148	43	83	59	5.6	9.3
675B:							
Greenbush----	2e	147	42	82	57	5.5	9.2
689B:							
Coloma-------	4s	57	40	20	28	2.4	4.0
689D:							
Coloma-------	6s	---	---	---	---	---	---
705A:							
Buckhart-----	1	158	48	90	63	6.0	9.9
727A:							
Waukee-------	2s	103	35	66	46	4.2	7.0
741F:							
Oakville-----	7s	---	---	---	---	---	---
763A:							
Joslin-------	1	135	43	80	55	5.1	8.5
763B:							
Joslin-------	2e	134	43	79	54	5.0	8.4
764A:							
Coyne--------	2s	101	35	67	47	3.8	6.3
764C:							
Coyne--------	3e	98	34	65	46	---	---
774A:							
Saude--------	2s	103	35	66	46	4.2	7.0

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Oats	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
800C. Psamments							
802B:							
Orthents	2e	---	---	---	---	---	---
898F3		---	---	---	---	2.6	4.4
Hickory	6e						
Sylvan	6e						
898G		---	---	---	---	---	---
Hickory	7e						
Sylvan	7e						
913D2		82	27	53	33	3.3	5.5
Marseilles	4e						
Hickory	3e						
913F		---	---	---	---	---	4.8
Marseilles	7e						
Hickory	6e						
913G		---	---	---	---	---	---
Marseilles	7e						
Hickory	7e						
917C2		---	---	---	---	3.2	5.3
Oakville	6s						
Tell	3e						
917D2		---	---	---	---	3.1	5.1
Oakville	6s						
Tell	4e						
943D2		102	32	60	43	4.1	6.9
Seaton	3e						
Timula	3e						
943F2		---	---	---	---	3.6	6.0
Seaton	6e						
Timula	6e						
944D2		91	30	54	37	3.6	6.0
Velma	3e						
Coatsburg	4e						
946D3		---	---	---	---	2.2	3.9
Hickory	4e						
Atlas	6e						
946F3		---	---	---	---	1.5	2.6
Hickory	6e						
Atlas	6e						
959G		---	---	---	---	---	---
Strawn	7e						
Chute	7s						

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Oats	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
960D2---------		94	30	57	40	3.9	6.5
Hickory------	3e						
Sylvan-------	3e						
Fayette------	3e						
960D3---------		88	28	54	37	3.6	6.0
Hickory------	4e						
Sylvan-------	4e						
Fayette------	4e						
960F----------		---	---	---	---	3.4	5.7
Hickory------	6e						
Sylvan-------	6e						
Fayette------	6e						
961A----------		72	25	50	34	2.8	4.7
Burkhardt----	2s						
Saude--------	2s						
962F----------		---	---	---	---	3.6	6.0
Sylvan-------	6e						
Bold---------	6e						
1076A:							
Otter--------	5w	---	---	---	---	---	---
1082A:							
Millington---	5w	---	---	---	---	---	---
1107A:							
Sawmill------	5w	---	---	---	---	---	---
1334A:							
Birds--------	5w	---	---	---	---	---	---
1400A:							
Calco--------	5w	---	---	---	---	---	---
1654A:							
Moline-------	5w	---	---	---	---	---	---
3074A:							
Radford------	3w	129	41	---	---	5.0	8.4
3076A:							
Otter--------	3w	129	41	62	44	4.2	7.1
3082A:							
Millington---	3w	120	37	---	---	4.1	6.9
3083A:							
Wabash-------	3w	95	32	---	---	3.3	5.6
3107A:							
Sawmill------	3w	132	42	---	---	5.0	8.3
3239A:							
Dorchester---	2w	119	39	---	---	4.8	8.0

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Oats	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
3400A:							
Calco--------	2w	119	40	---	---	4.2	7.0
3415A:							
Orion--------	3w	80	26	---	---	4.2	7.0
3428A:							
Coffeen------	2w	137	42	---	---	5.2	8.7
3451A:							
Lawson-------	3w	145	43	77	56	5.1	8.6
3646L:							
Fluvaquents--	5w	---	---	---	---	---	---
7076A:							
Otter--------	2w	143	46	69	49	4.7	7.8
7083A:							
Wabash-------	3w	106	35	55	43	3.7	6.2
7107A:							
Sawmill------	2w	147	47	76	54	5.5	9.2
7239A:							
Dorchester---	1	132	43	76	54	5.3	8.8
7304A:							
Landes-------	2s	99	34	62	45	3.7	6.2
7415A:							
Orion--------	2w	135	43	72	52	4.7	7.8
7428A:							
Coffeen------	1	152	47	79	57	5.8	9.7
7451A:							
Lawson-------	2w	161	48	86	62	5.7	9.5
7654A:							
Moline-------	3w	115	39	64	47	4.2	7.0
8107+:							
Sawmill------	2w	147	47	76	54	5.5	9.2
8302A:							
Ambraw-------	2w	132	43	70	52	4.6	7.7
8400A:							
Calco--------	2w	132	44	72	52	4.7	7.8
8404A:							
Titus--------	3w	125	42	68	52	4.3	7.2

* Animal unit month: 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.

Table 7.--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
45A	Denny silt loam, 0 to 2 percent slopes (where drained)
51A	Muscatune silt loam, 0 to 2 percent slopes
61A	Atterberry silt loam, 0 to 2 percent slopes (where drained)
68A	Sable silty clay loam, 0 to 2 percent slopes (where drained)
86B	Osco silt loam, 2 to 5 percent slopes
87A	Dickinson sandy loam, 0 to 2 percent slopes
87C2	Dickinson sandy loam, 5 to 10 percent slopes, eroded
172A	Hoopeston sandy loam, 0 to 2 percent slopes
212B	Thebes silt loam, 2 to 5 percent slopes
261A	Niota silt loam, 0 to 2 percent slopes (where drained)
274B	Seaton silt loam, 2 to 5 percent slopes
274B2	Seaton silt loam, 2 to 5 percent slopes, eroded
275A	Joy silt loam, 0 to 2 percent slopes
278A	Stronghurst silt loam, 0 to 2 percent slopes (where drained)
279A	Rozetta silt loam, 0 to 2 percent slopes
279B	Rozetta silt loam, 2 to 5 percent slopes
280B	Fayette silt loam, 2 to 5 percent slopes
280B2	Fayette silt loam, 2 to 5 percent slopes, eroded
317A	Millsdale silty clay loam, 0 to 2 percent slopes (where drained)
430A	Raddle silt loam, 0 to 2 percent slopes
430B	Raddle silt loam, 2 to 5 percent slopes
525A	Joslin loam, bedrock substratum, 0 to 2 percent slopes
570B	Martinsville silt loam, 2 to 5 percent slopes
647A	Lawler loam, 0 to 2 percent slopes
671A	Biggsville silt loam, 0 to 2 percent slopes
671B	Biggsville silt loam, 2 to 5 percent slopes
675A	Greenbush silt loam, 0 to 2 percent slopes
675B	Greenbush silt loam, 2 to 5 percent slopes
705A	Buckhart silt loam, 0 to 2 percent slopes
727A	Waukee loam, 0 to 2 percent slopes
763A	Joslin silt loam, 0 to 2 percent slopes
763B	Joslin silt loam, 2 to 5 percent slopes
764A	Coyne fine sandy loam, 0 to 2 percent slopes
774A	Saude loam, 0 to 2 percent slopes
961A	Burkhardt-Saude complex, 0 to 2 percent slopes
3074A	Radford silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3076A	Otter silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3082A	Millington silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3083A	Wabash silty clay, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3239A	Dorchester silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3400A	Calco silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3415A	Orion silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3428A	Coffeen silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
7076A	Otter silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7083A	Wabash silty clay, 0 to 2 percent slopes, rarely flooded (where drained)
7107A	Sawmill silty clay loam, 0 to 2 percent slopes, rarely flooded (where drained)

Table 7.--Prime Farmland--Continued

Map symbol	Soil name
7239A	Dorchester silt loam, 0 to 2 percent slopes, rarely flooded
7304A	Landes fine sandy loam, 0 to 2 percent slopes, rarely flooded
7415A	Orion silt loam, 0 to 2 percent slopes, rarely flooded
7428A	Coffeen silt loam, 0 to 2 percent slopes, rarely flooded
7451A	Lawson silt loam, 0 to 2 percent slopes, rarely flooded
7654A	Moline silty clay, 0 to 2 percent slopes, rarely flooded (where drained)
8107+	Sawmill silt loam, 0 to 2 percent slopes, occasionally flooded, overwash (where drained)
8302A	Ambraw loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8400A	Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)

Table 8.--Forestland Productivity

(Only the soils suitable for production of commercial trees are listed)

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
8D2, 8D3, 8F, 8F3:				
Hickory	Bitternut hickory	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Black oak	---	---	
	Green ash	---	---	
	Northern red oak	85	72	
	Tuliptree	95	100	
	White oak	85	72	
19C3, 19D, 19D3, 19F, 19F3:				
Sylvan	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
88A:				
Sparta	Eastern white pine	---	---	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple, red pine, shortleaf pine
	Jack pine	---	---	
	Northern red oak	70	57	
	Red pine	---	---	
274B, 274B2, 274C2, 274D2:				
Seaton	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	90	72	
278A:				
Stronghurst	Bur oak	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	

Table 8.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
279A, 279B:				
Rozetta	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
280B, 280B2, 280C2, 280C3:				
Fayette	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
570B, 570C3, 570D3:				
Martinsville	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Tuliptree	98	100	
	White oak	80	57	
689B, 689D:				
Coloma	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple, red pine, shortleaf pine
	Jack pine	68	100	
	Red pine	78	143	
	White oak	70	72	
741F:				
Oakville	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple, red pine, shortleaf pine
	Jack pine	68	100	
	Red pine	78	143	
	White oak	70	72	
898F3:				
Hickory	Bitternut hickory	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Black oak	---	---	
	Green ash	---	---	
	Northern red oak	85	72	
	Tuliptree	95	100	
	White oak	85	72	

Table 8.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
898F3:				
Sylvan	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
913D2, 913F, 913G:				
Marseilles	Black oak	---	---	Black oak, common hackberry, eastern white pine, green ash
	Northern red oak	66	43	
	White ash	---	---	
	White oak	66	43	
Hickory	Bitternut hickory	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Black oak	---	---	
	Green ash	---	---	
	Northern red oak	85	72	
	Tuliptree	95	100	
	White oak	85	72	
917C2, 917D2:				
Oakville	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple, red pine, shortleaf pine
	Jack pine	68	100	
	Red pine	78	143	
	White oak	70	72	
Tell	Northern red oak	75	57	Black oak, common hackberry, eastern white pine, green ash, red pine
	White oak	75	57	
943D2, 943F2:				
Seaton	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	90	72	
Timula	Bur oak	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Green ash	---	---	
	Northern red oak	---	---	
	White oak	70	57	

Table 8.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
946D3, 946F3:				
Hickory	Bitternut hickory	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Black oak	---	---	
	Green ash	---	---	
	Northern red oak	85	72	
	Tuliptree	95	100	
	White oak	85	72	
Atlas	Bur oak	70	57	Black oak, bur oak, chinkapin oak, common hackberry, eastern redcedar, green ash
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
959G:				
Strawn	Black walnut	---	0	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
Chute	---	---	---	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple
960D2, 960D3, 960F:				
Hickory	Bitternut hickory	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Black oak	---	---	
	Green ash	---	---	
	Northern red oak	85	72	
	Tuliptree	95	100	
	White oak	85	72	
Sylvan	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	

Table 8.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
960D2, 960D3, 960F:				
Fayette	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
962F:				
Sylvan	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
Bold	---	---	---	Bur oak, chinkapin oak, common hackberry, eastern cottonwood, eastern redcedar, green ash

Table 9a.--Forestland Management

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

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
8F, 8F3:						
Hickory	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
19C3:						
Sylvan	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
19D:						
Sylvan	Slight		Poorly suited		Severe	
			Slope	1.00	Low strength	1.00
			Low strength	0.50		
19D3:						
Sylvan	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
19F, 19F3:						
Sylvan	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
88A:						
Sparta	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
274B, 274B2:						
Seaton	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
274C2:						
Seaton	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
274D2:						
Seaton	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
278A:						
Stronghurst	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		

Table 9a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
279A, 279B:						
Rozetta	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
280B, 280B2:						
Fayette	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
280C2, 280C3:						
Fayette	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
570B:						
Martinsville	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
570C3:						
Martinsville	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
570D3:						
Martinsville	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
689B:						
Coloma	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
689D:						
Coloma	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Slope	0.50	Low strength	0.50
			Sandiness	0.50		
741F:						
Oakville	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50	Sandiness	0.50		
898F3:						
Hickory	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Sylvan	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
898G:						
Hickory	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Sylvan	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		

Table 9a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
913D2:						
Marseilles	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
Hickory	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
913F:						
Marseilles	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Hickory	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
913G:						
Marseilles	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Hickory	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
917C2:						
Oakville	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
			Slope	0.50		
Tell	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
917D2:						
Oakville	Moderate		Poorly suited		Moderate	
	Sandiness	0.50	Slope	1.00	Low strength	0.50
			Sandiness	0.50		
Tell	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
943D2:						
Seaton	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
Timula	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
943F2:						
Seaton	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		

Table 9a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
943F2:						
Timula	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
946D3:						
Hickory	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
Atlas	Moderate		Poorly suited		Severe	
	Stickiness/slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Wetness	0.50		
			Low strength	0.50		
			Stickiness	0.50		
946F3:						
Hickory	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Atlas	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Stickiness/slope	0.50	Wetness	0.50		
	Low strength	0.50	Low strength	0.50		
			Stickiness	0.50		
959G:						
Strawn	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Chute	Severe		Poorly suited		Moderate	
	Slope	1.00	Slope	1.00	Low strength	0.50
			Sandiness	0.50		
960D2, 960D3:						
Hickory	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
Sylvan	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
Fayette	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
960F:						
Hickory	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Sylvan	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Fayette	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		

Table 9a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
962F:						
Sylvan	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Bold	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		

Table 9b.--Forestland 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 soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
8F, 8F3:						
Hickory	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
19C3:						
Sylvan	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
19D, 19D3:						
Sylvan	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
19F, 19F3:						
Sylvan	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
88A:						
Sparta	Slight		Slight		Moderately suited	
					Sandiness	0.50
274B, 274B2:						
Seaton	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
274C2:						
Seaton	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
274D2:						
Seaton	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
278A:						
Stronghurst	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
279A:						
Rozetta	Slight		Slight		Moderately suited	
					Low strength	0.50
279B:						
Rozetta	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50

Table 9b.--Forestland Management--Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
280B, 280B2:						
Fayette	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
280C2, 280C3:						
Fayette	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
570B:						
Martinsville	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
570C3:						
Martinsville	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
570D3:						
Martinsville	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
689B:						
Coloma	Slight		Slight		Moderately suited	
					Sandiness	0.50
689D:						
Coloma	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
					Sandiness	0.50
898F3:						
Hickory	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Sylvan	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
898G:						
Hickory	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Sylvan	Very severe		Severe		Poorly suited	
	Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
913D2:						
Marseilles	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Hickory	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50

Table 9b.--Forestland Management--Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
913F:						
Marseilles	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Hickory	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
913G:						
Marseilles	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Hickory	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
917C2:						
Oakville	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Sandiness	0.50
					Slope	0.50
Tell	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
917D2:						
Oakville	Slight		Moderate		Poorly suited	
			Slope/erodibility	0.50	Slope	1.00
					Sandiness	0.50
Tell	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
943D2:						
Seaton	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Timula	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
943F2:						
Seaton	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Timula	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
946D3:						
Hickory	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50

Table 9b.--Forestland Management--Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
946D3:						
Atlas	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Wetness	0.50
					Low strength	0.50
					Stickiness	0.50
946F3:						
Hickory	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Atlas	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Wetness	0.50
					Low strength	0.50
					Stickiness	0.50
959G:						
Strawn	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Chute	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Sandiness	0.50
960D2, 960D3:						
Hickory	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Sylvan	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Fayette	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
960F:						
Hickory	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Sylvan	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Fayette	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
962F:						
Sylvan	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50

Table 9b.--Forestland Management--Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
962F:						
Bold	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50

Table 9c.--Forestland Management

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

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
8F, 8F3:						
Hickory	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
19C3, 19D, 19D3:						
Sylvan	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
19F, 19F3:						
Sylvan	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
88A:						
Sparta	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
274B, 274B2:						
Seaton	Well suited		Well suited		Moderately suited	
					Low strength	0.50
274C2, 274D2:						
Seaton	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
278A:						
Stronghurst	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
279A, 279B:						
Rozetta	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
280B, 280B2:						
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
280C2, 280C3:						
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
570B:						
Martinsville	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50

Table 9c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
570C3, 570D3:						
Martinsville	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
689B:						
Coloma	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
689D:						
Coloma	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50	Sandiness	0.50
			Sandiness	0.50		
741F:						
Oakville	Moderately suited		Poorly suited		Moderately suited	
	Sandiness	0.50	Slope	0.75	Sandiness	0.50
			Sandiness	0.50	Slope	0.50
898F3:						
Hickory	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
Sylvan	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
898G:						
Hickory	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
Sylvan	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
913D2:						
Marseilles	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
Hickory	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
913F:						
Marseilles	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
Hickory	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
913G:						
Marseilles	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50

Table 9c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
913G:						
Hickory	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
917C2, 917D2:						
Oakville	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50	Sandiness	0.50
			Sandiness	0.50		
Tell	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
943D2:						
Seaton	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
Timula	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
943F2:						
Seaton	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50
Timula	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50
946D3:						
Hickory	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
Atlas	Poorly suited		Poorly suited		Moderately suited	
	Stickiness	0.75	Stickiness	0.75	Low strength	0.50
			Slope	0.50	Stickiness	0.50
946F3:						
Hickory	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
Atlas	Poorly suited		Unsuited		Moderately suited	
	Stickiness	0.75	Slope	1.00	Low strength	0.50
			Stickiness	0.75	Slope	0.50
					Stickiness	0.50
959G:						
Strawn	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
					Low strength	0.50
Chute	Moderately suited		Unsuited		Poorly suited	
	Sandiness	0.50	Slope	1.00	Slope	1.00
	Slope	0.50	Sandiness	0.50	Sandiness	0.50
960D2, 960D3:						
Hickory	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		

Table 9c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
960D2, 960D3:						
Sylvan	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
960F:						
Hickory	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
Sylvan	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
Fayette	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
962F:						
Sylvan	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
Bold	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50

Table 9d.--Forestland Management

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

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:				
Hickory	Well suited		Well suited	
8F, 8F3:				
Hickory	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
19C3, 19D, 19D3:				
Sylvan	Well suited		Well suited	
19F, 19F3:				
Sylvan	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
88A:				
Sparta	Well suited		Well suited	
274B, 274B2, 274C2, 274D2:				
Seaton	Well suited		Well suited	
278A:				
Stronghurst	Well suited		Well suited	
279A, 279B:				
Rozetta	Well suited		Well suited	
280B, 280B2, 280C2, 280C3:				
Fayette	Well suited		Well suited	
570B, 570C3, 570D3:				
Martinsville	Well suited		Well suited	
689B, 689D:				
Coloma	Well suited		Well suited	
741F:				
Oakville	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
898F3:				
Hickory	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
Sylvan	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50

Table 9d.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
898G:				
Hickory	Unsuited		Unsuited	
	Slope	1.00	Slope	1.00
Sylvan	Unsuited		Unsuited	
	Slope	1.00	Slope	1.00
913D2:				
Marseilles	Well suited		Well suited	
Hickory	Well suited		Well suited	
913F:				
Marseilles	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
Hickory	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
913G:				
Marseilles	Unsuited		Unsuited	
	Slope	1.00	Slope	1.00
Hickory	Unsuited		Unsuited	
	Slope	1.00	Slope	1.00
917C2, 917D2:				
Oakville	Well suited		Well suited	
Tell	Well suited		Well suited	
943D2:				
Seaton	Well suited		Well suited	
Timula	Well suited		Well suited	
943F2:				
Seaton	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
Timula	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
946D3:				
Hickory	Well suited		Well suited	
Atlas	Poorly suited		Well suited	
	Stickiness	0.50		
946F3:				
Hickory	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
Atlas	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
	Stickiness	0.50		

Table 9d.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
959G:				
Strawn	Unsuited		Unsuited	
	Slope	1.00	Slope	1.00
Chute	Unsuited		Unsuited	
	Slope	1.00	Slope	1.00
960D2, 960D3:				
Hickory	Well suited		Well suited	
Sylvan	Well suited		Well suited	
Fayette	Well suited		Well suited	
960F:				
Hickory	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
Sylvan	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
Fayette	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
962F:				
Sylvan	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
Bold	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50

Table 9e.--Forestland Management

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

Map symbol and soil name	Potential for seedling mortality	
	Rating class and limiting features	Value
8D2, 8D3, 8F, 8F3:		
Hickory	Low	
19C3, 19D, 19D3, 19F, 19F3:		
Sylvan	Low	
88A:		
Sparta	Low	
274B, 274B2, 274C2, 274D2:		
Seaton	Low	
278A:		
Stronghurst	Low	
279A, 279B:		
Rozetta	Low	
280B, 280B2, 280C2, 280C3:		
Fayette	Low	
570B, 570C3, 570D3:		
Martinsville	Low	
689B, 689D:		
Coloma	Low	
741F:		
Oakville	Low	
898F3, 898G:		
Hickory	Low	
Sylvan	Low	
913D2, 913F, 913G:		
Marseilles	Low	
Hickory	Low	
917C2, 917D2:		
Oakville	Low	
Tell	Low	

Table 9e.--Forestland Management--Continued

Map symbol and soil name	Potential for seedling mortality	
	Rating class and limiting features	Value
943D2, 943F2:		
Seaton	Low	
Timula	Low	
946D3, 946F3:		
Hickory	Low	
Atlas	High	
	Depth to saturated zone	1.00
959G:		
Strawn	Low	
Chute	Moderate	
	Calcareous material	0.50
960D2, 960D3, 960F:		
Hickory	Low	
Sylvan	Low	
Fayette	Low	
962F:		
Sylvan	Low	
Bold	Moderate	
	Calcareous material	0.50
	High pH	0.50

Table 10.--Windbreaks and Environmental Plantings

(Only the soils suitable for windbreaks and environmental plantings are listed. Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8D2, 8D3, 8F, 8F3:					
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
19C3, 19D, 19D3, 19F, 19F3:					
Sylvan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
45A:					
Denny	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
51A: Muscatune	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
61A: Atterberry	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
68A: Sable	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
86B, 86C2:					
Osco	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
87A, 87C2:					
Dickinson	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash	Carolina poplar	---
88A:					
Sparta	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, green ash, red maple	Carolina poplar	Eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
172A: Hoopeston	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
212B: Thebes	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
250D: Velma	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
261A:					
Niota	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
274B, 274B2, 274C2, 274D2:					
Seaton	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
275A:					
Joy	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
278A: Stronghurst	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
279A, 279B: Rozetta	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
280B, 280B2, 280C2, 280C3: Fayette	American hazelnut, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, black walnut, blackgum, common hackberry, green ash, northern red oak, norway spruce, pin oak, red pine, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
317A:					
Millsdale	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash	Carolina poplar	---
430A, 430B:					
Raddle	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
525A:					
Joslin	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
567C2, 567D2:					
Elkhart	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
570B, 570C3, 570D3:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
647A:					
Lawler	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
671A, 671B:					
Biggsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
675A, 675B:					
Greenbush	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
689B, 689D:					
Coloma	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, green ash, red maple	Carolina poplar	Eastern white pine
705A:					
Buckhart	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
727A:					
Waukee	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash	Carolina poplar	---

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
741F:					
Oakville	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, green ash, red maple	Carolina poplar	Eastern white pine
763A, 763B:					
Joslin	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
764A, 764C:					
Coyne	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, red pine, tuliptree	Carolina poplar, eastern white pine
774A:					
Saude	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash, red pine	Carolina poplar	---

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
898F3, 898G:					
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
Sylvan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
913D2, 913F, 913G:					
Marseilles	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash	Carolina poplar	---
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
917C2, 917D2:					
Oakville	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, green ash, red maple	Carolina poplar	Eastern white pine
Tell	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash	Carolina poplar	---
943D2, 943F2:					
Seaton	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
Timula	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
944D2:					
Velma	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
Coatsburg	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
946D3, 946F3:					
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
946D3, 946F3:					
Atlas	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar, green ash	Norway spruce	Carolina poplar
959G:					
Strawn	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
Chute	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, green ash, red maple	Carolina poplar	Eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
960D2, 960D3, 960F:					
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
Sylvan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
Fayette	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
961A:					
Burkhardt	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash, red pine	Carolina poplar	---

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
961A:					
Saude	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash, red pine	Carolina poplar	---
962F:					
Sylvan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
Bold	American hazelnut, common winterberry, gray dogwood, redosier dogwood	Blackhaw, common chokecherry, common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	American sycamore, arborvitae, blue spruce, bur oak, chinkapin oak, common hackberry, eastern redcedar, green ash	Carolina poplar, eastern cottonwood	---
1076A:					
Otter	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
1082A: Millington	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
1107A: Sawmill	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
1334A: Birds	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
1400A: Calco	Common winterberry, gray dogwood, redosier dogwood	Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	Carolina poplar, eastern cottonwood, green ash	---

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
1654A: Moline	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3074A: Radford	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3076A: Otter	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
3082A:					
Millington	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3083A:					
Wabash	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3107A:					
Sawmill	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
3239A: Dorchester	Common winterberry, gray dogwood, redosier dogwood, silky dogwood	Blackhaw, common pawpaw, common serviceberry, downy arrowwood, roughleaf dogwood, southern arrowwood	Austrian pine, arborvitae, bur oak, common hackberry, eastern redcedar, green ash, green hawthorn, nannyberry	Carolina poplar, eastern cottonwood	---
3400A: Calco	Common winterberry, gray dogwood, redosier dogwood	Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	Carolina poplar, eastern cottonwood, green ash	---
3415A: Orion	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3428A: Coffeen	Silky dogwood	American cranberrybush	Washington hawthorn, blue spruce, northern whitecedar, white fir	Austrian pine, Norway spruce	Pin oak, eastern white pine
3451A: Lawson	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
7076A:					
Otter	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
7083A:					
Wabash	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
7107A:					
Sawmill	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
7239A: Dorchester	Common winterberry, gray dogwood, redosier dogwood, silky dogwood	Blackhaw, common pawpaw, common serviceberry, downy arrowwood, roughleaf dogwood, southern arrowwood	Austrian pine, arborvitae, bur oak, common hackberry, eastern redcedar, green ash, green hawthorn, nannyberry	Carolina poplar, eastern cottonwood	---
7304A: Landes	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, red pine, tuliptree	Carolina poplar, eastern white pine
7415A: Orion	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
7428A: Coffeen	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
7451A:					
Lawson	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
7654A:					
Moline	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8107+:					
Sawmill	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
8302A: Ambraw	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern whitecedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8400A: Calco	Common winterberry, gray dogwood, redosier dogwood	Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	Carolina poplar, eastern cottonwood, green ash	---
8404A: Titus	Black chokeberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, blackhaw, nannyberry, prairie crabapple, roughleaf dogwood	Common hackberry, eastern redcedar, northern whitecedar, shadbush	Norway spruce, baldcypress, eastern white pine, green ash, northern red oak, tuliptree	Eastern cottonwood, pin oak

Table 11a.--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 soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
8F, F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
19C3:						
Sylvan	Not limited		Not limited		Very limited	
					Slope	1.00
19D, 19D3:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
19F, 19F3:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
45A:						
Denny	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
51A:						
Muscatune	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
61A:						
Atterberry	Somewhat limited		Somewhat limited		Somewhat limited	
68A:						
Sable	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
86B:						
Osco	Not limited		Not limited		Somewhat limited	
					Slope	0.28
86C2:						
Osco	Not limited		Not limited		Very limited	
					Slope	1.00
87A:						
Dickinson	Not limited		Not limited		Not limited	
87C2:						
Dickinson	Not limited		Not limited		Very limited	
					Slope	1.00

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88A:						
Sparta	Somewhat limited Too sandy	0.95	Somewhat limited Too sandy	0.95	Somewhat limited Too sandy	0.95
172A:						
Hoopeston	Somewhat limited Depth to saturated zone	0.81	Somewhat limited Depth to saturated zone	0.48	Somewhat limited Depth to saturated zone	0.81
212B:						
Thebes	Not limited		Not limited		Somewhat limited Slope	0.28
250D:						
Velma	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
261A:						
Niota	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 1.00
274B, 274B2:						
Seaton	Not limited		Not limited		Somewhat limited Slope	0.28
274C2:						
Seaton	Not limited		Not limited		Very limited Slope	1.00
274D2:						
Seaton	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
275A:						
Joy	Somewhat limited Depth to saturated zone	0.98	Somewhat limited Depth to saturated zone	0.75	Somewhat limited Depth to saturated zone	0.98
278A:						
Stronghurst	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.94	Very limited Depth to saturated zone	1.00
279A:						
Rozetta	Not limited		Not limited		Not limited	
279B:						
Rozetta	Not limited		Not limited		Somewhat limited Slope	0.28
280B, 280B2:						
Fayette	Not limited		Not limited		Somewhat limited Slope	0.28
280C2, 280C3:						
Fayette	Not limited		Not limited		Very limited Slope	1.00

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
317A:						
Millsdale	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Restricted permeability	0.43
430A:						
Raddle	Not limited		Not limited		Not limited	
430B:						
Raddle	Not limited		Not limited		Somewhat limited	
					Slope	0.28
525A:						
Joslin	Not limited		Not limited		Not limited	
567C2:						
Elkhart	Not limited		Not limited		Very limited	
					Slope	1.00
567D2:						
Elkhart	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
570B:						
Martinsville	Not limited		Not limited		Somewhat limited	
					Slope	0.28
570C3:						
Martinsville	Not limited		Not limited		Very limited	
					Slope	1.00
570D3:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
647A:						
Lawler	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
671A:						
Biggsville	Not limited		Not limited		Not limited	
671B:						
Biggsville	Not limited		Not limited		Somewhat limited	
					Slope	0.28
675A:						
Greenbush	Not limited		Not limited		Not limited	
675B:						
Greenbush	Not limited		Not limited		Somewhat limited	
					Slope	0.28
689B:						
Coloma	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.50

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
689D:						
Coloma	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.37	Slope	0.37	Too sandy	1.00
705A:						
Buckhart	Not limited		Not limited		Not limited	
727A:						
Waukee	Not limited		Not limited		Not limited	
741F:						
Oakville	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Slope	1.00
	Too sandy	1.00	Slope	1.00	Too sandy	1.00
763A:						
Joslin	Not limited		Not limited		Not limited	
763B:						
Joslin	Not limited		Not limited		Somewhat limited	
					Slope	0.28
764A:						
Coyne	Not limited		Not limited		Not limited	
764C:						
Coyne	Not limited		Not limited		Very limited	
					Slope	1.00
774A:						
Saude	Not limited		Not limited		Not limited	
800C:						
Psamments	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
	Slope	0.09	Slope	0.09	Slope	1.00
802B:						
Orthents	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.50
					Restricted permeability	0.21
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
898F3, 898G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
913D2:						
Marseilles	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.96	Restricted permeability	0.96	Slope	1.00
	Slope	0.96	Slope	0.96	Restricted permeability	0.96
					Depth to bedrock	0.42
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
913F, 913G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
					Depth to bedrock	0.42
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
917C2:						
Oakville	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	1.00
Tell	Not limited		Not limited		Very limited	
					Slope	1.00
917D2:						
Oakville	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.96	Slope	0.96	Too sandy	1.00
Tell	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
943D2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
Timula	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
943F2:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
944D2:						
Velma	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
Coatsburg	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	1.00	Restricted permeability	1.00	Slope	1.00
	Slope	0.96	Slope	0.96	Restricted permeability	1.00

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
946D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
Atlas	Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Restricted permeability	1.00	Slope	1.00
	Depth to saturated zone	1.00	Slope	0.96	Restricted permeability	1.00
	Slope	0.96	Depth to saturated zone	0.94	Depth to saturated zone	1.00
946F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Atlas	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
959G:						
Strawn	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Chute	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Slope	1.00
	Too sandy	1.00	Slope	1.00	Too sandy	1.00
960D2, 960D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
960F:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Fayette	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
961A:						
Burkhardt	Not limited		Not limited		Not limited	
Saude	Not limited		Not limited		Not limited	
962F:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Bold	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1076A:						
Otter	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
1082A:						
Millington	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
1107A:						
Sawmill	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
1334A:						
Birds	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
1400A:						
Calco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
1654A:						
Moline	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Too clayey	1.00	Ponding	1.00
	Too clayey	1.00	Restricted permeability	0.96	Too clayey	1.00
	Restricted permeability	0.96	Flooding	0.40	Restricted permeability	0.96
3074A:						
Radford	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98
3076A:						
Otter	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3082A:						
Millington	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
3083A:						
Wabash	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Restricted permeability	1.00	Ponding	1.00
	Restricted permeability	1.00	Too clayey	1.00	Restricted permeability	1.00
	Too clayey	1.00	Flooding	0.40	Too clayey	1.00
3107A:						
Sawmill	Very limited		Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Flooding	0.40	Depth to saturated zone	1.00
3239A:						
Dorchester	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.40	Flooding	1.00
3400A:						
Calco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3415A:						
Orion	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98
3428A:						
Coffeen	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98
3451A:						
Lawson	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98
3646L:						
Fluvaquents	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7076A:						
Otter	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00				
7083A:						
Wabash	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	1.00	Restricted permeability	1.00
	Restricted permeability	1.00	Too clayey	1.00	Too clayey	1.00
	Too clayey	1.00				
7107A:						
Sawmill	Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00				
7239A:						
Dorchester	Very limited		Not limited		Not limited	
	Flooding	1.00				
7304A:						
Landes	Very limited		Not limited		Not limited	
	Flooding	1.00				
7415A:						
Orion	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.19	Depth to saturated zone	0.39
	Depth to saturated zone	0.39				
7428A:						
Coffeen	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Depth to saturated zone	0.98				
7451A:						
Lawson	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Depth to saturated zone	0.98				
7654A:						
Moline	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Too clayey	1.00	Too clayey	1.00
	Too clayey	1.00	Restricted permeability	0.96	Restricted permeability	0.96
	Restricted permeability	0.96				

Table 11a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8107+:						
Sawmill	Very limited		Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00			Flooding	0.60
8302A:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	0.21	Flooding	0.60
	Restricted permeability	0.21			Restricted permeability	0.21
8400A:						
Calco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00			Flooding	0.60
8404A:						
Titus	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	0.96	Restricted permeability	0.96
	Restricted permeability	0.96			Flooding	0.60

Table 11b.--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 soil name	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
8D2, 8D3:						
Hickory	Not limited		Not limited		Somewhat limited	
					Slope	0.96
8F, 8F3:						
Hickory	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.04	Slope	1.00
19C3:						
Sylvan	Not limited		Not limited		Not limited	
19D, 19D3:						
Sylvan	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
19F, 19F3:						
Sylvan	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
45A:						
Denny	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
					Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00		
51A:						
Muscatune	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
61A:						
Atterberry	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
68A:						
Sable	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
					Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00		
86B, 86C2:						
Osco	Not limited		Not limited		Not limited	
87A, 87C2:						
Dickinson	Not limited		Not limited		Not limited	
88A:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	0.08
172A:						
Hoopeston	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48

Table 11b.--Recreation--Continued

Map symbol and soil name	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
212B:						
Thebes	Not limited		Not limited		Not limited	
250D:						
Velma	Not limited		Not limited		Somewhat limited	
					Slope	0.96
261A:						
Niota	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
274B, 274B2, 274C2:						
Seaton	Not limited		Not limited		Not limited	
274D2:						
Seaton	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
275A:						
Joy	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
278A:						
Stronghurst	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
279A, 279B:						
Rozetta	Not limited		Not limited		Not limited	
280B, 280B2, 280C2, 280C3:						
Fayette	Not limited		Not limited		Not limited	
317A:						
Millsdale	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
					Depth to bedrock	0.42
430A, 430B:						
Raddle	Not limited		Not limited		Not limited	
525A:						
Joslin	Not limited		Not limited		Not limited	
567C2:						
Elkhart	Not limited		Not limited		Not limited	
567D2:						
Elkhart	Not limited		Not limited		Somewhat limited	
					Slope	0.96
570B, 570C3:						
Martinsville	Not limited		Not limited		Not limited	

Table 11b.--Recreation--Continued

Map symbol and soil name	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
570D3:						
Martinsville	Not limited		Not limited		Somewhat limited	
					Slope	0.96
647A:						
Lawler	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
671A, 671B:						
Biggsville	Not limited		Not limited		Not limited	
675A, 675B:						
Greenbush	Not limited		Not limited		Not limited	
689B:						
Coloma	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	0.50
					Droughty	0.49
689D:						
Coloma	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.58
					Too sandy	0.50
					Slope	0.37
705A:						
Buckhart	Not limited		Not limited		Not limited	
727A:						
Waukee	Not limited		Not limited		Not limited	
741F:						
Oakville	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.88			Droughty	0.62
763A, 763B:						
Joslin	Not limited		Not limited		Not limited	
764A, 764C:						
Coyne	Not limited		Not limited		Not limited	
774A:						
Saude	Not limited		Not limited		Not limited	
800C:						
Psamments	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.69
					Too sandy	0.50
					Slope	0.09
802B:						
Orthents	Not limited		Not limited		Not limited	
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	

Table 11b.--Recreation--Continued

Map symbol and soil name	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
898F3:						
Hickory	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.01	Slope	1.00
Sylvan	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.01		
898G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Water erosion	1.00	Slope	1.00		
913D2:						
Marseilles	Not limited		Not limited		Somewhat limited	
					Slope	0.96
					Depth to bedrock	0.42
Hickory	Not limited		Not limited		Somewhat limited	
					Slope	0.96
913F:						
Marseilles	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.01	Slope	1.00
					Depth to bedrock	0.42
Hickory	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.01	Slope	1.00
913G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Depth to bedrock	0.42
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
917C2:						
Oakville	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.34
Tell	Not limited		Not limited		Not limited	
917D2:						
Oakville	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Slope	0.96
					Droughty	0.40
Tell	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
943D2:						
Seaton	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
Timula	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96

Table 11b.--Recreation--Continued

Map symbol and soil name	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
943F2:						
Seaton	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
Timula	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
944D2:						
Velma	Not limited		Not limited		Somewhat limited	
					Slope	0.96
Coatsburg	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
946D3:						
Hickory	Not limited		Not limited		Somewhat limited	
					Slope	0.96
Atlas	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
946F3:						
Hickory	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.04	Slope	1.00
Atlas	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Depth to saturated zone	0.86	Depth to saturated zone	0.94
	Depth to saturated zone	0.86	Slope	0.04		
959G:						
Strawn	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Chute	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	1.00	Slope	1.00	Droughty	0.29
960D2, 960D3:						
Hickory	Not limited		Not limited		Somewhat limited	
					Slope	0.96
Sylvan	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
Fayette	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
960F:						
Hickory	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.04	Slope	1.00

Table 11b.--Recreation--Continued

Map symbol and soil name	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
960F:						
Sylvan	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
Fayette	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
961A:						
Burkhardt	Not limited		Not limited		Somewhat limited	
					Droughty	0.01
Saude	Not limited		Not limited		Not limited	
962F:						
Sylvan	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
Bold	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
1076A:						
Otter	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
1082A:						
Millington	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
1107A:						
Sawmill	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
1334A:						
Birds	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
1400A:						
Calco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00

Table 11b.--Recreation--Continued

Map symbol and soil name	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
1654A:						
Moline	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Too clayey	1.00	Too clayey	1.00	Depth to saturated zone	
	Flooding	0.40	Flooding	0.40	Too clayey	1.00
3074A:						
Radford	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
3076A:						
Otter	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Ponding	1.00
3082A:						
Millington	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
3083A:						
Wabash	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Too clayey	1.00	Too clayey	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Too clayey	1.00
3107A:						
Sawmill	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
3239A:						
Dorchester	Somewhat limited		Somewhat limited		Very limited	
	Flooding	0.40	Flooding	0.40	Flooding	1.00
3400A:						
Calco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
3415A:						
Orion	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75

Table 11b.--Recreation--Continued

Map symbol and soil name	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
3428A:						
Coffeen	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
3451A:						
Lawson	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
3646L:						
Fluvaquents	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
7076A:						
Otter	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
7083A:						
Wabash	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Too clayey	1.00	Too clayey	1.00	Too clayey	1.00
7107A:						
Sawmill	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
7239A:						
Dorchester	Not limited		Not limited		Not limited	
7304A:						
Landes	Not limited		Not limited		Not limited	
7415A:						
Orion	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.19
7428A:						
Coffeen	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
7451A:						
Lawson	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75

Table 11b.--Recreation--Continued

Map symbol and soil name	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
7654A:						
Moline	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Too clayey	1.00	Too clayey	1.00	Too clayey	1.00
8107+:						
Sawmill	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
8302A:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
					Flooding	0.60
8400A:						
Calco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
					Flooding	0.60
8404A:						
Titus	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
					Flooding	0.60

Table 12.--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 soil name	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
8D2, 8D3:										
Hickory	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
8F, 8F3:										
Hickory	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
19C3:										
Sylvan	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
19D, 19D3:										
Sylvan	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
19F, 19F3:										
Sylvan	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
45A:										
Denny	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
51A:										
Muscatune	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
61A:										
Atterberry	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
68A:										
Sable	Fair	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good.
86B:										
Osco	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
86C2:										
Osco	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87A:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87C2:										
Dickinson	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
88A:										
Sparta	Poor	Poor	Fair	Poor	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
172A:										
Hoopeston	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
212B:										
Thebes	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	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
250D:										
Velma	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
261A:										
Niota	Poor	Fair	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
274B, 274B2:										
Seaton	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
274C2:										
Seaton	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
274D2:										
Seaton	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
275A:										
Joy	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
278A:										
Stronghurst	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
279A, 279B:										
Rozetta	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
280B, 280B2:										
Fayette	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
280C2, 280C3:										
Fayette	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
317A:										
Millsdale	Poor	Poor	Fair	Poor	Poor	Good	Fair	Poor	Poor	Fair.
430A, 430B:										
Raddle	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
525A:										
Joslin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
567C2:										
Elkhart	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
567D2:										
Elkhart	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
570B:										
Martinsville	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
570C3:										
Martinsville	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
570D3:										
Martinsville	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
647A:										
Lawler	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
671A, 671B:										
Biggsville	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
675A, 675B:										
Greenbush	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
689B, 689D:										
Coloma	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
705A:										
Buckhart	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
727A:										
Waukee	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
741F:										
Oakville	Poor	Poor	Fair	Poor	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
763A, 763B:										
Joslin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
764A:										
Coyne	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
764C:										
Coyne	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
774A:										
Saude	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
800C.										
Psamments										
802B.										
Orthents										
864.										
Pits, quarries										
865.										
Pits, gravel										
898F3:										
Hickory	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	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
898F3:										
Sylvan	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
898G:										
Hickory	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Sylvan	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
913D2:										
Marseilles	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Hickory	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
913F:										
Marseilles	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Hickory	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
913G:										
Marseilles	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Hickory	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
917C2, 917D2:										
Oakville	Poor	Poor	Fair	Poor	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
Tell	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
943D2:										
Seaton	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Timula	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
943F2:										
Seaton	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Timula	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
944D2:										
Velma	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Coatsburg	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
946D3:										
Hickory	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Atlas	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
946F3:										
Hickory	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Atlas	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
959G:										
Strawn	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Chute	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
960D2, 960D3:										
Hickory	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Sylvan	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Fayette	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
960F:										
Hickory	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Sylvan	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Fayette	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
961A:										
Burkhardt	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
Saude	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
962F:										
Sylvan	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Bold	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
1076A:										
Otter	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
1082A:										
Millington	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
1107A:										
Sawmill	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
1334A:										
Birds	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
1400A:										
Calco	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
1654A:										
Moline	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3074A:										
Radford	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3076A:										
Otter	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3082A:										
Millington	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3083A:										
Wabash	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3107A:										
Sawmill	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3239A:										
Dorchester	Poor	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair	Poor.
3400A:										
Calco	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3415A:										
Orion	Poor	Fair	Fair	Good	Good	Fair	Fair	Good	Fair	Fair.
3428A:										
Coffeen	Poor	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Fair.
3451A:										
Lawson	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3646L:										
Fluvaquents	Very poor.	Poor	Fair	Fair	Fair	Good	Fair	Poor	Fair	Fair.
7076A:										
Otter	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7083A:										
Wabash	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
7107A:										
Sawmill	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7239A:										
Dorchester	Fair	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Poor	Poor.
7304A:										
Landes	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7415A:										
Orion	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
7428A:										
Coffeen	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Fair.
7451A:										
Lawson	Fair	Good	Good	Good	Good	Good	Fair	Good	Good	Fair.
7654A:										
Moline	Poor	Fair	Fair	Fair	Poor	Good	Good	Poor	Poor	Good.
8107+:										
Sawmill	Fair	Good	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
8302A:										
Ambraw	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8400A:										
Calco	Fair	Fair	Good	Fair	Poor	Good	Good	Fair	Fair	Good.
8404A:										
Titus	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.

Table 13.--Hydric Soils

(Only map units that have hydric components are listed. See text for a description of hydric qualities)

Map symbol and map unit name	Component	Hydric status	Local landform
45A:			
Denny silt loam, 0 to 2 percent slopes	Denny	Yes	depression
51A:			
Muscatune silt loam, 0 to 2 percent slopes	Muscatune	No	ground moraine
	Denny	Yes	depression
	Sable	Yes	depression
61A:			
Atterberry silt loam, 0 to 2 percent slopes	Atterberry	No	ground moraine
	Sable	Yes	depression
68A:			
Sable silty clay loam, 0 to 2 percent slopes	Sable	Yes	ground moraine
86B:			
Osco silt loam, 2 to 5 percent slopes	Osco	No	ground moraine
	Denny	Yes	depression
	Sable	Yes	depression
86C2:			
Osco silt loam, 5 to 10 percent slopes, eroded	Osco	No	ground moraine
	Denny	Yes	depression
	Sable	Yes	depression
261A:			
Niota silt loam, 0 to 2 percent slopes	Niota	Yes	lake plain
275A:			
Joy silt loam, 0 to 2 percent slopes	Joy	No	ground moraine
	Sable	Yes	depression
279A:			
Rozetta silt loam, 0 to 2 percent slopes	Rozetta	No	ground moraine
	Denny	Yes	depression
317A:			
Millsdale silty clay loam, 0 to 2 percent slopes	Millsdale	Yes	lake plain
671B:			
Biggsville silt loam, 2 to 5 percent slopes	Biggsville	No	ground moraine
	Denny	Yes	depression
675A:			
Greenbush silt loam, 0 to 2 percent slopes	Greenbush	No	ground moraine
	Denny	Yes	depression
675B:			
Greenbush silt loam, 2 to 5 percent slopes	Greenbush	No	ground moraine
	Denny	Yes	depression
705A:			
Buckhart silt loam, 0 to 2 percent slopes	Buckhart	No	knoll, ground moraine
	Sable	Yes	toeslope
	Denny	Yes	depression

Table 13.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform
944D2:			
Velma-Coatsburg silt loams, 10 to 18 percent slopes, eroded	Velma	No	ground moraine
	Coatsburg	Yes	ground moraine
1076A:			
Otter silt loam, undrained, 0 to 2 percent slopes, frequently flooded	Otter	Yes	flood plain
1082A:			
Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded	Millington	Yes	flood plain
1107A:			
Sawmill silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	Sawmill	Yes	flood plain
1334A:			
Birds silt loam, undrained, 0 to 2 percent slopes, frequently flooded	Birds	Yes	flood plain
1400A:			
Calco silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	Calco	Yes	flood plain
1654A:			
Moline silty clay, undrained, 0 to 2 percent slopes, frequently flooded	Moline	Yes	flood plain
3076A:			
Otter silt loam, 0 to 2 percent slopes, frequently flooded	Otter	Yes	flood plain
3082A:			
Millington silt loam, 0 to 2 percent slopes, frequently flooded	Millington	Yes	flood plain
3083A:			
Wabash silty clay, 0 to 2 percent slopes, frequently flooded	Wabash	Yes	flood plain
3107A:			
Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded	Sawmill	Yes	flood plain
3239A:			
Dorchester silt loam, 0 to 2 percent slopes, frequently flooded	Dorchester	No	flood plain
	Sawmill	Yes	flood plain
3400A:			
Calco silty clay loam, 0 to 2 percent slopes, frequently flooded	Calco	Yes	flood plain
3415A:			
Orion silt loam, 0 to 2 percent slopes, frequently flooded	Orion	No	flood plain
	Sawmill	Yes	flood plain
3451A:			
Lawson silt loam, 0 to 2 percent slopes, frequently flooded	Lawson	No	flood plain
	Sawmill	Yes	swale

Table 13.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform
3646L:			
Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded, long duration	Fluvaquents	Yes	flood plain
7076A:			
Otter silt loam, 0 to 2 percent slopes, rarely flooded	Otter	Yes	flood plain
7083A:			
Wabash silty clay, 0 to 2 percent slopes, rarely flooded	Wabash	Yes	flood plain
7107A:			
Sawmill silty clay loam, 0 to 2 percent slopes, rarely flooded	Sawmill	Yes	flood plain
7239A:			
Dorchester silt loam, 0 to 2 percent slopes, rarely flooded	Dorchester	No	flood plain
	Sawmill	Yes	flood plain
7428A:			
Coffeen silt loam, 0 to 2 percent slopes, rarely flooded	Coffeen	No	flood plain
	Sawmill	Yes	flood plain
7451A:			
Lawson silt loam, 0 to 2 percent slopes, rarely flooded	Lawson	No	flood plain
	Millington	Yes	flood plain
	Sawmill	Yes	flood plain
7654A:			
Moline silty clay, 0 to 2 percent slopes, rarely flooded	Moline	Yes	flood plain
8107+:			
Sawmill silt loam, 0 to 2 percent slopes, occasionally flooded, overwash	Sawmill	Yes	flood plain
8302A:			
Ambraw loam, 0 to 2 percent slopes, occasionally flooded	Ambraw	Yes	flood plain
8400A:			
Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded	Calco	Yes	flood plain
8404A:			
Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	Titus	Yes	flood plain

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 potential limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8F, 8F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
19C3:						
Sylvan	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.94
	Slope	0.12	Slope	0.12	Shrink-swell	0.50
19D:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
19D3:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
19F, 19F3:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
45A:						
Denny	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
51A:						
Muscatune	Somewhat limited		Very limited		Somewhat 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
61A:						
Atterberry	Somewhat limited		Very limited		Somewhat 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
68A:						
Sable	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	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 soil name	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
86B:						
Osco	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
86C2:						
Osco	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.94
	Slope	0.12	Depth to saturated zone	0.15	Shrink-swell	0.50
			Slope	0.12		
87A:						
Dickinson	Not limited		Not limited		Not limited	
87C2:						
Dickinson	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.12	Slope	0.12	Slope	0.94
88A:						
Sparta	Not limited		Not limited		Not limited	
172A:						
Hoopeston	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.84	Depth to saturated zone	1.00	Depth to saturated zone	0.84
212B:						
Thebes	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
250D:						
Velma	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
261A:						
Niota	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
274B, 274B2:						
Seaton	Not limited		Not limited		Not limited	
274C2:						
Seaton	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.12	Slope	0.12	Slope	0.94
274D2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
275A:						
Joy	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99

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

Map symbol and soil name	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
278A:						
Stronghurst	Somewhat limited		Very limited		Somewhat 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
279A, 279B:						
Rozetta	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
280B, 280B2:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
280C2, 280C3:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.94
	Slope	0.12	Slope	0.12	Shrink-swell	0.50
317A:						
Millsdale	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Depth to bedrock	1.00	Shrink-swell	1.00
	Depth to bedrock	0.42	Shrink-swell	1.00	Depth to bedrock	0.42
430A, 430B:						
Raddle	Not limited		Not limited		Not limited	
525A:						
Joslin	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to bedrock	0.42		
567C2:						
Elkhart	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.16	Slope	0.94
	Slope	0.12	Slope	0.12	Shrink-swell	0.50
567D2:						
Elkhart	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Depth to saturated zone	0.16	Shrink-swell	0.50
570B:						
Martinsville	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
570C3:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Slope	0.12	Slope	0.94
	Slope	0.12			Shrink-swell	0.50
570D3:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50

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

Map symbol and soil name	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
647A:						
Lawler	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.99
671A, 671B:						
Biggsville	Not limited		Somewhat limited Depth to saturated zone	0.15	Not limited	
675A, 675B:						
Greenbush	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.15	Somewhat limited Shrink-swell	0.50
689B:						
Coloma	Not limited		Not limited		Somewhat limited Slope	0.10
689D:						
Coloma	Somewhat limited Slope	0.68	Somewhat limited Slope	0.68	Very limited Slope	1.00
705A:						
Buckhart	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Somewhat limited Shrink-swell	0.50
727A:						
Waukee	Not limited		Not limited		Not limited	
741F:						
Oakville	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
763A, 763B:						
Joslin	Not limited		Not limited		Not limited	
764A:						
Coyne	Not limited		Not limited		Not limited	
764C:						
Coyne	Somewhat limited Slope	0.12	Somewhat limited Slope	0.12	Somewhat limited Slope	0.94
774A:						
Saude	Not limited		Not limited		Not limited	
800C:						
Psamments	Somewhat limited Slope	0.40	Somewhat limited Slope	0.40	Very limited Slope	1.00
802B:						
Orthents	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.10
864:						
Pits, quarries	Not rated		Not rated		Not rated	

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

Map symbol and soil name	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
865:						
Pits, gravel	Not rated		Not rated		Not rated	
898F3, 898G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
913D2:						
Marseilles	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to soft bedrock	0.42		
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
913F:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Depth to soft bedrock	0.42	Shrink-swell	0.50
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
913G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to soft bedrock	0.42		
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
917C2:						
Oakville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.12	Slope	0.12	Slope	0.94
Tell	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Slope	0.12	Slope	0.94
	Slope	0.12			Shrink-swell	0.50
917D2:						
Oakville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
Tell	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50

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

Map symbol and soil name	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
943D2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
Timula	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
943F2:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
944D2:						
Velma	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Coatsburg	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
					Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	1.00		
	Slope	0.98	Slope	0.98	Shrink-swell	1.00
946D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Atlas	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Depth to saturated zone	1.00	Slope	1.00
	Depth to saturated zone	1.00			Shrink-swell	1.00
			Shrink-swell	1.00	Depth to saturated zone	1.00
	Slope	0.98	Slope	0.98		
946F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Atlas	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
	Depth to saturated zone	1.00			Depth to saturated zone	1.00
			Shrink-swell	1.00		
959G:						
Strawn	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Chute	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
960D2, 960D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50

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

Map symbol and soil name	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
960D2, 960D3:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.98	Slope	0.98	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
960F:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
Fayette	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
961A:						
Burkhardt	Not limited		Not limited		Not limited	
Saude	Not limited		Not limited		Not limited	
962F:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
Bold	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
1076A:						
Otter	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
1082A:						
Millington	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
1107A:						
Sawmill	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
1334A:						
Birds	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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 soil name	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
1400A:						
Calco	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
1654A:						
Moline	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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	1.00	Shrink-swell	1.00	Shrink-swell	1.00
3074A:						
Radford	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Shrink-swell	0.50		
3076A:						
Otter	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
3082A:						
Millington	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
3083A:						
Wabash	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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	1.00	Shrink-swell	1.00	Shrink-swell	1.00
3107A:						
Sawmill	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
3239A:						
Dorchester	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Shrink-swell	0.50		
			Depth to saturated zone	0.16		

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

Map symbol and soil name	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
3400A:						
Calco	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
3415A:						
Orion	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
3428A:						
Coffeen	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
3451A:						
Lawson	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Shrink-swell	0.50		
3646L:						
Fluvaquents	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
7076A:						
Otter	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
7083A:						
Wabash	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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	1.00	Shrink-swell	1.00	Shrink-swell	1.00
7107A:						
Sawmill	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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 soil name	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
7239A:						
Dorchester	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Shrink-swell	0.50		
			Depth to saturated zone	0.16		
7304A:						
Landes	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		
7415A:						
Orion	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.44	Depth to saturated zone	1.00	Depth to saturated zone	0.44
7428A:						
Coffeen	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
7451A:						
Lawson	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Shrink-swell	0.50		
7654A:						
Moline	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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	1.00	Shrink-swell	1.00	Shrink-swell	1.00
8107+:						
Sawmill	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
8302A:						
Ambraw	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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
8400A:						
Calco	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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 soil name	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
8404A:						
Titus	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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	1.00	Shrink-swell	1.00	Shrink-swell	1.00

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 potential limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.98	Slope	0.96
	Slope	0.98				
	Shrink-swell	0.50				
	Frost action	0.50				
8F, 8F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00				
	Shrink-swell	0.50				
	Frost action	0.50				
19C3:						
Sylvan	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Slope	0.12		
	Low strength	1.00				
	Shrink-swell	0.50				
	Slope	0.12				
19D, 19D3:						
Sylvan	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.98	Slope	0.96
	Low strength	1.00				
	Slope	0.98				
	Shrink-swell	0.50				
19F, 19F3:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00				
	Low strength	1.00				
	Shrink-swell	0.50				
45A:						
Denny	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00				
	Low strength	1.00				
	Shrink-swell	1.00				
51A:						
Muscatune	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61A:						
Atterberry	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
68A:						
Sable	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00				
	Low strength	1.00				
	Shrink-swell	0.50				
86B:						
Osco	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50				
86C2:						
Osco	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50	Slope	0.12		
	Slope	0.12				
87A:						
Dickinson	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
87C2:						
Dickinson	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
	Slope	0.12	Slope	0.12		
88A:						
Sparta	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.08
172A:						
Hoopeston	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.48
	Depth to saturated zone	0.48	Depth to saturated zone	1.00		
212B:						
Thebes	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
250D:						
Velma	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.98	Slope	0.96
	Slope	0.98				
	Shrink-swell	0.50				
	Frost action	0.50				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
261A:						
Niota	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Too clayey	0.50		
	Low strength	1.00				
	Shrink-swell	1.00				
274B, 274B2:						
Seaton	Very limited		Not limited		Not limited	
	Frost action	1.00				
	Low strength	1.00				
274C2:						
Seaton	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Slope	0.12		
	Low strength	1.00				
	Slope	0.12				
274D2:						
Seaton	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.98	Slope	0.96
	Low strength	1.00				
	Slope	0.98				
275A:						
Joy	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75				
278A:						
Stronghurst	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
279A, 279B:						
Rozetta	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50				
280B, 280B2:						
Fayette	Very limited		Not limited		Not limited	
	Frost action	1.00				
	Low strength	1.00				
	Shrink-swell	0.50				
280C2, 280C3:						
Fayette	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Slope	0.12		
	Low strength	1.00				
	Shrink-swell	0.50				
	Slope	0.12				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
317A:						
Millsdale	Very limited		Very limited		Very limited	
	Ponding	1.00	Depth to bedrock	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Depth to saturated zone	1.00	Depth to bedrock	0.42
	Low strength	1.00	Too clayey	0.50		
	Shrink-swell	1.00				
430A, 430B:						
Raddle	Very limited		Not limited		Not limited	
	Frost action	1.00				
	Low strength	0.50				
525A:						
Joslin	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Depth to bedrock	0.42		
	Frost action	0.50				
567C2:						
Elkhart	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.16		
	Low strength	1.00				
	Shrink-swell	0.50	Slope	0.12		
	Slope	0.12				
567D2:						
Elkhart	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.98	Slope	0.96
	Low strength	1.00	Depth to saturated zone	0.16		
	Slope	0.98				
	Shrink-swell	0.50				
570B:						
Martinsville	Somewhat limited		Not limited		Not limited	
	Shrink-swell	0.50				
	Frost action	0.50				
	Low strength	0.05				
570C3:						
Martinsville	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Slope	0.12		
	Shrink-swell	0.50				
	Frost action	0.50				
	Slope	0.12				
570D3:						
Martinsville	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.98	Slope	0.96
	Slope	0.98				
	Shrink-swell	0.50				
	Frost action	0.50				
647A:						
Lawler	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Depth to saturated zone	0.75	Cutbanks cave	1.00		
	Low strength	0.05				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
671A, 671B:						
Biggsville	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
675A, 675B:						
Greenbush	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50				
689B:						
Coloma	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Too sandy	0.50
					Droughty	0.49
689D:						
Coloma	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.68	Cutbanks cave	1.00	Droughty	0.58
			Slope	0.68	Too sandy	0.50
					Slope	0.37
705A:						
Buckhart	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50				
727A:						
Waukee	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
741F:						
Oakville	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
			Slope	1.00	Droughty	0.62
763A, 763B:						
Joslin	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Too clayey	0.50		
	Frost action	0.50				
764A:						
Coyne	Somewhat limited		Not limited		Not limited	
	Frost action	0.50				
764C:						
Coyne	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
	Slope	0.12	Slope	0.12		
774A:						
Saude	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
800C:						
Psamments	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.40	Cutbanks cave	1.00	Droughty	0.69
			Slope	0.40	Too sandy	0.50
					Slope	0.09

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
802B:						
Orthents	Very limited		Not limited		Not limited	
	Low strength	1.00				
	Shrink-swell	0.50				
	Frost action	0.50				
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
898F3, 898G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00				
	Shrink-swell	0.50				
	Frost action	0.50				
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00				
	Low strength	1.00				
	Shrink-swell	0.50				
913D2:						
Marseilles	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.98	Slope	0.96
	Low strength	1.00	Depth to soft bedrock	0.42	Depth to bedrock	0.42
	Slope	0.98				
	Shrink-swell	0.50				
Hickory	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.98	Slope	0.96
	Slope	0.98				
	Shrink-swell	0.50				
	Frost action	0.50				
913F, 913G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Depth to soft bedrock	0.42	Depth to bedrock	0.42
	Low strength	1.00				
	Shrink-swell	0.50				
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00				
	Shrink-swell	0.50				
	Frost action	0.50				
917C2:						
Oakville	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.12	Cutbanks cave	1.00	Droughty	0.34
			Slope	0.12		
Tell	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	Slope	0.12		
	Shrink-swell	0.50				
	Slope	0.12				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
917D2:						
Oakville	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.98	Cutbanks cave	1.00	Slope	0.96
			Slope	0.98	Droughty	0.40
Tell	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Cutbanks cave	1.00	Slope	0.96
	Low strength	1.00	Slope	0.98		
	Slope	0.98				
	Shrink-swell	0.50				
943D2:						
Seaton	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.98	Slope	0.96
	Low strength	1.00				
	Slope	0.98				
Timula	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.98	Slope	0.96
	Slope	0.98				
943F2:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00				
	Low strength	1.00				
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00				
944D2:						
Velma	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.98	Slope	0.96
	Slope	0.98				
	Shrink-swell	0.50				
	Frost action	0.50				
Coatsburg	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	Slope	0.98	Slope	0.96
	Low strength	1.00	Too clayey	0.50		
	Shrink-swell	1.00				
	Slope	0.98				
946D3:						
Hickory	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.98	Slope	0.96
	Slope	0.98				
	Shrink-swell	0.50				
	Frost action	0.50				
Atlas	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Slope	0.96
	Low strength	1.00			Depth to saturated zone	0.94
	Shrink-swell	1.00	Slope	0.98		
	Slope	0.98	Too clayey	0.50		
	Depth to saturated zone	0.94				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
946F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00				
	Shrink-swell	0.50				
	Frost action	0.50				
Atlas	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Too clayey	0.50		
	Shrink-swell	1.00				
	Depth to saturated zone	0.94				
959G:						
Strawn	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50				
	Low strength	0.05				
Chute	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Cutbanks cave	1.00	Droughty	0.29
960D2, 960D3:						
Hickory	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.98	Slope	0.96
	Slope	0.98				
	Shrink-swell	0.50				
	Frost action	0.50				
Sylvan	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.98	Slope	0.96
	Low strength	1.00				
	Slope	0.98				
	Shrink-swell	0.50				
Fayette	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.98	Slope	0.96
	Low strength	1.00				
	Slope	0.98				
	Shrink-swell	0.50				
960F:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00				
	Shrink-swell	0.50				
	Frost action	0.50				
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00				
	Low strength	1.00				
	Shrink-swell	0.50				
Fayette	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00				
	Low strength	1.00				
	Shrink-swell	0.50				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
961A:						
Burkhardt	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.01
Saude	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
962F:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00				
	Low strength	1.00				
	Shrink-swell	0.50				
Bold	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00				
	Low strength	0.50				
1076A:						
Otter	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.80		
	Flooding	1.00				
	Low strength	1.00				
1082A:						
Millington	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.80		
	Flooding	1.00				
	Low strength	1.00				
1107A:						
Sawmill	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.80		
	Flooding	1.00				
	Low strength	1.00				
1334A:						
Birds	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.80		
	Flooding	1.00				
	Low strength	1.00				
1400A:						
Calco	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.80		
	Flooding	1.00				
	Low strength	1.00				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1654A:						
Moline	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Frost action	1.00	Too clayey	0.50	Too clayey	1.00
	Flooding	1.00				
3074A:						
Radford	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75				
3076A:						
Otter	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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				
	Low strength	1.00				
3082A:						
Millington	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				
	Low strength	1.00				
	Shrink-swell	0.50				
3083A:						
Wabash	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Frost action	1.00	Too clayey	0.50	Too clayey	1.00
	Flooding	1.00				
3107A:						
Sawmill	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Low strength	1.00				
	Depth to saturated zone	1.00				
	Shrink-swell	0.50				
3239A:						
Dorchester	Very limited		Somewhat limited		Very limited	
	Frost action	1.00	Flooding	0.80	Flooding	1.00
	Flooding	1.00	Depth to saturated zone	0.16		
	Low strength	0.05				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3400A:						
Calco	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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				
	Low strength	1.00				
3415A:						
Orion	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.75
	Low strength	1.00	Flooding	0.80		
	Depth to saturated zone	0.75				
3428A:						
Coffeen	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.75
	Depth to saturated zone	0.75				
3451A:						
Lawson	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75				
3646L:						
Fluvaquents	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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				
	Low strength	1.00				
7076A:						
Otter	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00				
	Low strength	1.00				
	Flooding	0.40				
7083A:						
Wabash	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too clayey	0.50	Too clayey	1.00
	Frost action	1.00				
	Low strength	1.00				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7107A:						
Sawmill	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Low strength	1.00				
	Depth to saturated zone	1.00				
	Shrink-swell	0.50				
7239A:						
Dorchester	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.16		
	Flooding	0.40				
	Low strength	0.05				
7304A:						
Landes	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
	Flooding	0.40	Depth to saturated zone	0.15		
7415A:						
Orion	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.19
	Low strength	1.00	Depth to saturated zone	1.00		
	Flooding	0.40				
	Depth to saturated zone	0.19				
7428A:						
Coffeen	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Depth to saturated zone	0.75				
	Flooding	0.40				
7451A:						
Lawson	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Depth to saturated zone	0.75				
	Flooding	0.40				
	Low strength	0.05				
7654A:						
Moline	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too clayey	0.50	Too clayey	1.00
	Frost action	1.00				
	Low strength	1.00				
8107+:						
Sawmill	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Low strength	1.00				
	Depth to saturated zone	1.00				
	Shrink-swell	0.50				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8302A:						
Ambraw	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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				
	Low strength	1.00				
8400A:						
Calco	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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				
	Low strength	1.00				
8404A:						
Titus	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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				
	Shrink-swell	1.00				

Table 15.--Sanitary Facilities

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

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:										
Hickory---------	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
8F, 8F3:										
Hickory---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
19C3:										
Sylvan----------	Somewhat limited		Very limited		Somewhat limited		Not limited		Somewhat limited	
	Restricted permeability	0.46	Slope	1.00	Too clayey	0.50			Too clayey	0.50
			Seepage	0.53						
19D:										
Sylvan----------	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
19D3:										
Sylvan----------	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53						
19F, 19F3:										
Sylvan----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53						

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45A:										
Denny	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00			Too clayey	0.50			Too clayey	0.50
51A:										
Muscatune	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
61A:										
Atterberry	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
68A:										
Sable	Very limited		Very limited		Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
86B:										
Osco	Somewhat limited		Somewhat limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Depth to saturated zone	0.40	Slope	0.18	Too clayey	0.50				
86C2:										
Osco	Somewhat limited		Very limited		Very limited		Very limited		Not limited	
	Restricted permeability	0.46	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Depth to saturated zone	0.40	Seepage	0.53						

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87A:										
Dickinson-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
					Too sandy	1.00			Seepage	1.00
87C2:										
Dickinson-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
			Slope	1.00	Too sandy	1.00			Seepage	1.00
88A:										
Sparta----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
					Too sandy	1.00			Seepage	1.00
172A:										
Hoopeston-------	Very limited		Very limited		Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Seepage	0.52
212B:										
Thebes----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00
			Slope	0.18					Too clayey	0.50
	Restricted permeability	0.46								
250D:										
Velma----------	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
261A:										
Niota----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	0.28						

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
274B, 274B2:										
Seaton----------	Somewhat limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53						
			Slope	0.18						
274C2:										
Seaton----------	Somewhat limited		Very limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Slope	1.00						
			Seepage	0.53						
274D2:										
Seaton----------	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53						
275A:										
Joy----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53						
278A:										
Stronghurst-----	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
279A:										
Rozetta---------	Somewhat limited		Somewhat limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Depth to saturated zone	0.40			Too clayey	0.50				
279B:										
Rozetta---------	Somewhat limited		Somewhat limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
			Slope	0.18						
	Depth to saturated zone	0.40			Too clayey	0.50				

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
280B, 280B2:										
Fayette	Somewhat limited		Somewhat limited		Somewhat limited		Not limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
			Slope	0.18						
280C2, 280C3:										
Fayette	Somewhat limited		Very limited		Somewhat limited		Not limited		Somewhat limited	
	Restricted permeability	0.46	Slope	1.00	Too clayey	0.50			Too clayey	0.50
			Seepage	0.53						
317A:										
Millsdale	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to bedrock	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00			Too clayey	1.00			Too clayey	1.00
									Hard to compact	1.00
430A:										
Raddle	Somewhat limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53						
430B:										
Raddle	Somewhat limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53						
			Slope	0.18						
525A:										
Joslin	Somewhat limited		Somewhat limited		Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	0.78	Seepage	0.53	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Restricted permeability	0.46	Depth to hard bedrock	0.42	Too clayey	0.50			Depth to bedrock	0.42
567C2:										
Elkhart	Somewhat limited		Very limited		Very limited		Very limited		Not limited	
	Restricted permeability	0.46	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
			Seepage	0.53						
	Depth to saturated zone	0.43								

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
567D2:										
Elkhart	Somewhat limited		Very limited		Very limited		Very limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Slope	0.96	Slope	0.96		
	Depth to saturated zone	0.43								
570B:										
Martinsville	Somewhat limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53						
			Slope	0.18						
570C3:										
Martinsville	Somewhat limited		Very limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Slope	1.00						
			Seepage	0.53						
570D3:										
Martinsville	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53						
647A:										
Lawler	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Restricted permeability	0.46			Too sandy	1.00			Depth to saturated zone	1.00
671A:										
Biggsville	Somewhat limited		Somewhat limited		Very limited		Very limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Depth to saturated zone	0.40								
671B:										
Biggsville	Somewhat limited		Somewhat limited		Very limited		Very limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
			Slope	0.18						
	Depth to saturated zone	0.40								

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
675A:										
Greenbush	Somewhat limited		Somewhat limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Depth to saturated zone	0.40			Too clayey	0.50				
675B:										
Greenbush	Somewhat limited		Somewhat limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Depth to saturated zone	0.40	Slope	0.18	Too clayey	0.50				
689B:										
Coloma	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
			Slope	0.32	Too sandy	1.00			Seepage	1.00
689D:										
Coloma	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
			Seepage	1.00	Too sandy	1.00	Slope	0.37	Seepage	1.00
	Slope	0.37			Slope	0.37			Slope	0.37
705A:										
Buckhart	Very limited		Very limited		Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Depth to saturated zone	0.25
727A:										
Waukee	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
					Too sandy	1.00			Seepage	1.00
	Restricted permeability	0.46								
741F:										
Oakville	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
			Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Slope	1.00			Too sandy	1.00			Seepage	1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
763A:										
Joslin----------	Very limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	1.00	Seepage	0.53						
763B:										
Joslin----------	Very limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	1.00	Seepage	0.53						
			Slope	0.18						
764A:										
Coyne----------	Very limited		Somewhat limited		Not limited		Very limited		Not limited	
	Restricted permeability	1.00	Seepage	0.53			Seepage	1.00		
764C:										
Coyne----------	Very limited		Very limited		Very limited		Very limited		Not limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00		
			Slope	1.00						
	Restricted permeability	1.00								
774A:										
Saude----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
					Too sandy	1.00			Seepage	1.00
800C:										
Psamments-------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
					Too sandy	1.00	Slope	0.09	Seepage	1.00
	Slope	0.09			Slope	0.09			Slope	0.09
802B:										
Orthents--------	Very limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	1.00	Slope	0.32						
864:										
Pits, quarries--	Not rated		Not rated		Not rated		Not rated		Not rated	
865:										
Pits, gravel----	Not rated		Not rated		Not rated		Not rated		Not rated	

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
898F3, 898G:										
Hickory---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
Sylvan----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53						
913D2:										
Marseilles------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Slope	0.96			Slope	0.96	Slope	0.96	Slope	0.96
			Slope	1.00	Too clayey	0.50			Too clayey	0.50
Hickory---------	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
913F:										
Marseilles------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Slope	1.00			Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
			Slope	1.00	Too clayey	0.50			Too clayey	0.50
			Seepage	0.53						
Hickory---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
913G:										
Marseilles------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Slope	1.00			Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
			Slope	1.00	Too clayey	0.50			Too clayey	0.50
Hickory---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
917C2:										
Oakville	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
			Slope	1.00	Too sandy	1.00			Seepage	1.00
Tell	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00
			Slope	1.00	Too sandy	1.00			Too sandy	0.50
	Restricted permeability	0.46								
917D2:										
Oakville	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
			Seepage	1.00	Too sandy	1.00	Slope	0.96	Seepage	1.00
	Slope	0.96			Slope	0.96			Slope	0.96
Tell	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
			Seepage	1.00	Too sandy	1.00	Slope	0.96	Seepage	1.00
	Slope	0.96			Slope	0.96			Slope	0.96
	Restricted permeability	0.46								
943D2:										
Seaton	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53						
Timula	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53						
943F2:										
Seaton	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53						
Timula	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53						

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
944D2:										
Velma	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
Coatsburg	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00			Too clayey	1.00	Slope	0.96	Too clayey	1.00
	Slope	0.96			Slope	0.96			Hard to compact	1.00
									Slope	0.96
946D3:										
Hickory	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
Atlas	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Depth to saturated zone	1.00			Too clayey	1.00	Slope	0.96	Hard to compact	1.00
	Slope	0.96			Slope	0.96			Depth to saturated zone	1.00
									Slope	0.96
946F3:										
Hickory	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
Atlas	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00	Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
	Depth to saturated zone	1.00			Slope	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Slope	1.00			Too clayey	1.00			Hard to compact	1.00
									Depth to saturated zone	1.00
959G:										
Strawn	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53						

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
959G:										
Chute	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Slope	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
					Too sandy	1.00			Seepage	1.00
960D2, 960D3:										
Hickory	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
Sylvan	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53						
Fayette	Somewhat limited		Very limited		Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	1.00	Slope	0.96	Slope	0.96	Slope	0.96
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
960F:										
Hickory	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
Sylvan	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53						
Fayette	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
961A:										
Burkhardt	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
					Too sandy	1.00			Seepage	1.00
Saude	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
					Too sandy	1.00			Seepage	1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
962F:										
Sylvan----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53						
Bold----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53						
1076A:										
Otter----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00		
	Restricted permeability	0.46	Seepage	0.53						
1082A:										
Millington------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00		
	Restricted permeability	0.46	Seepage	0.53						
1107A:										
Sawmill---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50				

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1334A:										
Birds----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00		
	Restricted permeability	0.46	Seepage	0.53						
1400A:										
Calco----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Hard to compact	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
1654A:										
Moline----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Restricted permeability	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Depth to saturated zone	1.00			Too clayey	1.00			Hard to compact	1.00
3074A:										
Radford---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50				
3076A:										
Otter----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00		
	Restricted permeability	0.46	Seepage	0.53						

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3082A:										
Millington------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Restricted permeability	0.46	Seepage	0.53						
3083A:										
Wabash----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Restricted permeability	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Depth to saturated zone	1.00			Too clayey	1.00			Hard to compact	1.00
3107A:										
Sawmill---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50				
3239A:										
Dorchester------	Very limited		Very limited		Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00	Flooding	1.00		
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Depth to saturated zone	0.43								
3400A:										
Calco----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Hard to compact	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3415A:										
Orion----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Restricted permeability	0.46	Seepage	0.53						
3428A:										
Coffeen---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.22
	Restricted permeability	0.46	Seepage	1.00	Seepage	1.00	Seepage	1.00		
3451A:										
Lawson----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Restricted permeability	0.46	Seepage	0.53						
3646L:										
Fluvaquents-----	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00		
	Restricted permeability	0.46	Seepage	0.53						
7076A:										
Otter----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53	Flooding	0.40	Flooding	0.40		
	Flooding	0.40	Flooding	0.40						

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7083A:										
Wabash----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	0.40	Too clayey	1.00	Flooding	0.40	Too clayey	1.00
	Flooding	0.40			Flooding	0.40			Hard to compact	1.00
7107A:										
Sawmill---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50	Flooding	0.40	Too clayey	0.50
	Flooding	0.40	Flooding	0.40	Flooding	0.40				
7239A:										
Dorchester------	Somewhat limited		Somewhat limited		Very limited		Very limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Depth to saturated zone	0.43	Flooding	0.40	Flooding	0.40	Flooding	0.40		
	Flooding	0.40								
7304A:										
Landes----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Depth to saturated zone	0.40	Flooding	0.40	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Flooding	0.40			Too sandy	1.00	Flooding	0.40		
					Flooding	0.40				
7415A:										
Orion----------	Very limited		Very limited		Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
	Restricted permeability	0.46	Seepage	0.53	Flooding	0.40	Flooding	0.40		
	Flooding	0.40	Flooding	0.40						

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7428A:										
Coffeen---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	1.00	Seepage	1.00	Seepage	1.00	Seepage	0.22
	Flooding	0.40	Flooding	0.40	Flooding	0.40	Flooding	0.40		
7451A:										
Lawson----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53	Flooding	0.40	Flooding	0.40		
	Flooding	0.40	Flooding	0.40						
7654A:										
Moline----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	0.40	Too clayey	1.00	Flooding	0.40	Too clayey	1.00
	Flooding	0.40			Flooding	0.40			Hard to compact	1.00
8107+:										
Sawmill---------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50				
8302A:										
Ambraw----------	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Restricted permeability	1.00	Seepage	0.28	Too clayey	0.50				

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons		Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8400A:										
Calco	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Hard to compact	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
8404A:										
Titus	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Ponding	1.00	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Restricted permeability	1.00	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00	Hard to compact	1.00
	Depth to saturated zone	1.00			Too clayey	0.50			Too clayey	0.50

Table 16.--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 1.00. For sand, the greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source. For the other materials, the smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as source of sand		Potential as source of topsoil		Potential as source of reclamation material		Potential as source of roadfill	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2:								
Hickory	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57			Shrink-swell	0.94
			Rock fragments	0.88	Too acid	0.88		
					Too clayey	0.98		
8D3:								
Hickory	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57			Shrink-swell	0.99
			Rock fragments	0.88	Too acid	0.88		
					Too clayey	0.98		
8F:								
Hickory	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57			Low strength	0.00
			Rock fragments	0.88	Too acid	0.88	Shrink-swell	0.94
					Too clayey	0.98		
8F3:								
Hickory	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57			Low strength	0.00
			Rock fragments	0.88	Too acid	0.88	Shrink-swell	0.99
					Too clayey	0.98		
19C3:								
Sylvan	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.57	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00					Shrink-swell	0.99
					Water erosion	0.68		
					Carbonate content	0.97		
					Too clayey	0.98		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
19D, 19D3:								
Sylvan	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57	Water erosion	0.68		
					Carbonate content	0.97		
					Too clayey	0.98		
19F:								
Sylvan	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.24	Slope	0.00
	Bottom layer	0.00	Too clayey	0.60	Water erosion	0.68	Low strength	0.00
					Carbonate content	0.97		
					Too clayey	0.98		
19F3:								
Sylvan	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57	Water erosion	0.68	Low strength	0.00
					Carbonate content	0.97		
					Too clayey	0.98		
45A:								
Denny	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.02	Depth to saturated zone	0.00
	Bottom layer	0.00	Too clayey	0.01	Low content of organic matter	0.50	Low strength	0.00
					Water erosion	0.90	Shrink-swell	0.74
					Too acid	0.95		
51A:								
Muscatune	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.14	Too acid	0.84	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.67	Too clayey	0.92	Depth to saturated zone	0.14
					Low content of organic matter	0.92	Shrink-swell	0.99
					Water erosion	0.99		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand		Potential as source of topsoil		Potential as source of reclamation material		Potential as source of roadfill	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61A:								
Atterberry	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.14	Low content of organic matter	0.18	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.55	Too acid	0.54	Depth to saturated zone	0.14
			Too acid	0.98	Water erosion	0.90	Shrink-swell	0.99
					Too clayey	0.92		
68A:								
Sable	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Low content of organic matter	0.68	Depth to saturated zone	0.00
	Bottom layer	0.00	Too clayey	0.98	Too clayey	0.98	Low strength	0.00
					Water erosion	0.99	Shrink-swell	0.87
86B:								
Osco	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.64	Low content of organic matter	0.50	Low strength	0.00
	Bottom layer	0.00					Shrink-swell	0.87
					Too acid	0.84		
					Too clayey	0.98		
					Water erosion	0.99		
86C2:								
Osco	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.64	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00					Shrink-swell	0.87
					Water erosion	0.68		
					Too acid	0.84		
					Too clayey	0.98		
87A, 87C2:								
Dickinson	Fair		Good		Fair		Good	
	Thickest layer	0.03			Low content of organic matter	0.12		
	Bottom layer	0.90						
					Too acid	0.84		
					Droughty	0.96		
88A:								
Sparta	Fair		Poor		Poor		Good	
	Thickest layer	0.67	Too sandy	0.00	Too sandy	0.00		
	Bottom layer	0.90			Wind erosion	0.00		
					Low content of organic matter	0.12		
					Too acid	0.74		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand		Potential as source of topsoil		Potential as source of reclamation material		Potential as source of roadfill	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
172A:								
Hoopeston	Fair		Fair		Fair		Fair	
	Thickest layer	0.06	Depth to saturated zone	0.29	Low content of organic matter	0.68	Depth to saturated zone	0.29
	Bottom layer	0.76			Too acid	0.97		
212B:								
Thebes	Fair		Fair		Fair		Good	
	Thickest layer	0.00	Too clayey	0.65	Low content of organic matter	0.12		
	Bottom layer	0.22	Too acid	0.98	Too acid	0.54		
					Water erosion	0.90		
					Too clayey	0.99		
250D:								
Velma	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.68	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.67	Too acid	0.88	Shrink-swell	0.96
					Carbonate content	0.97		
					Too clayey	0.98		
261A:								
Niota	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.00	Depth to saturated zone	0.00
	Bottom layer	0.00	Too clayey	0.00	Low content of organic matter	0.12	Shrink-swell	0.81
			Too acid	0.76	Too acid	0.20		
					Water erosion	0.90		
274B, 274B2, 274C2:								
Seaton	Poor		Good		Fair		Poor	
	Thickest layer	0.00			Low content of organic matter	0.88	Low strength	0.00
	Bottom layer	0.00			Too acid	0.88		
					Water erosion	0.90		
					Carbonate content	0.97		
274D2:								
Seaton	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.88	Low strength	0.00
	Bottom layer	0.00			Too acid	0.88		
					Water erosion	0.90		
					Carbonate content	0.97		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand		Potential as source of topsoil		Potential as source of reclamation material		Potential as source of roadfill	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
275A:								
Joy	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.14	Low content of organic matter	0.60	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.90	Depth to saturated zone	0.14
					Too acid	0.97		
278A:								
Stronghurst	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.14	Low content of organic matter	0.88	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.70	Water erosion	0.90	Depth to saturated zone	0.14
					Too acid	0.97	Shrink-swell	0.97
					Too clayey	0.98		
279A:								
Rozetta	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.60	Low content of organic matter	0.24	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.68	Shrink-swell	0.96
					Too acid	0.68		
					Too clayey	0.98		
279B:								
Rozetta	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.57	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.68	Shrink-swell	0.92
					Too acid	0.68		
					Too clayey	0.98		
280B:								
Fayette	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.64	Low content of organic matter	0.50	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.68	Shrink-swell	0.87
					Too acid	0.68		
					Too clayey	0.98		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
280B2, 280C2, 280C3:								
Fayette	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.57	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00			Too acid	0.68	Shrink-swell	0.87
					Water erosion	0.90		
					Too clayey	0.98		
317A:								
Millsdale	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Too clayey	0.00	Droughty	0.40	Depth to saturated zone	0.00
			Depth to bedrock	0.58	Depth to bedrock	0.58	Low strength	0.00
							Shrink-swell	0.39
430A, 430B:								
Raddle	Poor		Good		Fair		Fair	
	Thickest layer	0.00			Water erosion	0.68	Low strength	0.22
	Bottom layer	0.00						
525A:								
Joslin	Poor		Good		Good		Poor	
	Thickest layer	0.00					Low strength	0.00
	Bottom layer	0.00					Depth to bedrock	0.58
							Shrink-swell	0.97
567C2:								
Elkhart	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.57	Low content of organic matter	0.01	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.68		
					Carbonate content	0.68		
					Too clayey	0.98		
567D2:								
Elkhart	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.01	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57	Water erosion	0.68		
					Carbonate content	0.68		
					Too clayey	0.98		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
570B:								
Martinsville	Fair		Good		Fair		Good	
	Thickest layer	0.00			Low content of organic matter	0.12		
	Bottom layer	0.06			Carbonate content	0.68		
					Too acid	0.97		
570C3:								
Martinsville	Fair		Fair		Fair		Good	
	Thickest layer	0.00	Too clayey	0.57	Low content of organic matter	0.02		
	Bottom layer	0.06	Rock fragments	0.88	Too acid	0.84		
					Too clayey	0.98		
570D3:								
Martinsville	Fair		Fair		Fair		Good	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.02		
	Bottom layer	0.06	Too clayey	0.57	Too acid	0.84		
			Rock fragments	0.88	Too clayey	0.98		
647A:								
Lawler	Fair		Fair		Fair		Fair	
	Thickest layer	0.00	Depth to saturated zone	0.14	Low content of organic matter	0.12	Depth to saturated zone	0.14
	Bottom layer	0.86	Hard to reclaim	0.82	Too acid	0.84		
			Rock fragments	0.97				
671A, 671B:								
Biggsville	Poor		Good		Fair		Poor	
	Thickest layer	0.00			Water erosion	0.90	Low strength	0.00
	Bottom layer	0.00			Carbonate content	0.97		
675A:								
Greenbush	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.70	Low content of organic matter	0.88	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.90	Shrink-swell	0.93
					Too acid	0.97		
					Too clayey	0.98		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
675B:								
Greenbush	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Too clayey	0.70	Low content of organic matter	0.88	Low strength	0.00
	Bottom layer	0.00			Too acid	0.97	Shrink-swell	0.91
					Too clayey	0.98		
					Water erosion	0.99		
689B:								
Coloma	Fair		Poor		Poor		Good	
	Thickest layer	0.76	Too sandy	0.00	Too sandy	0.00		
	Bottom layer	0.76			Wind erosion	0.00		
					Low content of organic matter	0.12		
					Droughty	0.36		
					Too acid	0.88		
689D:								
Coloma	Fair		Poor		Poor		Good	
	Bottom layer	0.76	Too sandy	0.00	Wind erosion	0.00		
	Thickest layer	0.83	Slope	0.63	Too sandy	0.00		
					Low content of organic matter	0.12		
					Droughty	0.31		
					Too acid	0.88		
705A:								
Buckhart	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.98	Low content of organic matter	0.92	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.99	Shrink-swell	0.87
							Depth to saturated zone	0.98
727A:								
Waukee	Fair		Fair		Fair		Good	
	Thickest layer	0.00	Rock fragments	0.97	Low content of organic matter	0.50		
	Bottom layer	0.86	Hard to reclaim	0.98	Too acid	0.74		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand		Potential as source of topsoil		Potential as source of reclamation material		Potential as source of roadfill	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
741F:								
Oakville	Good		Poor		Poor		Fair	
	Thickest layer	0.87	Slope	0.00	Too sandy	0.00	Slope	0.12
	Bottom layer	0.99	Too sandy	0.00	Wind erosion	0.00		
					Low content of organic matter	0.12		
					Droughty	0.29		
					Too acid	0.88		
763A, 763B:								
Joslin	Poor		Good		Fair		Poor	
	Thickest layer	0.00			Low content of organic matter	0.88	Low strength	0.00
	Bottom layer	0.00						
764A:								
Coyne	Fair		Good		Good		Good	
	Bottom layer	0.00						
	Thickest layer	0.07						
764C:								
Coyne	Fair		Good		Good		Good	
	Thickest layer	0.08						
	Bottom layer	0.97						
774A:								
Saude	Fair		Fair		Fair		Good	
	Thickest layer	0.00	Rock fragments	0.50	Low content of organic matter	0.12		
	Bottom layer	0.83	Hard to reclaim	0.82				
					Too acid	0.74		
800C:								
Psamments	Good		Poor		Poor		Good	
			Too sandy	0.00	Too sandy	0.00		
			Slope	0.91	Wind erosion	0.00		
					Low content of organic matter	0.12		
					Too acid	0.88		
					Droughty	0.98		
802B:								
Orthents	Poor		Good		Fair		Poor	
	Thickest layer	0.00			Low content of organic matter	0.68	Low strength	0.00
	Bottom layer	0.00					Shrink-swell	0.87
					Water erosion	0.90		
864:								
Pits, quarries	Not rated		Not rated		Not rated		Not rated	

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
865:								
Pits, gravel	Not rated		Not rated		Not rated		Not rated	
898F3:								
Hickory	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57	Too acid	0.88	Low strength	0.00
			Rock fragments	0.88	Too clayey	0.98	Shrink-swell	0.96
Sylvan	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57	Water erosion	0.68	Low strength	0.00
					Carbonate content	0.97		
					Too clayey	0.98		
898G:								
Hickory	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57	Too acid	0.88	Low strength	0.00
			Rock fragments	0.88	Too clayey	0.98		
Sylvan	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.24	Slope	0.00
	Bottom layer	0.00	Too clayey	0.60	Water erosion	0.68	Low strength	0.00
					Carbonate content	0.97		
					Too clayey	0.98		
913D2:								
Marseilles	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Depth to bedrock	0.00
	Bottom layer	0.00	Too clayey	0.39	Too acid	0.32	Low strength	0.00
			Depth to bedrock	0.58	Depth to bedrock	0.58	Shrink-swell	0.87
			Too acid	0.88	Too clayey	0.68		
					Droughty	0.73		
					Water erosion	0.99		
Hickory	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57	Too acid	0.88	Shrink-swell	0.94
			Rock fragments	0.88	Too clayey	0.98		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
913F:								
Marseilles	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Depth to bedrock	0.58	Depth to bedrock	0.00
	Bottom layer	0.00	Too clayey	0.49	Too clayey	0.68	Low strength	0.00
			Depth to bedrock	0.58	Too acid	0.68	Slope	0.00
					Low content of organic matter	0.88	Shrink-swell	0.92
					Water erosion	0.90		
					Droughty	0.99		
Hickory	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57	Too acid	0.88	Low strength	0.00
			Rock fragments	0.88	Too clayey	0.98	Shrink-swell	0.89
913G:								
Marseilles	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.50	Depth to bedrock	0.00
	Bottom layer	0.00	Too clayey	0.44	Depth to bedrock	0.58	Slope	0.00
			Depth to bedrock	0.58	Too clayey	0.68	Low strength	0.00
					Too acid	0.68	Shrink-swell	0.87
					Droughty	0.88		
					Water erosion	0.99		
Hickory	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57	Too acid	0.88	Low strength	0.00
			Rock fragments	0.97	Too clayey	0.98	Shrink-swell	0.94
917C2:								
Oakville	Good		Poor		Poor		Good	
	Thickest layer	0.90	Too sandy	0.00	Too sandy	0.00		
	Bottom layer	0.99			Wind erosion	0.00		
					Low content of organic matter	0.12		
					Droughty	0.62		
					Too acid	0.88		
Tell	Fair		Good		Fair		Good	
	Thickest layer	0.00			Low content of organic matter	0.12		
	Bottom layer	0.43			Too acid	0.84		
					Water erosion	0.90		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
917D2:								
Oakville	Good		Poor		Poor		Good	
	Thickest layer	0.54	Too sandy	0.00	Too sandy	0.00		
	Bottom layer	0.99	Slope	0.04	Wind erosion	0.00		
					Low content of organic matter	0.12		
					Droughty	0.42		
					Too acid	0.88		
Tell	Fair		Fair		Fair		Good	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12		
	Bottom layer	0.90			Too acid	0.84		
					Water erosion	0.90		
943D2:								
Seaton	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Water erosion	0.68	Low strength	0.00
	Bottom layer	0.00			Low content of organic matter	0.88		
					Too acid	0.88		
					Carbonate content	0.97		
Timula	Poor		Fair		Fair		Good	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.24		
	Bottom layer	0.00			Water erosion	0.37		
					Carbonate content	0.92		
943F2:								
Seaton	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.88	Slope	0.00
	Bottom layer	0.00			Too acid	0.88	Low strength	0.00
					Water erosion	0.90		
					Carbonate content	0.97		
Timula			Poor		Fair		Poor	
	Poor		Slope	0.00	Low content of organic matter	0.24	Slope	0.00
	Thickest layer	0.00			Water erosion	0.37		
	Bottom layer	0.00			Carbonate content	0.92		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand		Potential as source of topsoil		Potential as source of reclamation material		Potential as source of roadfill	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
944D2:								
Velma	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.68	Low strength	0.00
	Bottom layer	0.00			Too acid	0.88	Shrink-swell	0.96
					Carbonate content	0.97		
Coatsburg	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.00	Depth to saturated zone	0.00
	Bottom layer	0.00	Too clayey	0.00	Low content of organic matter	0.50	Low strength	0.00
			Slope	0.04	Too acid	0.84	Shrink-swell	0.21
					Water erosion	0.99		
946D3:								
Hickory	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57	Too acid	0.88	Shrink-swell	0.99
			Rock fragments	0.88	Too clayey	0.98		
Atlas	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Too clayey	0.00	Too clayey	0.00	Low strength	0.00
	Bottom layer	0.00	Depth to saturated zone	0.04	Low content of organic matter	0.50	Depth to saturated zone	0.04
			Slope	0.04	Too acid	0.88	Shrink-swell	0.17
					Water erosion	0.99		
946F3:								
Hickory	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57	Too acid	0.88	Low strength	0.00
			Rock fragments	0.88	Too clayey	0.98	Shrink-swell	0.99
Atlas	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Slope	0.00	Too clayey	0.00	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.00	Low content of organic matter	0.50	Slope	0.00
			Depth to saturated zone	0.04	Too acid	0.88	Depth to saturated zone	0.04
					Water erosion	0.99	Shrink-swell	0.17

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
959G:								
Strawn	Poor		Poor		Fair		Poor	
	Bottom layer	0.00	Slope	0.00	Low content of organic matter	0.24	Slope	0.00
	Thickest layer	0.00	Rock fragments	0.88				
			Carbonate content	0.97	Carbonate content	0.97		
Chute	Good		Poor		Poor		Poor	
	Bottom layer	0.26	Slope	0.00	Too sandy	0.00	Slope	0.00
	Thickest layer	0.99	Too sandy	0.00	Wind erosion	0.00		
			Carbonate content	0.92	Low content of organic matter	0.12		
					Droughty	0.75		
					Carbonate content	0.92		
960D2:	Poor							
Hickory	Thickest layer	0.00	Fair		Fair		Poor	
	Bottom layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
			Too clayey	0.57			Shrink-swell	0.94
			Rock fragments	0.88	Too acid	0.88		
					Too clayey	0.98		
Sylvan	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.58				
					Water erosion	0.68		
					Carbonate content	0.97		
					Too clayey	0.99		
Fayette	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57			Shrink-swell	0.87
					Too acid	0.68		
					Water erosion	0.90		
					Too clayey	0.98		
960D3:								
Hickory	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57			Shrink-swell	0.99
			Rock fragments	0.88	Too acid	0.88		
					Too clayey	0.98		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
960D3:								
Sylvan	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57	Water erosion	0.68		
					Carbonate content	0.97		
					Too clayey	0.98		
Fayette	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Slope	0.04	Low content of organic matter	0.12	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.57	Water erosion	0.68	Shrink-swell	0.87
					Too acid	0.68		
					Too clayey	0.98		
960F:								
Hickory	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Too clayey	0.57	Too acid	0.88	Low strength	0.00
			Rock fragments	0.88	Too clayey	0.98	Shrink-swell	0.97
Sylvan	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.24	Slope	0.00
	Bottom layer	0.00	Too clayey	0.60	Water erosion	0.68	Low strength	0.00
					Carbonate content	0.97		
					Too clayey	0.98		
Fayette	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.50	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.64	Too acid	0.68	Slope	0.00
					Water erosion	0.90	Shrink-swell	0.87
					Too clayey	0.98		
961A:								
Burkhardt	Fair		Poor		Poor		Good	
	Thickest layer	0.09	Too sandy	0.00	Too sandy	0.00		
	Bottom layer	0.90	Rock fragments	0.00	Low content of organic matter	0.12		
			Hard to reclaim	0.68	Droughty	0.49		
					Too acid	0.84		

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
961A:								
Saude	Fair		Fair		Fair		Good	
	Thickest layer	0.00	Rock fragments	0.50	Low content of organic matter	0.12		
	Bottom layer	0.83	Hard to reclaim	0.82	Too acid	0.74		
962F:								
Sylvan	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.24	Slope	0.00
	Bottom layer	0.00	Too clayey	0.60	Water erosion	0.68	Low strength	0.00
					Carbonate content	0.97		
					Too clayey	0.98		
Bold	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.00	Low content of organic matter	0.12	Slope	0.00
	Bottom layer	0.00	Carbonate content	0.32	Carbonate content	0.32	Low strength	0.22
					Water erosion	0.37		
1076A:								
Otter	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Water erosion	0.68	Depth to saturated zone	0.00
	Bottom layer	0.00					Low strength	0.78
1082A:								
Millington	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Carbonate content	0.92	Depth to saturated zone	0.00
	Bottom layer	0.00					Low strength	0.00
							Shrink-swell	0.95
1107A:								
Sawmill	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.98	Depth to saturated zone	0.00
	Bottom layer	0.00	Too clayey	0.98			Low strength	0.00
							Shrink-swell	0.87
1334A:								
Birds	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Water erosion	0.68	Depth to saturated zone	0.00
	Bottom layer	0.00			Low content of organic matter	0.88	Low strength	0.00
							Shrink-swell	0.99

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
1400A:								
Calco	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.08	Depth to saturated zone	0.00
	Bottom layer	0.00	Too clayey	0.08	Carbonate content	0.97	Low strength	0.00
			Carbonate content	0.97			Shrink-swell	0.87
1654A:								
Moline	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Too clayey	0.00	Too clayey	0.00	Depth to saturated zone	0.00
	Bottom layer	0.00	Depth to saturated zone	0.00	Low content of organic matter	0.12	Shrink-swell	0.00
					Carbonate content	0.92	Low strength	0.00
3074A:								
Radford	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.14	Low content of organic matter	0.50	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.68	Depth to saturated zone	0.14
3076A:								
Otter	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Water erosion	0.68	Depth to saturated zone	0.00
	Bottom layer	0.00					Low strength	0.00
3082A:								
Millington	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Carbonate content	0.92	Depth to saturated zone	0.00
	Bottom layer	0.00					Low strength	0.00
							Shrink-swell	0.95
3083A:								
Wabash	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Too clayey	0.00	Too clayey	0.00	Depth to saturated zone	0.00
	Bottom layer	0.00	Depth to saturated zone	0.00	Too acid	0.97	Shrink-swell	0.00
							Low strength	0.00
3107A:								
Sawmill	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.98	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.98			Depth to saturated zone	0.00
							Shrink-swell	0.87

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand		Potential as source of topsoil		Potential as source of reclamation material		Potential as source of roadfill	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3239A:								
Dorchester	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Carbonate content	0.97	Water erosion	0.68	Low strength	0.00
	Bottom layer	0.00			Carbonate content	0.97	Shrink-swell	0.99
3400A:								
Calco	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.08	Depth to saturated zone	0.00
	Bottom layer	0.00	Too clayey	0.08	Carbonate content	0.97	Low strength	0.00
			Carbonate content	0.97			Shrink-swell	0.87
3415A:								
Orion	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.14	Water erosion	0.90	Low strength	0.00
	Bottom layer	0.00					Depth to saturated zone	0.14
3428A:								
Coffeen	Poor		Fair		Fair		Fair	
	Thickest layer	0.00	Depth to saturated zone	0.14	Water erosion	0.68	Depth to saturated zone	0.14
	Bottom layer	0.00						
3451A:								
Lawson	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.14	Low content of organic matter	0.50	Low strength	0.00
	Bottom layer	0.00			Water erosion	0.68	Depth to saturated zone	0.14
3646L:								
Fluvaquents	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Water erosion	0.68	Depth to saturated zone	0.00
	Bottom layer	0.00			Low content of organic matter	0.88	Low strength	0.00
							Shrink-swell	0.99
7076A:								
Otter	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Water erosion	0.68	Depth to saturated zone	0.00
	Bottom layer	0.00					Low strength	0.00

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value	Potential as source of topsoil: Rating class and limiting features	Value	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value
7083A:								
Wabash	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Too clayey	0.00	Too clayey	0.00	Depth to saturated zone	0.00
	Bottom layer	0.00	Depth to saturated zone	0.00	Too acid	0.97	Shrink-swell	0.00
							Low strength	0.00
7107A:								
Sawmill	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.98	Low strength	0.00
	Bottom layer	0.00	Too clayey	0.93			Depth to saturated zone	0.00
							Shrink-swell	0.87
7239A:								
Dorchester	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Carbonate content	0.97	Water erosion	0.68	Low strength	0.00
	Bottom layer	0.00			Carbonate content	0.97	Shrink-swell	0.99
7304A:								
Landes	Fair		Good		Fair		Good	
	Thickest layer	0.01			Low content of organic matter	0.12		
	Bottom layer	0.95						
7415A:								
Orion	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.53	Water erosion	0.90	Low strength	0.00
	Bottom layer	0.00					Depth to saturated zone	0.53
7428A:								
Coffeen	Poor		Fair		Fair		Fair	
	Thickest layer	0.00	Depth to saturated zone	0.14	Water erosion	0.68	Depth to saturated zone	0.14
	Bottom layer	0.00						
7451A:								
Lawson	Poor		Fair		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.14	Water erosion	0.68	Low strength	0.00
	Bottom layer	0.00					Depth to saturated zone	0.14

Table 16.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand		Potential as source of topsoil		Potential as source of reclamation material		Potential as source of roadfill	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7654A:								
Moline	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Too clayey	0.00	Too clayey	0.00	Depth to saturated zone	0.00
	Bottom layer	0.00	Depth to saturated zone	0.00	Low content of organic matter	0.12	Shrink-swell	0.00
					Carbonate content	0.92	Low strength	0.00
8107+:								
Sawmill	Poor		Poor		Good		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00			Low strength	0.00
	Bottom layer	0.00					Depth to saturated zone	0.00
							Shrink-swell	0.87
8302A:								
Ambraw	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too acid	0.97	Depth to saturated zone	0.00
	Bottom layer	0.00					Low strength	0.00
							Shrink-swell	0.99
8400A:								
Calco	Poor		Poor		Fair		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.08	Depth to saturated zone	0.00
	Bottom layer	0.00			Carbonate content	0.97	Low strength	0.00
			Too clayey	0.08			Shrink-swell	0.87
			Carbonate content	0.97				
8404A:								
Titus	Poor		Poor		Poor		Poor	
	Thickest layer	0.00	Depth to saturated zone	0.00	Too clayey	0.00	Depth to saturated zone	0.00
	Bottom layer	0.00			Low content of organic matter	0.68	Shrink-swell	0.12
			Too clayey	0.00				

Table 17a.--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 soil name	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
8D2:						
Hickory	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
	Slope	0.02				
8D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.04	Deep to water	1.00
	Slope	0.02				
8F:						
Hickory	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
	Slope	0.36				
8F3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.02	Deep to water	1.00
	Slope	0.36				
19C3:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Deep to water	1.00
19D:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Deep to water	1.00
	Slope	0.02				
19D3:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.18	Deep to water	1.00
	Slope	0.02				
19F:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.40	Deep to water	1.00
	Slope	0.36				
19F3:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Deep to water	1.00
	Slope	0.36				
45A:						
Denny	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.05		
51A:						
Muscatune	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.08		

Table 17a.--Water Management--Continued

Map symbol and soil name	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
61A:						
Atterberry	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.01	Cutbanks cave	0.10
68A:						
Sable	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
86B:						
Osco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Deep to water	1.00
86C2:						
Osco	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
87A, 87C2:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Deep to water	1.00
88A:						
Sparta	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Deep to water	1.00
172A:						
Hoopeston	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.76		
212B:						
Thebes	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Deep to water	1.00
250D:						
Velma	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.09	Deep to water	1.00
	Slope	0.02				
261A:						
Niota	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.54	Ponding	1.00	Slow refill	0.46
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.01		
274B, 274B2, 274C2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.88	Deep to water	1.00
274D2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.88	Deep to water	1.00
	Slope	0.02				

Table 17a.--Water Management--Continued

Map symbol and soil name	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
275A:						
Joy	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.70	Cutbanks cave	0.10
278A:						
Stronghurst	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
279A, 279B:						
Rozetta	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
280B:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.09	Deep to water	1.00
280B2:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.06	Deep to water	1.00
280C2, 280C3:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Deep to water	1.00
317A:						
Millsdale	Somewhat limited		Very limited		Very limited	
	Depth to bedrock	0.85	Ponding	1.00	Depth to hard bedrock	1.00
	Seepage	0.04	Depth to saturated zone	1.00		
					Slow refill	0.28
			Thin layer	0.85	Cutbanks cave	0.10
430A, 430B:						
Raddle	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Deep to water	1.00
525A:						
Joslin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Deep to water	1.00
	Depth to bedrock	0.10	Piping	0.10		
567C2:						
Elkhart	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.17	Deep to water	1.00
567D2:						
Elkhart	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.08	Deep to water	1.00
	Slope	0.02				
570B:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.99	Deep to water	1.00
			Seepage	0.06		
570C3:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.71	Deep to water	1.00
			Seepage	0.06		

Table 17a.--Water Management--Continued

Map symbol and soil name	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
570D3:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.71	Deep to water	1.00
	Slope	0.02	Seepage	0.06		
647A:						
Lawler	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.95		
671A, 671B:						
Biggsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.89	Deep to water	1.00
675A:						
Greenbush	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Deep to water	1.00
675B:						
Greenbush	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.07	Deep to water	1.00
689B:						
Coloma	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Deep to water	1.00
689D:						
Coloma	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Deep to water	1.00
	Slope	0.01				
705A:						
Buckhart	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	0.68	Slow refill	0.28
					Deep to water	0.14
			Piping	0.03	Cutbanks cave	0.10
727A:						
Waukee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Deep to water	1.00
741F:						
Oakville	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Deep to water	1.00
	Slope	0.20				
763A:						
Joslin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Deep to water	1.00
763B:						
Joslin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Deep to water	1.00
764A:						
Coyne	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.90	Deep to water	1.00
			Seepage	0.07		
764C:						
Coyne	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.97	Deep to water	1.00

Table 17a.--Water Management--Continued

Map symbol and soil name	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
774A:						
Saude	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Deep to water	1.00
800C:						
Psamments	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Deep to water	1.00
802B:						
Orthents	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.50	Deep to water	1.00
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
898F3:						
Hickory	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
	Slope	0.32				
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Deep to water	1.00
	Slope	0.32				
898G:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Piping	0.12	Deep to water	1.00
	Seepage	0.72				
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Piping	0.06	Deep to water	1.00
	Seepage	0.72				
913D2:						
Marseilles	Somewhat limited		Somewhat limited		Very limited	
	Depth to bedrock	0.11	Thin layer	0.85	Deep to water	1.00
	Slope	0.02	Hard to pack	0.03		
Hickory	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
	Slope	0.02				
913F:						
Marseilles	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.32	Thin layer	0.85	Deep to water	1.00
	Depth to bedrock	0.11				
Hickory	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
	Slope	0.32				
913G:						
Marseilles	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.97	Thin layer	0.85	Deep to water	1.00
	Depth to bedrock	0.11	Hard to pack	0.03		
Hickory	Somewhat limited		Not limited		Very limited	
	Slope	0.97			Deep to water	1.00
	Seepage	0.72				

Table 17a.--Water Management--Continued

Map symbol and soil name	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
917C2:						
Oakville	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Deep to water	1.00
Tell	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.43	Deep to water	1.00
917D2:						
Oakville	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Deep to water	1.00
	Slope	0.02				
Tell	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Deep to water	1.00
	Slope	0.02				
943D2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.88	Deep to water	1.00
	Slope	0.02				
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Deep to water	1.00
	Slope	0.02				
943F2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.88	Deep to water	1.00
	Slope	0.36				
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Deep to water	1.00
	Slope	0.36				
944D2:						
Velma	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
	Slope	0.02				
Coatsburg	Somewhat limited		Very limited		Very limited	
	Slope	0.02	Depth to saturated zone	1.00	Deep to water	1.00
			Hard to pack	0.96		
946D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.02	Deep to water	1.00
	Slope	0.02				
Atlas	Somewhat limited		Very limited		Very limited	
	Slope	0.02	Depth to saturated zone	1.00	Slow refill	1.00
					Cutbanks cave	0.10
			Hard to pack	0.93		
946F3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.02	Deep to water	1.00
	Slope	0.36				
Atlas	Somewhat limited		Very limited		Very limited	
	Slope	0.36	Depth to saturated zone	1.00	Deep to water	1.00
			Hard to pack	0.93		

Table 17a.--Water Management--Continued

Map symbol and soil name	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
959G:						
Strawn	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.90	Piping	0.78	Deep to water	1.00
	Seepage	0.72				
Chute	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Deep to water	1.00
	Slope	0.90				
960D2:						
Hickory	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Deep to water	1.00
	Slope	0.02				
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.08	Deep to water	1.00
	Slope	0.02				
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Deep to water	1.00
	Slope	0.02				
960D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.04	Deep to water	1.00
	Slope	0.02				
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.18	Deep to water	1.00
	Slope	0.02				
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Deep to water	1.00
	Slope	0.02				
960F:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Deep to water	1.00
	Slope	0.36				
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Deep to water	1.00
	Slope	0.36				
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Deep to water	1.00
	Slope	0.36				
961A:						
Burkhardt	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Deep to water	1.00
Saude	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Deep to water	1.00
962F:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Deep to water	1.00
	Slope	0.36				
Bold	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Deep to water	1.00
	Slope	0.36				

Table 17a.--Water Management--Continued

Map symbol and soil name	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
1076A:						
Otter	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.78		
1082A:						
Millington	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.74		
1107A:						
Sawmill	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.01		
1334A:						
Birds	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.96		
1400A:						
Calco	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
1654A:						
Moline	Not limited		Very limited		Somewhat limited	
			Ponding	1.00	Slow refill	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Hard to pack	1.00		
3074A:						
Radford	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.33		
3076A:						
Otter	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.75		
3082A:						
Millington	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.74		

Table 17a.--Water Management--Continued

Map symbol and soil name	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
3083A:						
Wabash	Not limited		Very limited		Very limited	
			Ponding	1.00	Slow refill	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Hard to pack	1.00		
3107A:						
Sawmill	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
3239A:						
Dorchester	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.94	Deep to water	1.00
3400A:						
Calco	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
3415A:						
Orion	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00	Slow refill	0.28
3428A:						
Coffeen	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	1.00		
3451A:						
Lawson	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.68	Cutbanks cave	0.10
3646L:						
Fluvaquents	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	1.00		
7076A:						
Otter	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.73		
7083A:						
Wabash	Not limited		Very limited		Very limited	
			Ponding	1.00	Slow refill	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Hard to pack	1.00		

Table 17a.--Water Management--Continued

Map symbol and soil name	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
7107A:						
Sawmill	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
7239A:						
Dorchester	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.94	Deep to water	1.00
7304A:						
Landes	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	Deep to water	1.00
7415A:						
Orion	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Slow refill	0.28
					Deep to water	0.01
7428A:						
Coffeen	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	1.00		
7451A:						
Lawson	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.60		
7654A:						
Moline	Not limited		Very limited		Somewhat limited	
			Ponding	1.00	Slow refill	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Hard to pack	1.00		
8107+:						
Sawmill	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
8302A:						
Ambraw	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.54	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.35		
8400A:						
Calco	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10

Table 17a.--Water Management--Continued

Map symbol and soil name	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
8404A:						
Titus	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Ponding	1.00	Slow refill	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10

Table 17b.--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 soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2:						
Hickory	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Cutbanks cave	0.10
8D3:						
Hickory	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.56	Cutbanks cave	0.10
8F:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Cutbanks cave	0.10
8F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.56	Cutbanks cave	0.10
19C3:						
Sylvan	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.50
			Slope	0.99		
19D, 19D3:						
Sylvan	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
19F, 19F3:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.10
45A:						
Denny	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
51A:						
Muscatune	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
61A:						
Atterberry	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68A:						
Sable	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
86B:						
Osco	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.25	Cutbanks cave	0.10
86C2:						
Osco	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.99	Cutbanks cave	0.10
87A:						
Dickinson	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.17		
87C2:						
Dickinson	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.99		
			Water erosion	0.17		
88A:						
Sparta	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
172A:						
Hoopeston	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Water erosion	0.17	Depth to saturated zone	1.00
212B:						
Thebes	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.25		
250D:						
Velma	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.56	Cutbanks cave	0.10
261A:						
Niota	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Too clayey	0.41
					Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
274B, 274B2:						
Seaton	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.50
			Slope	0.25		
274C2:						
Seaton	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.50
			Slope	0.99		
274D2:						
Seaton	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
275A:						
Joy	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
					Cutbanks cave	0.10
278A:						
Stronghurst	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
					Cutbanks cave	0.10
279A:						
Rozetta	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.15
					Cutbanks cave	0.10
279B:						
Rozetta	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.25		
					Cutbanks cave	0.10
280B, 280B2:						
Fayette	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
280C2, 280C3:						
Fayette	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
317A:						
Millsdale	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Ponding	1.00	Depth to hard bedrock	1.00
			Depth to saturated zone	1.00	Ponding	1.00
			Depth to bedrock	1.00	Depth to saturated zone	1.00
			Water erosion	0.89		
					Too clayey	0.12
					Cutbanks cave	0.10
430A:						
Raddle	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
430B:						
Raddle	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
525A:						
Joslin	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	0.42	Water erosion	0.89	Depth to hard bedrock	0.42
			Depth to bedrock	0.42		
					Cutbanks cave	0.10
567C2:						
Elkhart	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.50
			Slope	0.99	Depth to saturated zone	0.16
567D2:						
Elkhart	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
					Depth to saturated zone	0.16
570B:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.25	Water erosion	0.89	Cutbanks cave	0.10
			Slope	0.25		
570C3:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	0.10
			Water erosion	0.89		
570D3:						
Martinsville	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Cutbanks cave	0.10
647A:						
Lawler	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.89		
671A:						
Biggsville	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.15
					Cutbanks cave	0.10
671B:						
Biggsville	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.25		
					Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
675A:						
Greenbush	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.15
					Cutbanks cave	0.10
675B:						
Greenbush	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.25	Cutbanks cave	0.10
689B:						
Coloma	Somewhat limited		Very limited		Very limited	
	Slope	0.36	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.36		
689D:						
Coloma	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.37
705A:						
Buckhart	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Cutbanks cave	0.10
727A:						
Waukee	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.89		
741F:						
Oakville	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Too sandy	1.00	Cutbanks cave	1.00
763A:						
Joslin	Not limited		Somewhat limited		Somewhat limited	
			Water erosion	0.89	Cutbanks cave	0.10
					Too clayey	0.04
763B:						
Joslin	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.25	Water erosion	0.89	Cutbanks cave	0.10
			Slope	0.25	Too clayey	0.04
764A:						
Coyne	Not limited		Somewhat limited		Somewhat limited	
			Water erosion	0.17	Cutbanks cave	0.10
764C:						
Coyne	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	1.00
			Water erosion	0.17	Depth to dense layer	0.50
774A:						
Saude	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.89		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
800C:						
Psamments	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.09
802B:						
Orthents	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.36	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.36		
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
898F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.56	Cutbanks cave	0.10
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.50
898G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Cutbanks cave	0.10
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.50
913D2:						
Marseilles	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
	Depth to soft bedrock	0.42	Slope	1.00	Depth to soft bedrock	0.42
			Depth to soft bedrock	0.42	Cutbanks cave	0.10
Hickory	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Cutbanks cave	0.10
913F:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Depth to soft bedrock	0.42	Slope	1.00	Depth to soft bedrock	0.42
			Depth to soft bedrock	0.42	Cutbanks cave	0.10
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Cutbanks cave	0.10
913G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Depth to soft bedrock	0.42	Slope	1.00	Depth to soft bedrock	0.42
			Depth to soft bedrock	0.42	Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
913G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Cutbanks cave	0.10
917C2:						
Oakville	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.99		
Tell	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.99		
917D2:						
Oakville	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	0.96
Tell	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.96
			Too sandy	1.00		
943D2:						
Seaton	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
Timula	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
943F2:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.50
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.50
944D2:						
Velma	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Cutbanks cave	0.10
Coatsburg	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Depth to saturated zone	1.00
			Slope	1.00	Slope	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10
					Too clayey	0.01
946D3:						
Hickory	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.56	Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
946D3:						
Atlas	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Depth to saturated zone	1.00
			Slope	1.00	Slope	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10
					Too clayey	0.02
946F3:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.56	Cutbanks cave	0.10
Atlas	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
					Too clayey	0.02
959G:						
Strawn	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Cutbanks cave	0.10
Chute	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Too sandy	1.00	Cutbanks cave	1.00
960D2:						
Hickory	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Cutbanks cave	0.10
Sylvan	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
Fayette	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.10
960D3:						
Hickory	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.56	Cutbanks cave	0.10
Sylvan	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
Fayette	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.10
960F:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
960F:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.10
Fayette	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.10
961A:						
Burkhardt	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.17		
Saude	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.89		
962F:						
Sylvan	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.10
Bold	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.10
1076A:						
Otter	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
			Water erosion	0.89		
					Cutbanks cave	0.10
1082A:						
Millington	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
			Water erosion	0.89		
					Cutbanks cave	0.10
1107A:						
Sawmill	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
			Water erosion	0.56		
					Cutbanks cave	0.10
1334A:						
Birds	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1400A:						
Calco	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.56	Depth to saturated zone	1.00
					Cutbanks cave	0.10
1654A:						
Moline	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.56	Depth to saturated zone	1.00
					Too clayey	0.88
					Cutbanks cave	0.10
3074A:						
Radford	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3076A:						
Otter	Not limited		Very limited		Very limited	
			Ponding	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Ponding	1.00
					Cutbanks cave	0.10
3082A:						
Millington	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.89	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3083A:						
Wabash	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.56	Depth to saturated zone	1.00
					Too clayey	0.50
					Cutbanks cave	0.10
3107A:						
Sawmill	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.56	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3239A:						
Dorchester	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
					Depth to saturated zone	0.16
					Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3400A:						
Calco	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Ponding	1.00
					Flooding	1.00
			Water erosion	0.56	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3415A:						
Orion	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	1.00
3428A:						
Coffeen	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3451A:						
Lawson	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	0.10
3646L:						
Fluvaquents	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.10
7076A:						
Otter	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	0.10
7083A:						
Wabash	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.56	Too clayey	0.50
					Cutbanks cave	0.10
7107A:						
Sawmill	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7239A:						
Dorchester	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.16
					Cutbanks cave	0.10
7304A:						
Landes	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.17	Depth to saturated zone	0.15
7415A:						
Orion	Not limited		Very limited		Very limited	
			Water erosion	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
7428A:						
Coffeen	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
7451A:						
Lawson	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	0.10
7654A:						
Moline	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.56	Too clayey	0.88
					Cutbanks cave	0.10
8107+:						
Sawmill	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Flooding	0.60
					Cutbanks cave	0.10
8302A:						
Ambraw	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Flooding	0.60
					Cutbanks cave	0.10
8400A:						
Calco	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.56	Flooding	0.60
					Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8404A:						
Titus	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Flooding	0.60
					Cutbanks cave	0.10

Table 18.--Engineering Index Properties

(Absence of an entry indicates that the data were not estimated. The representative values for USDA texture and Unified and AASHTO classifications are designated with an asterisk. Representative values are indicative of conditions that occur most commonly)

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
8D2:												
Hickory---------	0-6	Silt loam*	CL*, CL-ML, ML	A-6*, A-4	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	6-51	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-80	30-50	15-30
	51-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
8D3:												
Hickory---------	0-5	Clay loam*	CL*	A-6*, A-7	0	0-5	95-100	90-100	80-100	65-80	30-50	15-30
	5-30	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	30-40	Clay loam*, loam, gravelly clay loam	CL*, SC	A-6*, A-4	0-1	0-5	85-100	70-100	65-95	50-85	30-50	8-30
	40-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
8F:												
Hickory---------	0-12	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	12-53	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	53-58	Loam*, sandy loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
	58-63	Loam*, sandy loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
8F3:												
Hickory---------	0-6	Clay loam*	CL*	A-6*, A-7	0	0-5	95-100	90-100	80-100	65-80	30-50	15-30
	6-42	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	42-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
19C3:												
Sylvan----------	0-7	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	7-37	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	37-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
19D:												
Sylvan----------	0-5	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	25-35	5-15
	5-10	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	100	95-100	30-40	7-15
	10-35	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	35-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
19D3:												
Sylvan----------	0-9	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	9-28	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	28-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
19F:												
Sylvan----------	0-5	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	25-35	5-15
	5-10	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	100	95-100	30-40	7-15
	10-27	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	27-80	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
19F3:												
Sylvan----------	0-6	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	6-30	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	30-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
45A:												
Denny----------	0-9	Silt loam*	CL*	A-6*, A-4	0	0	100	100	95-100	95-100	30-40	8-15
	9-22	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	25-40	5-15
	22-45	Silty clay loam*, silty clay	CH*, CL	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-60	15-35
	45-60	Silty clay loam*, silt loam	CL*	A-6*	0	0	100	100	95-100	95-100	25-40	11-20
51A:												
Muscatune-------	0-16	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	97-100	95-100	24-37	4-14
	16-22	Silty clay loam*, silt loam	CL*, ML	A-6*	0	0	100	100	97-100	95-100	35-40	14-20
	22-46	Silty clay loam*	CL*, ML	A-7-6*, A-6	0	0	100	100	97-100	95-100	37-46	16-24
	46-60	Silt loam*, silty clay loam	CL*, ML	A-6*, A-4	0	0	100	100	96-100	93-100	24-37	7-18
61A:												
Atterberry------	0-9	Silt loam*	CL*, CL-ML, ML	A-6*, A-4	0	0	100	100	95-100	95-100	24-37	6-16
	9-17	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	24-37	7-18
	17-48	Silty clay loam*, silt loam	CL*, ML	A-7-6*, A-6	0	0	100	100	95-100	95-100	37-46	16-25
	48-60	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	95-100	95-100	24-37	7-18
68A:												
Sable----------	0-17	Silty clay loam*	CH*, CL, MH, ML	A-7-6*	0	0	100	100	95-100	95-100	41-65	15-35
	17-23	Silty clay loam*	CH*, CL, MH, ML	A-7-6*	0	0	100	100	95-100	95-100	41-65	15-35
	23-60	Silty clay loam*, silt loam	CL*, CH	A-7-6*	0	0	100	100	95-100	95-100	40-55	20-35
86B:												
Osco----------	0-14	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	100	95-100	35-45	7-20
	14-55	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	40-50	15-25
	55-60	Silt loam*, silty clay loam	CL*, ML	A-6*, A-4	0	0	100	100	100	95-100	35-45	7-25
86C2:												
Osco----------	0-9	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	95-100	95-100	35-45	10-20
	9-34	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	40-50	15-25
	34-60	Silt loam*, silty clay loam	CL*, ML	A-6*, A-4	0	0	100	100	95-100	95-100	35-45	15-25

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
87A:												
Dickinson-------	0-8	Sandy loam*	SC-SM*, SC, SM	A-4*, A-2-4	0	0	100	100	63-76	24-50	17-26	3-11
	8-20	Sandy loam*, fine sandy loam	SC*, SC-SM, SM	A-4*, A-2-4	0	0	100	100	63-87	24-50	17-26	4-11
	20-31	Sandy loam*, fine sandy loam	SC-SM*, SC, SM	A-4*	0	0	100	100	63-87	24-50	17-26	4-12
	31-36	Loamy sand*, loamy fine sand, fine sand	SM*, SC-SM, SP-SM	A-2-4*, A-3	0	0	100	100	55-80	7-25	9-15	NP-5
	36-60	Sand*, loamy fine sand, loamy sand	SP-SM*, SM	A-2-4*, A-3	0	0	100	100	50-80	7-25	9-14	NP-5
87C2:												
Dickinson-------	0-11	Sandy loam*	SC-SM*, SC, SM	A-4*, A-2	0	0	100	100	63-76	24-50	17-30	3-11
	11-29	Sandy loam*, fine sandy loam	SC-SM*, SC, SM	A-4*	0	0	100	100	63-87	24-50	17-30	4-12
	29-35	Loamy sand*, loamy fine sand, fine sand	SM*, SC-SM, SP-SM	A-2-4*, A-3	0	0	100	100	55-80	7-25	9-20	NP-5
	35-60	Sand*, loamy fine sand, loamy sand	SP-SM*, SM	A-2-4*, A-3	0	0	100	100	50-80	7-25	9-14	NP-5
88A:												
Sparta----------	0-17	Loamy sand*	SM*	A-2-4*, A-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	17-31	Loamy sand*, fine sand, sand	SM*, SP-SM	A-2-4*, A-3, A-4	0	0	85-100	85-100	50-95	5-50	0-14	NP
	31-72	Stratified sand to loamy sand*	SP-SM*, SM, SP	A-2-4*, A-3	0	0	85-100	85-100	50-95	4-50	0-14	NP-4
172A:												
Hoopeston-------	0-14	Sandy loam*	SC-SM*, SC, SM	A-4*, A-2-4	0	0	90-100	90-100	70-90	25-45	0-25	NP-10
	14-38	Sandy loam*	SC*, SC-SM, SM	A-4*, A-2-4	0	0	90-100	90-100	60-85	25-50	0-30	NP-10
	38-60	Sand*	SM*, SC, SC-SM, SP-SM	A-2-4*, A-3	0	0	90-100	90-100	50-80	5-35	0-25	NP-10

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
212B:												
Thebes----------	0-9	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	25-35	5-15
	9-31	Silty clay loam*, silt loam	CL*	A-6*, A-7-6	0	0	100	100	100	95-100	35-45	15-25
	31-40	Loam*, sandy loam, clay loam	CL*, CL-ML	A-4*	0	0	100	95-100	80-90	45-75	20-30	5-10
	40-80	Stratified loamy sand to sandy loam*, loamy sand, sand	SM*, SC-SM, SP-SM	A-2-4*, A-3	0	0	100	95-100	80-90	2-20	15-20	NP-5
250D:												
Velma----------	0-16	Silt loam*, loam	CL*	A-6*, A-4	0	0	100	100	90-100	70-90	20-40	8-25
	16-54	Clay loam*, loam, silty clay loam	CL*	A-6*, A-7-6	0-1	0-5	100	85-100	80-95	55-75	30-50	15-30
	54-80	Loam*, clay loam, sandy loam	CL*, ML, SC, SM	A-6*, A-4, A-2	0-1	0-5	90-100	75-100	60-90	30-80	20-40	3-20
261A:												
Niota----------	0-9	Silt loam*	ML*, CL	A-4*, A-6	0	0	100	100	95-100	90-100	30-40	5-15
	9-16	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	90-100	25-35	5-15
	16-27	Silty clay*, clay, silty clay loam	CH*	A-7-5*	0	0	100	100	95-100	95-100	52-76	26-42
	27-36	Silty clay loam*, silt loam, loam	CL*, CH	A-7-6*, A-6	0	0	100	100	95-100	95-100	38-52	17-25
	36-49	Silt loam*, loam, loamy fine sand	CL*, ML, SC, SM	A-4*, A-2, A-6, A-7	0	0	100	95-100	60-90	20-90	18-48	NP-20
	49-60	Stratified loamy sand to silt loam*	SC*, SM, CL, ML, SC-SM, CL-ML	A-2-4*, A-4	0	0-5	90-100	70-95	40-80	15-55	20-25	NP-10
274B:												
Seaton----------	0-9	Silt loam*	CL*, CL-ML, ML	A-4*, A-6, A-7	0	0	100	100	95-100	95-100	20-45	2-20
	9-60	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
	60-80	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
274B2:												
Seaton----------	0-9	Silt loam*	CL*, CL-ML, ML	A-6*, A-4, A-7	0	0	100	100	100	95-100	20-45	5-20
	9-53	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20
	53-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
274C2:												
Seaton----------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	20-35	5-15
	7-47	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
	47-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
274D2:												
Seaton----------	0-8	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	20-35	5-15
	8-52	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20
	52-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20
275A:												
Joy----------	0-15	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
	15-51	Silt loam*	CL*	A-6*	0	0	100	100	95-100	95-100	25-40	10-20
	51-60	Silt loam*, loam, very fine sandy loam	CL*, CL-ML, SC, SC-SM	A-4*, A-6	0	0	100	100	90-100	40-100	20-35	5-15
278A:												
Stronghurst-----	0-8	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	8-47	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	40-55	20-35
	47-60	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	25-40	5-20
279A:												
Rozetta---------	0-4	Silt loam*	CL*	A-6*, A-4	0	0	100	100	95-100	95-100	24-35	8-15
	4-11	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	20-30	5-15
	11-50	Silty clay loam*,	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-50	15-30
	50-60	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	95-100	85-100	25-40	7-20
279B:												
Rozetta---------	0-7	Silt loam*	CL*	A-6*, A-4	0	0	100	100	95-100	95-100	24-35	8-15
	7-11	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	20-30	5-15
	11-55	Silty clay loam*	CL*	A-7*, A-6	0	0	100	100	95-100	95-100	35-50	15-30
	55-60	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	95-100	85-100	25-40	7-20
280B:												
Fayette---------	0-9	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	95-100	25-35	5-15
	9-39	Silty clay loam*, silt loam	CL*	A-7*, A-6	0	0	100	100	100	95-100	35-45	15-25
	39-60	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	10-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
280B2:												
Fayette---------	0-8	Silt loam*	CL*, CL-ML	A-6*, A-7	0	0	100	100	100	95-100	30-45	10-25
	8-56	Silty clay loam*, silt loam	CL*	A-6*, A-7	0	0	100	100	100	95-100	35-45	15-25
	56-80	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	10-20
280C2:												
Fayette---------	0-8	Silt loam*	CL*	A-6*, A-7	0	0	100	100	100	95-100	30-45	10-25
	8-64	Silty clay loam*, silt loam	CL*	A-7*, A-6	0	0	100	100	100	95-100	35-45	15-25
	64-80	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	10-20
280C3:												
Fayette---------	0-8	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	100	95-100	35-45	15-25
	8-48	Silty clay loam*, silt loam	CL*	A-6*, A-7	0	0	100	100	100	95-100	35-45	15-25
	48-60	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	10-20
317A:												
Millsdale-------	0-8	Silty clay loam*	CL*	A-7-6*, A-6	0	0	90-100	80-100	75-100	70-95	32-50	12-25
	8-27	Silty clay*, clay, silty clay loam, clay loam	CH*, CL	A-7-6*	0	0-5	85-100	80-100	75-100	60-95	40-60	20-35
	27-60	Unweathered bedrock*	---	---	---	---	---	---	---	---	---	---
430A:												
Raddle----------	0-21	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	90-100	25-40	4-15
	21-80	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	80-100	20-35	4-15
430B:												
Raddle----------	0-13	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	25-40	4-15
	13-60	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	80-100	20-35	4-15
525A:												
Joslin----------	0-20	Loam*, silt loam	CL*, CL-ML	A-4*, A-2	0	0	100	100	90-100	75-95	20-40	5-15
	20-34	Loam*, clay loam, sandy clay loam	CL*	A-6*, A-7	0	0	90-100	85-100	70-100	30-75	25-45	5-30
	34-51	Clay loam*, sandy clay loam	CL*	A-6*	0	0	90-100	85-100	70-100	30-75	20-50	5-30
	51-58	Clay loam*, clay	CL*	A-6*	0	0-5	85-100	80-100	65-100	25-75	20-50	5-30
	58-80	Unweathered bedrock*	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
567C2:												
Elkhart---------	0-8	Silt loam*	CL*	A-6*, A-7	0	0	100	100	100	95-100	25-35	8-15
	8-25	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	18-30
	25-60	Silt loam*, silt	CL*	A-6*, A-4	0	0	100	100	95-100	95-100	20-37	8-20
567D2:												
Elkhart---------	0-10	Silt loam*	CL*	A-6*, A-4	0	0	100	100	95-100	95-100	25-35	8-15
	10-30	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-50	18-30
	30-60	Silt loam*, silt	CL*	A-6*, A-4	0	0	100	100	95-100	90-100	20-37	8-20
570B:												
Martinsville----	0-9	Silt loam*, loam	CL*, CL-ML, ML	A-6*, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	9-18	Silty clay loam*, clay loam, sandy clay loam	CL*, CL-ML, SC, SC-SM	A-6*, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-90	20-50	5-35
	18-33	Clay loam*, loam, sandy clay loam	CL*, CL-ML, SC, SC-SM	A-6*, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	33-42	Sandy loam*, loam, sandy clay loam	SC*, CL-ML, SC-SM, SM	A-4*, A-6, A-2-4, A-2-6	0	0	95-100	85-100	50-95	25-70	10-40	NP-20
	42-72	Stratified sandy loam to loam to silt loam*	SC-SM*, SC, CL, ML	A-4*, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10
570C3:												
Martinsville----	0-9	Clay loam*	CL*	A-6*, A-7	0	0	95-100	90-100	80-100	65-80	30-50	15-30
	9-30	Clay loam*, silty clay loam	CL*	A-6*, A-7	0	0	90-100	70-100	65-95	50-85	30-50	15-30
	30-60	Sandy loam*, loam, sandy clay loam	CL*, CL-ML, SC, SC-SM	A-4*, A-6, A-2	0	0	85-100	85-100	55-95	30-75	20-30	5-11
570D3:												
Martinsville----	0-9	Clay loam*	CL*	A-6*, A-7	0	0	95-100	90-100	80-100	65-80	30-50	15-30
	9-30	Clay loam*, silty clay loam	CL*	A-6*, A-7	0	0	90-100	70-100	65-95	50-85	30-50	15-30
	30-60	Sandy loam*, loam, sandy clay loam	CL*, CL-ML, SC, SC-SM	A-4*, A-6, A-2	0	0	85-100	85-100	55-95	30-75	20-30	5-11

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
647A:												
Lawler----------	0-10	Loam*, silt loam	CL*, ML	A-6*, A-7	0	0	100	90-100	70-90	55-75	35-45	10-20
	10-31	Loam*, sandy clay loam, clay loam, silt loam	CL*, SC	A-6*	0	0	85-95	80-95	70-85	45-65	25-40	10-20
	31-60	Sand*, gravelly coarse sand, gravelly loamy sand, loamy coarse sand	SP*, GP, SP-SM	A-1-b*	0	0-10	50-90	50-85	20-40	3-10	0-14	NP
671A:												
Biggsville------	0-13	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	100	95-100	25-40	7-18
	13-53	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	95-100	25-40	7-18
	53-80	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	90-100	25-40	7-17
671B:												
Biggsville------	0-13	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	100	95-100	25-40	7-18
	13-53	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	95-100	25-40	7-18
	53-80	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	90-100	25-40	7-17
675A:												
Greenbush-------	0-9	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	25-35	5-15
	9-16	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	25-35	5-15
	16-46	Silty clay loam*, silt loam	CL*	A-6*, A-7	0	0	100	100	100	95-100	35-45	15-25
	46-60	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	11-20
675B:												
Greenbush-------	0-14	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	25-35	5-15
	14-60	Silty clay loam*, silt loam	CL*	A-6*, A-7	0	0	100	100	100	95-100	35-45	15-25
	60-80	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	11-20
689B:												
Coloma----------	0-10	Sand*	SP-SM*, SP, SM	A-3*, A-2	0	0	85-100	85-100	50-80	2-15	0-14	NP
	10-27	Sand*, loamy sand	SP-SM*, SP, SM	A-3*, A-2	0	0	85-100	85-100	50-75	2-30	0-14	NP
	27-60	Stratified sand to loamy sand*	SM*, SP, SP-SM	A-2-4*, A-3, A-4	0	0	85-100	85-100	50-100	2-40	0-14	NP

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
689D:												
Coloma----------	0-12	Sand*	SP-SM*, SP, SM	A-3*, A-2	0	0	85-100	85-100	50-75	2-15	0-14	NP
	12-25	Sand*, loamy sand	SP-SM*, SP, SM	A-3*, A-2	0	0	85-100	85-100	50-75	2-30	0-14	NP
	25-60	Stratified sand to loamy sand to sandy loam*	SM*, SP, SP-SM	A-2-4*, A-3, A-4	0	0	85-100	85-100	50-100	2-40	0-14	NP
705A:												
Buckhart--------	0-20	Silt loam*, silty clay loam	CL*, ML	A-6*, A-7	0	0	100	100	100	95-100	35-45	10-20
	20-58	Silty clay loam*, silt loam	CL*	A-7-6*, A-7	0	0	100	100	100	95-100	40-50	15-25
	58-60	Silt loam*, silty clay loam	CL*	A-6*	0	0	100	100	100	95-100	30-40	11-20
727A:												
Waukee----------	0-14	Loam*, silt loam	CL*	A-6*	0	0	100	90-100	70-90	50-75	30-40	10-20
	14-34	Loam*, sandy clay loam	SC*, SC-SM, CL, CL-ML	A-4*, A-6	0	0-5	85-95	80-95	65-85	40-60	20-35	5-15
	34-60	Coarse sand*, loamy sand, gravelly coarse sand, loamy coarse sand	SM*, SP, SP-SM	A-1-b*	0	0-10	60-90	60-85	20-40	3-25	0-14	NP
741F:												
Oakville--------	0-3	Fine sand*	SP-SM*, SM	A-2-4*	0	0	100	95-100	70-80	2-12	8-15	NP-1
	3-24	Fine sand*, loamy fine sand	SP-SM*, SM	A-2-4*	0	0	100	95-100	74-85	2-15	8-15	NP
	24-60	Fine sand*, sand	SP-SM*, SM	A-3*, A-2-4	0	0	100	95-100	73-83	0-13	8-15	NP-2
763A:												
Joslin----------	0-15	Silt loam*, loam	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	75-95	25-40	5-15
	15-40	Silt loam*, loam	CL*	A-6*, A-7-6	0	0	100	100	90-100	75-85	30-45	10-20
	40-60	Silty clay*, silty clay loam, clay	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	40-60	20-35
	60-85	Silt loam*, silty clay loam, loam, clay loam	CL*	A-6*, A-7-6	0	0	100	100	90-100	75-95	30-50	10-25

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
763B:												
Joslin----------	0-14	Silt loam*, loam	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	75-95	25-40	5-15
	14-48	Silt loam*, loam	CL*	A-6*, A-7-6	0	0	100	100	90-100	75-85	30-45	10-20
	48-60	Silty clay*, silty clay loam, clay	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	40-60	20-35
	60-85	Silt loam*, clay loam, silty clay loam, loam	CL*	A-6*, A-7-6	0	0	100	100	90-100	75-95	30-50	10-25
764A:												
Coyne----------	0-23	Fine sandy loam*	SC*, SC-SM, SM	A-2-4*, A-4, A-6	0	0	100	95-100	60-70	20-50	20-35	3-15
	23-42	Fine sandy loam*, loam	SC*, SC-SM, SM	A-2-4*, A-4, A-6	0	0	100	95-100	60-70	20-50	20-35	3-15
	42-60	Silty clay loam*, loam, silt loam	CL*	A-6*, A-7	0	0	100	100	85-100	80-95	30-45	11-25
764C:												
Coyne----------	0-23	Fine sandy loam*	SC*, SC-SM, SM	A-2-4*, A-4, A-6	0	0	100	95-100	60-70	20-50	20-35	3-15
	23-42	Fine sandy loam*, loam	SC*, SC-SM, SM	A-2-4*, A-4, A-6	0	0	100	95-100	60-70	20-50	20-35	3-15
	42-55	Silty clay loam*, loam, silt loam	CL*	A-6*, A-7	0	0	100	100	85-100	80-95	30-45	11-25
	55-60	Gravelly sand*, sand	SP-SM*, SP, SM	A-1-b*	0	0	70-90	60-80	20-45	0-15	15-15	NP-3
774A:												
Saude----------	0-14	Loam*	CL*	A-6*	0	0	100	90-100	70-90	50-75	25-35	10-15
	14-29	Loam*, sandy loam, gravelly sandy loam	CL*, CL-ML, SC, SC-SM	A-4*, A-6	0	0-5	85-95	65-95	60-85	45-60	20-30	5-15
	29-60	Gravelly coarse sand*, coarse sand, loamy sand, sand	SM*, GM, GP	A-2-4*	0	0-10	50-90	50-85	20-40	3-25	0-14	NP
800C:												
Psamments-------	0-60	Sand*, loamy sand	SP-SM*, SP, SM	A-3*, A-2	0	0	85-100	85-100	50-75	2-30	0-14	NP
	60-80	Sand*, fine sand	SP-SM*, SP, SM	A-3*, A-2	0	0	85-100	85-100	50-75	2-30	0-9	NP

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
802B:												
Orthents--------	0-6	Loam*	CL*	A-6*	0-1	0-5	95-100	90-100	85-95	60-90	20-40	10-20
	6-60	Loam*, silt loam, clay loam	CL*	A-6*	0-1	0-5	95-100	90-100	85-95	60-90	20-40	10-20
864. Pits, quarries												
865. Pits, gravel												
898F3:												
Hickory---------	0-12	Clay loam*	CL*	A-6*, A-7	0	0-5	95-100	90-100	80-100	65-80	30-50	15-30
	12-48	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	48-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
Sylvan----------	0-6	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-50	20-30
	6-30	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-50	20-30
	30-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
898G:												
Hickory---------	0-10	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	10-35	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	35-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
Sylvan----------	0-3	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	3-7	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	95-100	95-100	30-40	7-15
	7-33	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-50	20-30
	33-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
913D2:												
Marseilles------	0-4	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	25-40	5-15
	4-38	Silty clay loam*, clay loam, silty clay	CL*, CH	A-7-6*	0-1	0-5	95-100	90-100	85-100	80-95	40-60	15-30
	38-60	Weathered bedrock*	---	---	---	---	---	---	---	---	---	---
Hickory---------	0-6	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0-5	95-100	90-100	90-100	75-95	20-35	3-15
	6-51	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	95-100	70-100	65-95	50-80	30-50	15-30
	51-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
913F:												
Marseilles------	0-12	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	90-100	25-40	5-15
	12-18	Silt loam*, silty clay loam	CL*	A-7-6*, A-6	0	0	100	100	90-100	85-100	35-50	15-25
	18-34	Silty clay loam*, clay loam, silty clay	CL* , CH	A-7-6*	0-5	0-5	95-100	90-100	85-100	80-100	40-60	15-30
	34-60	Weathered bedrock*	---	---	---	---	---	---	---	---	---	---
Hickory---------	0-8	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	8-57	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	57-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
913G:												
Marseilles------	0-9	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	25-40	5-15
	9-36	Silty clay loam*, silty clay, clay loam	CL* , CH	A-7-6*	0-1	0-5	95-100	90-100	85-100	80-95	40-60	15-30
	36-60	Weathered bedrock*	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
913G:												
Hickory---------	0-12	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0-5	95-100	90-100	90-100	75-95	20-35	3-15
	12-53	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	95-100	75-100	70-95	65-80	30-50	15-30
	53-60	Loam*, sandy loam, gravelly clay loam	CL-ML*, CL	A-6*, A-4	0-1	0-5	85-100	75-95	70-95	60-80	20-40	5-20
917C2:												
Oakville--------	0-7	Fine sand*	SP-SM*, SM	A-2-4*	0	0	100	95-100	70-80	2-12	8-15	NP-1
	7-51	Fine sand*, loamy fine sand	SP-SM*, SM	A-2-4*	0	0	100	95-100	74-85	2-15	8-15	NP
	51-60	Fine sand*, sand	SP-SM*, SM	A-3*, A-2	0	0	100	95-100	73-83	0-13	8-15	NP-2
Tell----------	0-7	Silt loam*	CL*	A-4*	0	0	100	100	90-98	69-88	23-26	8-10
	7-23	Silt loam*, silty clay loam	CL*	A-6*	0	0	100	100	96-99	85-96	22-38	8-21
	23-27	Sandy loam*, loam, sandy clay loam	SC*, SC-SM, CL, CL-ML	A-4*, A-2-4, A-6	0	0	100	90-100	75-92	29-62	17-33	4-17
	27-60	Loamy sand*, sand	SP-SM*, SP, SM	A-2-4*, A-1, A-3	0	0	100	90-100	71-86	13-33	8-19	NP-7
917D2:												
Oakville--------	0-9	Fine sand*	SP-SM*, SM	A-2-4*	0	0	100	95-100	70-80	2-12	8-15	NP-1
	9-36	Fine sand*, loamy fine sand	SP-SM*, SM	A-2-4*	0	0	100	95-100	74-85	2-15	8-15	NP
	36-60	Fine sand*, sand	SP-SM*, SM	A-3*, A-2	0	0	100	95-100	73-83	0-13	8-15	NP-2
Tell----------	0-8	Silt loam*	CL*	A-4*	0	0	100	100	90-98	69-88	23-26	8-10
	8-28	Silt loam*, silty clay loam	CL*	A-6*	0	0	100	100	96-99	85-96	22-38	8-21
	28-32	Sandy loam*, loam, sandy clay loam	SC*, SC-SM, CL, CL-ML	A-4*, A-2-4, A-6	0	0	100	90-100	75-92	29-62	17-33	4-17
	32-60	Sand*, loamy sand	SP-SM*, SP, SM	A-2-4*, A-1, A-3	0	0	100	90-100	71-86	13-33	8-19	NP-7
943D2:												
Seaton----------	0-4	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	20-35	5-15
	4-39	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20
	39-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
943D2:												
Timula----------	0-5	Silt loam*	ML*	A-4*	0	0	100	100	95-100	85-100	25-35	NP-10
	5-23	Silt loam*	ML*	A-4*	0	0	100	100	95-100	85-100	25-35	NP-10
	23-60	Silt loam*, silt	ML*	A-4*	0	0	100	100	95-100	85-100	25-35	NP-10
943F2:												
Seaton----------	0-6	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	20-35	5-15
	6-49	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20
	49-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20
Timula----------	0-6	Silt loam*	ML*	A-4*	0	0	100	100	95-100	85-100	25-35	NP-10
	6-28	Silt loam*	ML*	A-4*	0	0	100	100	95-100	85-100	25-35	NP-10
	28-60	Silt loam*, silt	ML*	A-4*	0	0	100	100	95-100	85-100	25-35	NP-10
944D2:												
Velma----------	0-17	Silt loam*	CL*	A-6*, A-4	0	0	100	100	90-100	70-90	20-40	8-25
	17-56	Clay loam*, loam, silty clay loam	CL*	A-6*, A-7	0-1	0-5	100	85-100	80-95	55-75	30-50	15-30
	56-60	Clay loam*, loam, sandy loam	CL*, ML, SC, SM	A-6*, A-4, A-2	0-1	0-5	90-100	75-100	60-90	30-80	20-40	3-20
Coatsburg-------	0-12	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	90-100	25-40	5-15
	12-54	Silty clay*, clay, clay loam	CH*	A-7-6*	0	0	100	95-100	75-90	65-85	50-70	35-55
	54-72	Clay loam*, loam	CL*, CH	A-7-6*, A-6	0	0-5	100	95-100	70-100	60-80	35-55	15-30
946D3:												
Hickory---------	0-7	Clay loam*	CL*	A-6*, A-7	0	0-5	95-100	90-100	80-100	65-80	30-50	15-30
	7-42	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	42-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL	A-6*, A-4, A-2	0-1	0-5	85-100	75-95	45-95	25-75	20-40	5-20
Atlas----------	0-6	Silty clay loam*	CH*, CL	A-7-6*	0	0	100	100	95-100	75-100	45-65	25-40
	6-12	Silty clay loam*, silty clay, clay loam	CH*	A-7-6*	0	0	100	95-100	95-100	75-95	50-70	30-45
	12-55	Silty clay*, silty clay loam, clay loam	CH*	A-7-6*	0	0	100	95-100	95-100	75-95	50-70	30-45
	55-60	Clay loam*, clay, loam	CL*, CH	A-7-6*, A-6	0	0	95-100	90-100	80-100	60-95	35-55	20-30

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
946F3:												
Hickory---------	0-6	Clay loam*	CL*	A-6*, A-7	0	0-5	95-100	90-100	80-100	65-80	30-50	15-30
	6-42	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	42-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
Atlas----------	0-6	Silty clay loam*	CH*, CL	A-7-6*	0	0	100	100	95-100	75-100	40-60	25-40
	6-12	Silty clay loam*, silty clay, clay loam	CH*	A-7-6*	0	0	100	95-100	95-100	75-95	50-70	30-45
	12-55	Silty clay*, silty clay loam, clay loam	CH*	A-7-6*	0	0	100	95-100	95-100	75-95	50-70	30-45
	55-60	Clay loam*, clay, loam	CL*, CH	A-7-6*, A-6	0	0	95-100	90-100	80-100	60-95	35-55	20-30
959G:												
Strawn----------	0-12	Loam*, silt loam	CL*, CL-ML, ML	A-6*, A-4	0	0	95-100	95-100	90-100	90-100	20-40	3-20
	12-23	Clay loam*, loam, silty clay loam	CL*	A-6*, A-7-6	0-1	0-5	90-100	80-100	75-95	50-95	25-45	10-23
	23-60	Loam*, silt loam, clay loam	CL*, SC	A-6*, A-4	0-1	0-5	75-100	70-100	60-95	40-95	20-35	7-18
Chute----------	0-3	Fine sand*, fine sandy loam, loamy fine sand	SM*, SP-SM	A-2-4*, A-3	0	0	100	100	70-95	5-25	0-14	NP
	3-13	Fine sand*, sand, loamy fine sand	SM*	A-2-4*, A-3	0	0	100	95-100	70-95	5-25	0-14	NP
	13-60	Fine sand*, sand, loamy fine sand	SM*, SP-SM	A-3*, A-2-4	0	0	100	95-100	70-95	5-25	0-14	NP
960D2:												
Hickory---------	0-6	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0-5	95-100	90-100	90-100	75-95	20-35	3-15
	6-51	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	95-100	70-100	65-95	50-80	30-50	15-30
	51-60	Clay loam*, loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
960D2:												
Sylvan----------	0-4	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	4-32	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-50	20-30
	32-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
Fayette---------	0-6	Silt loam*	CL*	A-6*, A-7-6	0	0	100	100	100	95-100	30-45	10-25
	6-48	Silty clay loam*, silt loam	CL*	A-6*, A-7-6	0	0	100	100	100	95-100	35-45	15-25
	48-60	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	10-20
960D3:												
Hickory---------	0-5	Clay loam*	CL*	A-6*, A-7	0	0-5	95-100	90-100	80-100	65-80	30-50	15-30
	5-30	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	30-40	Clay loam*, loam, gravelly clay loam	CL*, SC	A-6*, A-4	0-1	0-5	85-100	70-100	65-95	50-85	30-50	8-30
	40-60	Clay loam*, loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
Sylvan----------	0-9	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	9-28	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-50	20-30
	28-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
Fayette---------	0-8	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	100	95-100	95-100	35-45	15-25
	8-36	Silty clay loam*, silt loam	CL*	A-6*, A-7-6	0	0	100	100	95-100	95-100	35-45	15-25
	36-60	Silt loam*	CL*	A-6*	0	0	100	100	95-100	95-100	30-40	10-20
960F:												
Hickory---------	0-12	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	12-48	Clay loam*, silty clay loam, gravelly clay loam	CL*	A-6*, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	48-60	Loam*, clay loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-4	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
960F:												
Sylvan----------	0-6	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	6-30	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-50	20-30
	30-60	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
Fayette---------	0-10	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	10-60	Silty clay loam*, silt loam	CL*	A-6*, A-7-6	0	0	100	100	95-100	95-100	35-45	15-25
	60-70	Silt loam*	CL*	A-6*	0	0	100	100	95-100	95-100	30-40	10-20
961A:												
Burkhardt-------	0-13	Sandy loam*	SM*, SC-SM	A-2-4*, A-4	0	0	95-100	90-100	55-70	25-40	15-26	2-7
	13-24	Sandy loam*, loam	SM*, CL, ML, SC	A-4*, A-2-4	0	0	95-100	85-100	50-95	25-75	15-30	2-10
	24-60	Stratified gravel to sand*	SP*, SP-SM, GP, GP-GM	A-1-b*	0	0	50-85	45-85	20-35	1-5	0-14	NP
Saude----------	0-14	Loam*	CL*	A-6*	0	0	100	90-100	70-90	50-75	25-35	10-15
	14-29	Loam*, sandy loam, gravelly sandy loam	CL*, CL-ML, SC, SC-SM	A-4*, A-6	0	0-5	85-95	65-95	60-85	45-60	20-30	5-15
	29-60	Gravelly coarse sand*, coarse sand, loamy sand, sand	SM*, GM, GP	A-1-b*	0	0-10	50-90	50-85	20-40	3-25	0-14	NP
962F:												
Sylvan----------	0-6	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	6-30	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	95-100	35-50	20-30
	30-60	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	20-40	5-20
Bold----------	0-3	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	100	90-100	20-35	3-15
	3-60	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	100	90-100	20-35	3-15
1076A:												
Otter----------	0-31	Silt loam*	CL*	A-6*, A-4, A-7-6	0	0	100	95-100	90-100	80-100	25-45	7-20
	31-40	Silt loam*, loam, silty clay loam	CL*	A-6*, A-7-6	0	0	100	95-100	90-100	80-100	30-45	10-20
	40-64	Silt loam*, sandy loam, silty clay loam	CL*, CL-ML, SC, SC-SM	A-6*, A-4, A-7-6	0	0	90-100	80-100	55-95	45-85	25-45	5-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
1082A:												
Millington------	0-19	Silt loam*	ML*, CL	A-6*, A-4, A-7	0	0	90-100	90-100	80-100	70-95	30-45	8-17
	19-35	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
	35-60	Loam*, stratified sandy loam to loam to silt loam to silty clay loam	CL*, CL-ML	A-6*, A-4, A-7	0	0	80-100	80-100	80-100	60-95	20-45	5-20
1107A:												
Sawmill---------	0-29	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	95-100	85-100	30-50	15-30
	29-38	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	95-100	85-100	30-50	15-30
	38-60	Silty clay loam*, clay loam, loam	CL*	A-6*, A-4, A-7	0	0	100	100	85-100	70-95	25-50	8-25
1334A:												
Birds----------	0-9	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	85-100	25-35	5-15
	9-37	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	90-100	85-95	25-40	8-20
	37-60	Silt loam*, stratified sandy loam to loam to silt loam to clay loam to silty clay loam	CL*, CL-ML, SC	A-4*, A-6	0	0	100	100	65-95	35-85	25-35	5-12
1400A:												
Calco----------	0-37	Silty clay loam*, silty clay	CH*, CL	A-7-6*	0	0	100	100	95-100	85-100	40-60	15-30
	37-49	Silty clay loam*	CH*, CL	A-7-6*	0	0	100	100	95-100	85-100	40-60	15-30
	49-60	Loam*, silty clay loam, clay loam, stratified silt loam to loam	CL*	A-6*, A-7-6	0	0	100	100	90-100	80-100	30-45	10-20
1654A:												
Moline----------	0-14	Silty clay*, silty clay loam	CH*, CL	A-7-6*	0	0	100	100	97-100	91-100	46-76	23-45
	14-33	Clay*, silty clay	CH*	A-7-6*	0	0	100	100	94-100	83-96	57-77	33-49
	33-75	Clay*, silty clay	CH*, CL	A-7-6*	0	0	100	100	94-100	83-96	46-76	25-48
	75-98	Silt loam*, silty clay loam	CL*	A-6*, A-7-6	0	0	100	100	94-100	83-100	27-47	11-27

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
3074A:												
Radford---------	0-12	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	95-100	85-100	28-36	5-15
	12-33	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	95-100	85-100	28-36	5-15
	33-60	Silty clay loam*, silt loam, clay loam	CL*	A-6*, A-7	0	0	100	100	85-100	70-95	35-50	15-25
3076A:												
Otter----------	0-43	Silt loam*	CL*	A-6*, A-4, A-7	0	0	100	95-100	90-100	80-100	25-45	7-20
	43-50	Silt loam*, loam, silty clay loam	CL*	A-6*, A-7	0	0	100	95-100	90-100	80-100	30-45	10-20
	50-60	Silt loam*, sandy loam, silty clay loam	CL*, CL-ML, SC, SC-SM	A-6*, A-4, A-7	0	0	90-100	80-100	55-95	45-85	25-45	5-20
3082A:												
Millington------	0-19	Silt loam*	ML*, CL	A-6*, A-4, A-7	0	0	90-100	90-100	80-100	70-95	30-45	8-17
	19-35	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
	35-60	Loam*, stratified sandy loam to loam to silt loam to silty clay loam	CL*, CL-ML	A-6*, A-4, A-7	0	0	80-100	80-100	80-100	60-95	20-45	5-20
3083A:												
Wabash----------	0-15	Silty clay*	CH*	A-7-6*	0	0	100	100	95-100	95-100	50-75	30-50
	15-60	Silty clay*, clay	CH*	A-7-6*	0	0	100	100	95-100	95-100	52-78	30-55
3107A:												
Sawmill---------	0-26	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	95-100	85-100	30-50	15-30
	26-54	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	95-100	85-100	30-50	15-30
	54-60	Silty clay loam*, clay loam, loam	CL*	A-6*, A-4, A-7	0	0	100	100	85-100	70-95	25-50	8-25
3239A:												
Dorchester------	0-9	Silt loam*	CL*, CL-ML, ML	A-4*	0	0	95-100	95-100	80-100	70-95	25-35	5-10
	9-32	Silt loam*	CL*, CL-ML, ML	A-4*	0	0	95-100	95-100	80-100	70-95	25-35	5-10
	32-60	Silt loam*, silty clay loam, clay loam	CL*, ML	A-6*, A-7-6	0	0	100	100	95-100	90-95	35-45	10-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
3400A:												
Calco----------	0-34	Silty clay loam*, silty clay	CH*, CL	A-7-6*	0	0	100	100	95-100	85-100	40-60	15-30
	34-45	Silty clay loam*	CH*, CL	A-7-6*	0	0	100	100	95-100	85-100	40-60	15-30
	45-60	Stratified silt loam to loam*, silty clay loam, loam, clay loam	CL*	A-6*, A-7-6	0	0	100	100	90-100	80-100	30-45	10-20
3415A:												
Orion----------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	85-100	80-100	25-35	4-12
	7-22	Stratified very fine sand to silt loam*	CL-ML*, CL	A-4*	0	0	100	100	90-100	70-80	20-30	4-10
	22-60	Silt loam*, silty clay loam	CL*, CL-ML	A-6*, A-4	0	0	100	100	85-100	85-100	20-40	4-18
	60-80	Stratified sand to silt loam*	CL-ML*, CL	A-4*	0	0	80-100	80-100	80-100	80-100	20-30	4-10
3428A:												
Coffeen---------	0-17	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	90-100	85-100	25-40	5-20
	17-33	Silt loam*	CL*, CL-ML, ML	A-4*	0	0	100	100	90-100	80-95	20-35	3-10
	33-60	Stratified silt loam to sandy loam*	CL-ML*, CL, ML, SC, SM	A-2*, A-4	0	0	100	90-100	85-100	30-85	15-30	NP-10
3451A:												
Lawson----------	0-14	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	90-100	85-100	20-35	5-15
	14-33	Silt loam*, silty clay loam	CL*, CL-ML	A-4*	0	0	100	100	90-100	85-100	20-40	5-20
	33-80	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	90-100	60-100	30-40	10-20
3646L:												
Fluvaquents-----	0-9	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	85-100	25-35	5-15
	9-37	Silt loam*, silty clay loam	CL*, CL-ML	A-6*, A-4	0	0	100	100	90-100	85-95	25-40	5-20
	37-60	Stratified sandy loam to silt loam*	CL*, CL-ML, SC	A-4*, A-6	0	0	100	100	65-95	35-85	25-35	5-12

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
7076A:												
Otter----------	0-38	Silt loam*	CL*	A-6*, A-4, A-7-6	0	0	100	95-100	90-100	80-100	25-45	7-20
	38-50	Silt loam*, loam, silty clay loam	CL*	A-6*, A-7-6	0	0	100	95-100	90-100	80-100	30-45	10-20
	50-60	Silt loam*, sandy loam, silty clay loam	CL*, CL-ML, SC, SC-SM	A-6*, A-4, A-7-6	0	0	90-100	80-100	55-95	45-85	25-45	5-20
7083A:												
Wabash----------	0-15	Silty clay*	CH*	A-7-6*	0	0	100	100	95-100	95-100	50-75	30-50
	15-60	Silty clay*, clay	CH*	A-7-6*	0	0	100	100	95-100	95-100	52-78	30-55
7107A:												
Sawmill---------	0-10	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	95-100	85-100	30-50	15-30
	10-35	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	95-100	85-100	30-50	15-30
	35-60	Silty clay loam*, clay loam, silt loam	CL*	A-6*, A-4, A-7	0	0	100	90-100	85-100	70-95	20-50	8-30
7239A:												
Dorchester------	0-9	Silt loam*	CL*, CL-ML, ML	A-4*	0	0	95-100	95-100	80-100	70-95	25-35	5-10
	9-32	Silt loam*	CL*, CL-ML, ML	A-4*	0	0	95-100	95-100	80-100	70-95	25-35	5-10
	32-60	Silt loam*, silty clay loam, clay loam	CL*, ML	A-6*, A-7-6	0	0	100	100	95-100	90-95	35-45	10-20
7304A:												
Landes----------	0-19	Fine sandy loam*	SC-SM*, SC, SM	A-4*, A-2-4	0	0	100	85-100	85-95	30-60	5-25	NP-10
	19-32	Fine sandy loam*, loam, very fine sandy loam, loamy fine sand	SC-SM*, SC, SM, CL-ML	A-2-4*, A-4	0	0	100	85-100	70-95	15-60	0-25	NP-10
	32-60	Sand*, fine sandy loam, stratified sand to silt loam, loamy fine sand	SC-SM*, SC, SM, SP-SM	A-2-4*, A-4	0	0	100	85-100	60-85	5-50	0-30	NP-10

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
7415A:												
Orion----------	0-21	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	25-35	4-12
	21-27	Stratified very fine sand to silt loam*	CL-ML*, CL	A-4*	0	0	100	100	90-100	85-100	20-30	4-10
	27-45	Silt loam*, silty clay loam	CL*, CL-ML	A-6*, A-4	0	0	100	100	85-100	85-100	20-40	4-18
	45-60	Stratified sand to silt loam*	CL-ML*, CL	A-4*, A-2-4	0	0	80-100	80-100	80-100	30-85	20-30	4-10
7428A:												
Coffeen---------	0-20	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	85-100	25-40	5-20
	20-32	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-95	20-35	3-10
	32-60	Stratified sandy loam to silt loam*	CL-ML*, CL, ML, SC	A-4*, A-2-4	0	0	100	90-100	85-100	30-85	16-31	2-10
7451A:												
Lawson----------	0-14	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	90-100	85-100	20-40	5-20
	14-33	Silt loam*, silty clay loam	CL*, CL-ML	A-4*	0	0	100	100	90-100	85-100	20-30	5-10
	33-80	Silt loam*, silty clay loam	CL*	A-6*, A-7-6	0	0	100	100	90-100	60-100	20-45	10-25
7654A:												
Moline----------	0-14	Silty clay*, silty clay loam	CH*, CL	A-7-6*	0	0	100	100	97-100	91-100	46-76	23-45
	14-33	Clay*, silty clay	CH*	A-7-6*	0	0	100	100	94-100	83-96	57-77	33-49
	33-75	Clay*, silty clay	CH*, CL	A-7-6*	0	0	100	100	94-100	83-96	46-76	25-48
	75-98	Silt loam*, silty clay loam	CL*	A-6*, A-7-6	0	0	100	100	94-100	83-100	27-47	11-27
8107+:												
Sawmill---------	0-8	Silt loam*	CL*	A-6*	0	0	100	100	80-100	75-95	25-40	10-20
	8-14	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	95-100	85-100	30-50	15-30
	14-46	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	95-100	85-100	30-50	15-30
	46-60	Silty clay loam*, clay loam, loam	CL*	A-6*, A-4, A-7	0	0	100	100	85-100	70-95	25-50	8-25

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
8302A:												
Ambraw----------	0-9	Loam*	CL*	A-6*, A-7-6	0	0	100	100	85-95	55-80	30-45	10-20
	9-32	Clay loam*, clay, loam	CL*, CH	A-7-6*, A-6	0	0	100	100	80-90	60-80	35-55	15-30
	32-38	Clay loam*, sandy clay loam	CL*, SC	A-6*, A-7-6	0	0	100	90-100	85-95	40-80	30-50	10-25
	38-60	Stratified clay loam to sandy loam*	CL*, ML, SC, SM	A-4*, A-6	0	0	100	90-100	80-90	40-80	20-40	NP-17
8400A:												
Calco----------	0-34	Silty clay loam*, silty clay	CH*, CL	A-7-6*	0	0	100	100	95-100	85-100	40-60	15-30
	34-45	Silty clay loam*	CH*, CL	A-7-6*	0	0	100	100	95-100	85-100	40-60	15-30
	45-60	Stratified silt loam to loam*, silty clay loam, loam, clay loam	CL*	A-6*, A-7-6	0	0	100	100	90-100	80-100	30-45	10-20
8404A:												
Titus----------	0-13	Silty clay loam*	CH*, CL	A-7*	0	0	100	100	95-100	90-100	40-55	20-30
	13-68	Silty clay loam*, silty clay	CH*, CL	A-7*	0	0	100	100	95-100	90-100	40-55	20-30
	68-80	Silty clay loam*, silt loam, loam	CL*	A-6*	0	0	100	90-100	70-90	55-85	20-40	10-25

Table 19.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
8D2:											
Hickory----------	0-6	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.32	.32	5	6	48
	6-51	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	51-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
8D3:											
Hickory----------	0-5	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	.24	.24	4	6	48
	5-30	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	30-40	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	40-60	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	.28	.32			
8F:											
Hickory----------	0-12	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.32	.32	5	6	48
	12-53	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	53-58	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
	58-63	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	.28	.32			
8F3:											
Hickory----------	0-6	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	.24	.24	4	6	48
	6-42	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	42-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
19C3:											
Sylvan----------	0-7	27-32	1.25-1.45	0.6-2	0.20-0.22	3.0-5.9	.43	.43	5	7	38
	7-37	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	37-60	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
19D:											
Sylvan----------	0-5	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	6	48
	5-10	15-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
	10-35	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	35-60	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
19D3:											
Sylvan----------	0-9	27-32	1.25-1.45	0.6-2	0.20-0.22	3.0-5.9	.43	.43	4	7	38
	9-28	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	28-60	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
19F:											
Sylvan----------	0-5	18-24	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	6	48
	5-10	15-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
	10-27	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	27-80	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
19F3:											
Sylvan----------	0-6	27-32	1.25-1.45	0.6-2	0.20-0.22	3.0-5.9	.43	.43	4	7	38
	6-30	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	30-60	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
45A:											
Denny----------	0-9	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	.37	.37	5	6	48
	9-22	15-22	1.25-1.45	0.2-0.6	0.18-0.20	0.0-2.9	.43	.43			
	22-45	35-45	1.20-1.40	0.06-0.2	0.11-0.22	6.0-8.9	.37	.37			
	45-60	25-35	1.40-1.60	0.2-0.6	0.20-0.22	3.0-5.9	.43	.43			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
51A:											
Muscatune----------	0-16	24-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	.28	.28	5	6	48
	16-22	25-35	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	.37	.37			
	22-46	27-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	46-60	15-30	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	.49	.49			
61A:											
Atterberry----------	0-9	15-27	1.25-1.45	0.6-2	0.19-0.26	0.0-2.9	.37	.37	5	6	48
	9-17	15-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	.43	.43			
	17-48	25-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	.37	.37			
	48-60	15-27	1.30-1.50	0.6-2	0.17-0.22	0.0-2.9	.49	.49			
68A:											
Sable----------	0-17	27-35	1.15-1.35	0.6-2	0.21-0.23	3.0-5.9	.24	.24	5	7	38
	17-23	27-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	.24	.24			
	23-60	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
86B:											
Osco----------	0-14	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	.28	.28	5	6	48
	14-55	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	55-60	20-30	1.35-1.40	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
86C2:											
Osco----------	0-9	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	.37	.37	5	6	48
	9-34	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	34-60	20-30	1.35-1.40	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
87A:											
Dickinson----------	0-8	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	.15	.15	4	3	86
	8-20	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	.15	.15			
	20-31	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	.24	.24			
	31-36	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	.15	.15			
	36-60	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	.05	.05			
87C2:											
Dickinson----------	0-11	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	.17	.17	4	3	86
	11-29	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	.24	.24			
	29-35	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	.17	.17			
	35-60	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	.15	.15			
88A:											
Sparta----------	0-17	0-10	1.20-1.40	2-6	0.09-0.12	0.0-2.9	.02	.02	5	2	134
	17-31	1-8	1.40-1.60	6-20	0.05-0.11	0.0-2.9	.10	.10			
	31-72	3-16	1.50-1.70	6-20	0.06-0.08	0.0-2.9	.17	.17			
172A:											
Hoopeston----------	0-14	8-18	1.35-1.70	2-6	0.12-0.15	0.0-2.9	.15	.15	4	3	86
	14-38	10-18	1.45-1.70	2-6	0.12-0.17	0.0-2.9	.24	.24			
	38-60	2-12	1.50-1.70	6-20	0.05-0.10	0.0-2.9	.05	.05			
212B:											
Thebes----------	0-9	15-25	1.30-1.35	0.6-2	0.20-0.22	0.0-2.9	.43	.43	5	5	48
	9-31	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	31-40	15-30	1.30-1.35	2-6	0.11-0.17	0.0-2.9	.32	.32			
	40-80	3-10	1.30-1.35	6-20	0.05-0.10	0.0-2.9	.17	.17			
250D:											
Velma----------	0-16	20-27	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	.20	.24	5	6	48
	16-54	25-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	54-80	18-30	1.50-1.70	0.6-2	0.06-0.09	0.0-2.9	.28	.32			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
261A:											
Niota----------	0-9	20-27	1.20-1.35	0.2-0.6	0.22-0.24	0.0-2.9	.37	.37	3	6	48
	9-16	18-25	1.30-1.55	0.2-0.6	0.18-0.22	0.0-2.9	.43	.43			
	16-27	38-60	1.40-1.60	.001-0.06	0.09-0.13	6.0-8.9	.32	.32			
	27-36	25-40	1.40-1.60	0.2-0.6	0.17-0.22	3.0-5.9	.37	.37			
	36-49	12-25	1.50-1.70	0.2-2	0.08-0.20	3.0-5.9	.32	.32			
	49-60	5-20	1.50-1.70	2-6	0.11-0.22	0.0-2.9	.28	.28			
274B:											
Seaton----------	0-9	10-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	5	56
	9-60	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	.43	.43			
	60-80	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
274B2:											
Seaton----------	0-9	10-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	5	56
	9-53	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	.43	.43			
	53-60	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
274C2:											
Seaton----------	0-7	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	5	56
	7-47	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	.43	.43			
	47-60	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
274D2:											
Seaton----------	0-8	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	.37	.37	5	5	56
	8-52	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	.37	.37			
	52-60	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
275A:											
Joy----------	0-15	15-25	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	.28	.28	5	6	48
	15-51	18-27	1.15-1.25	0.6-2	0.20-0.22	0.0-2.9	.43	.43			
	51-60	12-23	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
278A:											
Stronghurst---------	0-8	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	6	48
	8-47	22-35	1.30-1.55	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	47-60	20-27	1.35-1.60	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
279A:											
Rozetta----------	0-4	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	6	48
	4-11	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.49	.49			
	11-50	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	.37	.37			
	50-60	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
279B:											
Rozetta----------	0-7	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	6	48
	7-11	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.49	.49			
	11-55	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	.37	.37			
	55-60	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
280B:											
Fayette----------	0-9	15-27	1.30-1.35	0.6-2	0.20-0.22	0.0-2.9	.43	.43	5	6	48
	9-39	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	39-60	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
280B2:											
Fayette----------	0-8	25-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	.43	.43	5	6	48
	8-56	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	56-80	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
280C2:											
Fayette----------	0-8	25-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	.43	.43	5	6	48
	8-64	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	64-80	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	.49	.49			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
280C3:											
Fayette----------	0-8	27-32	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	.43	.43	4	7	38
	8-48	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	48-60	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
317A:											
Millsdale----------	0-8	27-38	1.30-1.50	0.6-2	0.17-0.22	3.0-5.9	.20	.20	4	7	38
	8-27	35-55	1.40-1.65	0.2-0.6	0.12-0.16	6.0-8.9	.32	.32			
	27-60	---	---	0.06-0.6	---	---	---	---			
430A:											
Raddle----------	0-21	18-24	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	6	48
	21-80	18-24	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
430B:											
Raddle----------	0-13	18-24	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	6	48
	13-60	18-24	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
525A:											
Joslin----------	0-20	8-16	1.20-1.40	0.6-2	0.13-0.18	0.0-2.9	.24	.24	4	3	86
	20-34	15-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	.32	.32			
	34-51	27-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	.32	.32			
	51-58	27-50	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	.32	.32			
	58-80	---	---	0.01-0.2	---	---	---	---			
567C2:											
Elkhart----------	0-8	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.28	.28	5	6	48
	8-25	25-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	25-60	10-27	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
567D2:											
Elkhart----------	0-10	20-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	.28	.28	5	6	48
	10-30	25-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	30-60	10-27	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
570B:											
Martinsville--------	0-9	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	.32	.32	5	5	56
	9-18	25-39	1.40-1.60	0.6-2	0.15-0.21	3.0-5.9	.32	.32			
	18-33	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	.32	.32			
	33-42	10-30	1.40-1.65	0.6-2	0.10-0.19	0.0-2.9	.24	.24			
	42-72	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	.24	.24			
570C3:											
Martinsville--------	0-9	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	.24	.24	5	5	56
	9-30	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.32	.32			
	30-60	10-30	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	.24	.24			
570D3:											
Martinsville--------	0-9	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	.24	.24	5	5	56
	9-30	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.32	.32			
	30-60	10-30	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	.24	.24			
647A:											
Lawler----------	0-10	18-27	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	.24	.24	4	6	48
	10-31	20-28	1.45-1.60	0.6-2	0.16-0.18	0.0-2.9	.32	.32			
	31-60	2-8	1.60-1.75	20-100	0.02-0.04	0.0-2.9	.02	.05			
671A:											
Biggsville----------	0-13	18-27	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	.28	.28	5	6	48
	13-53	18-25	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	.43	.43			
	53-80	15-27	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	.49	.49			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
671B:											
Biggsville----------	0-13	18-27	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	.28	.28	5	6	48
	13-53	18-25	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	.43	.43			
	53-80	15-27	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
675A:											
Greenbush----------	0-9	15-25	1.25-1.30	2-6	0.21-0.23	0.0-2.9	.37	.37	5	6	48
	9-16	15-27	1.30-1.35	0.6-2	0.18-0.20	0.0-2.9	.43	.43			
	16-46	26-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	46-60	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
675B:											
Greenbush----------	0-14	18-25	1.25-1.30	0.6-2	0.21-0.23	0.0-2.9	.37	.37	5	6	48
	14-60	26-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	60-80	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
689B:											
Coloma----------	0-10	0-10	1.35-1.65	6-20	0.05-0.09	0.0-2.9	.02	.02	5	1	250
	10-27	0-10	1.35-1.65	6-20	0.05-0.12	0.0-2.9	.15	.15			
	27-60	2-12	1.50-1.65	2-20	0.03-0.08	0.0-2.9	.15	.15			
689D:											
Coloma----------	0-12	0-10	1.35-1.65	6-20	0.05-0.09	0.0-2.9	.02	.02	5	1	250
	12-25	0-10	1.35-1.65	6-20	0.05-0.12	0.0-2.9	.15	.15			
	25-60	2-12	1.50-1.65	2-20	0.03-0.08	0.0-2.9	.15	.15			
705A:											
Buckhart----------	0-20	20-30	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	.28	.28	5	6	48
	20-58	25-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	58-60	18-27	1.35-1.45	0.6-2	0.20-0.22	3.0-5.9	.49	.49			
727A:											
Waukee----------	0-14	10-24	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	.24	.24	4	6	48
	14-34	18-27	1.40-1.50	0.6-2	0.15-0.19	0.0-2.9	.32	.32			
	34-60	2-8	1.50-1.75	6-20	0.02-0.06	0.0-2.9	.02	.05			
741F:											
Oakville----------	0-3	0-10	1.30-1.55	6-20	0.07-0.09	0.0-2.9	.02	.02	5	2	134
	3-24	0-10	1.30-1.65	6-20	0.06-0.10	0.0-2.9	.15	.15			
	24-60	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	.15	.15			
763A:											
Joslin----------	0-15	12-22	1.10-1.30	0.6-2	0.20-0.24	0.0-2.9	.24	.24	5	5	48
	15-40	18-27	1.15-1.35	0.6-2	0.17-0.22	0.0-2.9	.32	.32			
	40-60	35-50	1.40-1.65	0.2-0.6	0.08-0.19	3.0-5.9	.32	.32			
	60-85	18-35	1.45-1.65	0.2-0.6	0.17-0.22	0.0-2.9	.32	.32			
763B:											
Joslin----------	0-14	12-22	1.10-1.30	0.6-2	0.20-0.24	0.0-2.9	.24	.24	5	6	56
	14-48	18-27	1.15-1.35	0.6-2	0.17-0.22	0.0-2.9	.32	.32			
	48-60	35-50	1.40-1.65	0.2-0.6	0.08-0.19	3.0-5.9	.32	.32			
	60-85	18-35	1.45-1.65	0.2-0.6	0.17-0.22	0.0-2.9	.32	.32			
764A:											
Coyne----------	0-23	5-18	1.45-1.60	2-6	0.16-0.17	0.0-2.9	.15	.15	4	3	86
	23-42	5-18	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	.24	.24			
	42-60	18-35	1.35-1.55	0.2-0.6	0.15-0.20	3.0-5.9	.37	.37			
764C:											
Coyne----------	0-23	5-18	1.45-1.60	2-6	0.16-0.17	0.0-2.9	.15	.15	5	3	86
	23-42	5-18	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	.24	.24			
	42-55	18-35	1.35-1.55	0.2-0.6	0.15-0.20	3.0-5.9	.37	.37			
	55-60	2-10	1.70-1.90	6-20	0.02-0.04	0.0-2.9	.02	.05			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
774A:											
Saude----------	0-14	18-24	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	.32	.32	4	6	48
	14-29	12-18	1.40-1.50	0.6-6	0.15-0.19	0.0-2.9	.32	.32			
	29-60	2-8	1.50-1.75	20-100	0.02-0.06	0.0-2.9	.02	.05			
800C:											
Psamments----------	0-60	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	.02	.02	5	1	310
	60-80	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	.02	.02			
802B:											
Orthents----------	0-6	22-30	1.70-1.75	0.2-0.6	0.18-0.22	3.0-5.9	.43	.43	5	6	48
	6-60	22-30	1.70-1.80	0.2-0.6	0.16-0.20	3.0-5.9	.43	.43			
864.											
Pits, quarries											
865.											
Pits, gravel											
898F3:											
Hickory----------	0-12	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	.24	.24	4	6	48
	12-48	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	48-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
Sylvan----------	0-6	27-32	1.25-1.45	0.6-2	0.20-0.22	3.0-5.9	.43	.43	4	7	38
	6-30	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	30-60	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
898G:											
Hickory----------	0-10	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.32	.32	5	6	48
	10-35	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	35-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
Sylvan----------	0-3	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	6	48
	3-7	15-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
	7-33	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	33-60	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
913D2:											
Marseilles----------	0-4	20-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	.32	.32	4	6	48
	4-38	27-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-6.0	.37	.37			
	38-60	---	---	0.01-0.2	---	---	---	---			
Hickory----------	0-6	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.32	.32	5	6	48
	6-51	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	51-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
913F:											
Marseilles----------	0-12	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.32	.32	3	6	48
	12-18	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.43	.43			
	18-34	25-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-5.9	.37	.37			
	34-60	---	---	0.01-0.2	---	---	---	---			
Hickory----------	0-8	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.32	.32	5	6	48
	8-57	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	57-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
913G:											
Marseilles----------	0-9	20-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	.37	.37	4	6	48
	9-36	25-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-5.9	.37	.37			
	36-60	---	---	0.01-0.2	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
913G:											
Hickory----------	0-12	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.32	.32	5	6	48
	12-53	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	53-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
917C2:											
Oakville----------	0-7	0-10	1.30-1.55	6-20	0.07-0.09	0.0-2.9	.02	.02	5	2	134
	7-51	0-10	1.30-1.65	6-20	0.06-0.10	0.0-2.9	.15	.15			
	51-60	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	.15	.15			
Tell----------	0-7	14-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	.43	.43	4	5	56
	7-23	14-28	1.50-1.60	0.6-2	0.18-0.22	3.0-5.9	.37	.37			
	23-27	10-25	1.50-1.60	0.6-2	0.11-0.19	0.0-2.9	.37	.37			
	27-60	2-12	1.55-1.70	6-20	0.04-0.07	0.0-2.9	.15	.15			
917D2:											
Oakville----------	0-9	0-10	1.30-1.55	6-20	0.07-0.09	0.0-2.9	.02	.02	5	2	134
	9-36	0-10	1.30-1.65	6-20	0.06-0.10	0.0-2.9	.15	.15			
	36-60	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	.15	.15			
Tell----------	0-8	14-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	.43	.43	4	5	56
	8-28	14-28	1.50-1.60	0.6-2	0.18-0.22	3.0-5.9	.37	.37			
	28-32	10-25	1.50-1.60	0.6-2	0.11-0.19	0.0-2.9	.37	.37			
	32-60	2-12	1.55-1.70	6-20	0.04-0.07	0.0-2.9	.15	.15			
943D2:											
Seaton----------	0-4	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	5	56
	4-39	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	.43	.43			
	39-60	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
Timula----------	0-5	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	.43	.43	5	5	56
	5-23	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	.43	.43			
	23-60	10-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	.55	.55			
943F2:											
Seaton----------	0-6	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	5	56
	6-49	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	.43	.43			
	49-60	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
Timula----------	0-6	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	.43	.43	5	5	56
	6-28	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	.43	.43			
	28-60	10-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	.55	.55			
944D2:											
Velma----------	0-17	20-27	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	.24	.24	5	6	48
	17-56	25-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.32	.32			
	56-60	15-30	1.50-1.70	0.6-2	0.06-0.09	0.0-2.9	.32	.32			
Coatsburg----------	0-12	20-27	1.20-1.40	0.2-0.6	0.22-0.26	3.0-5.9	.24	.24	3	6	48
	12-54	35-45	1.50-1.70	.001-0.06	0.09-0.13	6.0-8.9	.32	.32			
	54-72	20-35	1.55-1.75	0.06-0.2	0.15-0.19	3.0-5.9	.37	.37			
946D3:											
Hickory----------	0-7	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	.24	.24	4	6	48
	7-42	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	42-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
Atlas----------	0-6	30-40	1.35-1.55	0.06-0.2	0.14-0.19	6.0-8.9	.28	.28	2	7	38
	6-12	38-45	1.35-1.55	.001-0.06	0.07-0.19	6.0-8.9	.37	.37			
	12-55	38-45	1.35-1.55	.001-0.06	0.07-0.19	6.0-8.9	.32	.32			
	55-60	25-45	1.35-1.60	0.06-0.2	0.07-0.18	3.0-5.9	.37	.37			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
946F3:											
Hickory----------	0-6	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	.24	.24	4	4	86
	6-42	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	42-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
Atlas----------	0-6	30-40	1.35-1.55	0.06-0.2	0.14-0.19	6.0-8.9	.28	.28	2	4	86
	6-12	38-45	1.35-1.55	.001-0.06	0.07-0.19	6.0-8.9	.37	.37			
	12-55	38-45	1.35-1.55	.001-0.06	0.07-0.19	6.0-8.9	.32	.32			
	55-60	25-45	1.35-1.60	0.06-0.2	0.07-0.18	3.0-5.9	.37	.37			
959G:											
Strawn----------	0-12	18-27	1.15-1.45	0.6-2	0.20-0.24	0.0-2.9	.32	.32	5	6	48
	12-23	25-35	1.35-1.55	0.6-2	0.15-0.20	3.0-5.9	.32	.32			
	23-60	22-30	1.50-1.70	0.6-2	0.08-0.12	0.0-2.9	.32	.32			
Chute----------	0-3	2-8	1.45-1.65	6-20	0.09-0.11	0.0-2.9	.02	.02	5	1	250
	3-13	2-8	1.60-1.75	6-20	0.06-0.09	0.0-2.9	.02	.02			
	13-60	1-8	1.60-1.75	6-20	0.06-0.09	0.0-2.9	.02	.02			
960D2:											
Hickory----------	0-6	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.32	.32	5	6	48
	6-51	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	51-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
Sylvan----------	0-4	20-27	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	.43	.43	5	6	48
	4-32	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	32-60	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
Fayette----------	0-6	25-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	.43	.43	5	6	48
	6-48	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	48-60	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
960D3:											
Hickory----------	0-5	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	.24	.24	4	4	86
	5-30	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	30-40	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	40-60	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	.28	.32			
Sylvan----------	0-9	27-32	1.25-1.45	0.6-2	0.20-0.22	3.0-5.9	.43	.43	4	7	38
	9-28	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	28-60	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
Fayette----------	0-8	27-32	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	.43	.43	4	7	38
	8-36	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	36-60	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
960F:											
Hickory----------	0-12	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.32	.32	5	6	48
	12-48	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	.28	.32			
	48-60	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	.28	.32			
Sylvan----------	0-6	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	6	48
	6-30	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	30-60	18-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
Fayette----------	0-10	15-27	1.30-1.35	0.6-2	0.20-0.22	0.0-2.9	.43	.43	5	6	48
	10-60	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	60-70	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
961A:											
Burkhardt----------	0-13	5-13	1.35-1.55	2-6	0.11-0.15	0.0-2.9	.20	.20	3	3	86
	13-24	8-18	1.55-1.65	2-6	0.10-0.19	0.0-2.9	.24	.24			
	24-60	1-6	1.50-1.80	6-20	0.02-0.04	0.0-2.9	.02	.05			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
961A:											
Saude----------	0-14	18-24	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	.32	.32	4	6	48
	14-29	12-18	1.40-1.50	0.6-6	0.15-0.19	0.0-2.9	.32	.32			
	29-60	2-8	1.50-1.75	20-100	0.02-0.06	0.0-2.9	.02	.05			
962F:											
Sylvan----------	0-6	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	6	48
	6-30	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	.37	.37			
	30-60	18-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
Bold----------	0-3	12-18	1.40-1.60	0.6-2	0.21-0.24	0.0-2.9	.43	.43	5	4L	86
	3-60	12-18	1.10-1.30	0.6-2	0.20-0.24	0.0-2.9	.55	.55			
1076A:											
Otter----------	0-31	18-27	1.10-1.25	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	6	48
	31-40	18-27	1.20-1.45	0.6-2	0.17-0.22	3.0-5.9	.49	.49			
	40-64	15-28	1.30-1.55	0.6-2	0.15-0.20	0.0-2.9	.49	.49			
1082A:											
Millington----------	0-19	20-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	.32	.32	5	4L	86
	19-35	18-35	1.40-1.60	0.6-2	0.17-0.20	3.0-5.9	.32	.32			
	35-60	15-35	1.50-1.70	0.6-2	0.14-0.20	3.0-5.9	.32	.32			
1107A:											
Sawmill----------	0-29	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	.28	.28	5	7	38
	29-38	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	.32	.32			
	38-60	25-35	1.30-1.45	0.6-2	0.17-0.20	3.0-5.9	.32	.32			
1334A:											
Birds----------	0-9	15-27	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	.37	.37	5	6	48
	9-37	18-30	1.35-1.45	0.6-2	0.20-0.24	3.0-5.9	.43	.43			
	37-60	15-27	1.35-1.45	0.6-2	0.12-0.20	0.0-2.9	.49	.49			
1400A:											
Calco----------	0-37	28-42	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	.28	.28	5	4L	86
	37-49	30-35	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	.32	.32			
	49-60	18-27	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.32	.32			
1654A:											
Moline----------	0-14	35-55	1.35-1.55	0.2-0.6	0.11-0.14	9.0-25.0	.24	.24	5	4	86
	14-33	45-60	1.45-1.65	0.06-0.2	0.09-0.11	9.0-25.0	.28	.28			
	33-75	35-60	1.40-1.65	0.06-0.2	0.09-0.11	9.0-25.0	.28	.28			
	75-98	18-35	1.50-1.60	0.06-0.2	0.18-0.22	0.0-5.9	.49	.49			
3074A:											
Radford----------	0-12	18-27	1.40-1.60	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	6	48
	12-33	18-27	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
	33-60	24-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	.32	.32			
3076A:											
Otter----------	0-43	18-27	1.10-1.25	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	6	48
	43-50	18-27	1.20-1.45	0.6-2	0.17-0.22	3.0-5.9	.49	.49			
	50-60	15-28	1.30-1.55	0.6-2	0.15-0.20	0.0-2.9	.49	.49			
3082A:											
Millington----------	0-19	20-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	.32	.32	5	4L	86
	19-35	18-35	1.40-1.60	0.6-2	0.17-0.20	3.0-5.9	.32	.32			
	35-60	15-35	1.50-1.70	0.6-2	0.14-0.20	3.0-5.9	.32	.32			
3083A:											
Wabash----------	0-15	40-46	1.25-1.45	.001-0.06	0.12-0.14	9.0-25.0	.24	.24	5	4	86
	15-60	40-60	1.20-1.45	.001-0.06	0.08-0.12	9.0-25.0	.28	.28			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
3107A:											
Sawmill----------	0-26	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	.28	.28	5	7	38
	26-54	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	.32	.32			
	54-60	25-35	1.30-1.45	0.6-2	0.17-0.20	3.0-5.9	.32	.32			
3239A:											
Dorchester----------	0-9	11-30	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	.37	.37	5	4L	86
	9-32	18-24	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
	32-60	18-30	1.25-1.40	0.6-2	0.22-0.24	3.0-5.9	.49	.49			
3400A:											
Calco----------	0-34	28-42	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	.28	.28	5	4L	86
	34-45	30-35	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	.32	.32			
	45-60	18-27	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.32	.32			
3415A:											
Orion----------	0-7	10-18	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	5	56
	7-22	10-18	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	.28	.28			
	22-60	10-30	1.25-1.45	0.6-2	0.18-0.22	0.0-2.9	.32	.32			
	60-80	10-18	1.20-1.40	0.6-2	0.18-0.22	0.0-2.9	.28	.28			
3428A:											
Coffeen----------	0-17	15-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	.32	.32	5	6	48
	17-33	10-18	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
	33-60	5-15	1.50-1.70	0.6-6	0.11-0.19	0.0-2.9	.32	.32			
3451A:											
Lawson----------	0-14	10-27	1.20-1.55	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	5	56
	14-33	10-30	1.20-1.55	0.6-2	0.18-0.22	0.0-2.9	.32	.32			
	33-80	18-30	1.55-1.65	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
3646L:											
Fluvaquents---------	0-9	15-27	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	6	48
	9-37	18-30	1.35-1.45	0.6-2	0.20-0.24	3.0-5.9	.49	.49			
	37-60	15-27	1.35-1.45	0.6-2	0.12-0.20	0.0-2.9	.49	.49			
7076A:											
Otter----------	0-38	18-27	1.10-1.25	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	6	48
	38-50	18-27	1.20-1.45	0.6-2	0.17-0.22	3.0-5.9	.49	.49			
	50-60	15-28	1.30-1.55	0.6-2	0.15-0.20	0.0-2.9	.49	.49			
7083A:											
Wabash----------	0-15	40-46	1.25-1.45	.001-0.06	0.12-0.14	9.0-25.0	.24	.24	5	4	86
	15-60	40-60	1.20-1.45	.001-0.06	0.08-0.12	9.0-25.0	.28	.28			
7107A:											
Sawmill----------	0-10	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	.28	.28	5	7	38
	10-35	27-35	1.20-1.40	0.6-2	0.17-0.20	3.0-5.9	.32	.32			
	35-60	20-35	1.35-1.50	0.6-2	0.15-0.19	3.0-5.9	.32	.32			
7239A:											
Dorchester----------	0-9	11-30	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	.37	.37	5	4L	86
	9-32	18-24	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
	32-60	18-30	1.25-1.40	0.6-2	0.22-0.24	3.0-5.9	.49	.49			
7304A:											
Landes----------	0-19	7-20	1.40-1.60	2-6	0.13-0.20	0.0-2.9	.20	.20	4	3	86
	19-32	5-18	1.60-1.70	2-6	0.10-0.15	0.0-2.9	.24	.24			
	32-60	5-18	1.60-1.80	6-20	0.05-0.15	0.0-2.9	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct					
7415A:											
Orion----------	0-21	10-18	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	.43	.43	5	5	56
	21-27	4-18	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	.28	.28			
	27-45	10-30	1.25-1.45	0.6-2	0.18-0.22	0.0-2.9	.32	.32			
	45-60	4-18	1.20-1.40	0.6-2	0.18-0.22	0.0-2.9	.28	.28			
7428A:											
Coffeen----------	0-20	15-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	.32	.32	5	6	48
	20-32	10-18	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	.49	.49			
	32-60	5-15	1.50-1.70	0.6-6	0.11-0.19	0.0-2.9	.32	.32			
7451A:											
Lawson----------	0-14	10-27	1.20-1.55	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	5	56
	14-33	10-30	1.20-1.55	0.6-2	0.18-0.22	0.0-2.9	.49	.49			
	33-80	18-30	1.55-1.65	0.6-2	0.18-0.20	3.0-5.9	.49	.49			
7654A:											
Moline----------	0-14	35-55	1.35-1.55	0.2-0.6	0.11-0.14	9.0-25.0	.28	.28	5	4	86
	14-33	45-60	1.45-1.65	0.06-0.2	0.09-0.11	9.0-25.0	.37	.37			
	33-75	35-60	1.40-1.65	0.06-0.2	0.09-0.11	9.0-25.0	.37	.37			
	75-98	18-35	1.50-1.60	0.06-0.2	0.18-0.22	0.0-5.9	.37	.37			
8107+:											
Sawmill----------	0-8	18-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	.32	.32	5	6	48
	8-14	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	.28	.28			
	14-46	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	.32	.32			
	46-60	25-35	1.30-1.45	0.6-2	0.17-0.20	3.0-5.9	.32	.32			
8302A:											
Ambraw----------	0-9	18-27	1.30-1.55	0.6-2	0.15-0.22	3.0-5.9	.32	.32	5	6	48
	9-32	25-42	1.30-1.55	0.2-0.6	0.08-0.19	3.0-5.9	.28	.28			
	32-38	24-35	1.40-1.65	0.2-2	0.10-0.15	3.0-5.9	.28	.28			
	38-60	18-30	1.35-1.65	0.2-2	0.11-0.22	0.0-2.9	.28	.28			
8400A:											
Calco----------	0-34	28-42	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	.28	.28	5	4L	86
	34-45	30-35	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	.32	.32			
	45-60	18-27	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	.32	.32			
8404A:											
Titus----------	0-13	35-40	1.30-1.50	0.06-0.2	0.18-0.22	6.0-8.9	.28	.28	5	4	86
	13-68	35-45	1.30-1.60	0.06-0.2	0.11-0.22	6.0-8.9	.32	.32			
	68-80	20-30	1.45-1.75	0.2-0.6	0.10-0.20	3.0-5.9	.32	.32			

Table 20.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
8D2:					
Hickory---------	0-6	4.5-7.3	1.0-2.0	14-19	0
	6-51	4.5-7.3	0.0-0.5	16-22	0
	51-60	5.1-8.4	0.0-0.2	9-19	0-25
8D3:					
Hickory---------	0-5	4.5-7.3	0.5-1.0	17-23	0
	5-30	4.5-7.3	0.0-0.5	16-22	0
	30-40	4.5-7.8	0.0-0.5	16-22	0
	40-60	5.6-8.4	0.0-0.5	5-15	0-25
8F:					
Hickory---------	0-12	4.5-7.3	1.0-3.0	14-19	0
	12-53	4.5-7.3	0.0-0.5	16-22	0
	53-58	5.1-7.8	0.0-0.5	9-19	0-15
	58-63	5.6-8.4	0.0-0.5	5-15	0-25
8F3:					
Hickory---------	0-6	4.5-7.3	0.5-1.0	17-23	0
	6-42	4.5-7.3	0.0-0.5	16-22	0
	42-60	5.1-7.8	0.0-0.2	9-19	0-15
19C3:					
Sylvan----------	0-7	5.6-7.3	0.5-1.0	17-21	0
	7-37	5.6-7.3	0.0-0.5	15-22	0
	37-60	6.6-8.4	0.0-0.5	6-18	0-35
19D:					
Sylvan----------	0-5	5.6-7.3	1.0-3.0	13-20	0
	5-10	5.6-7.3	0.2-1.0	9-17	0
	10-35	5.6-7.3	0.0-0.5	15-22	0
	35-60	6.6-8.4	0.0-0.5	11-17	0-35
19D3:					
Sylvan----------	0-9	5.6-7.3	0.5-1.0	17-21	0
	9-28	5.6-7.3	0.0-0.5	15-22	0
	28-60	6.6-8.4	0.0-0.5	6-18	0-35
19F:					
Sylvan----------	0-5	5.6-7.3	1.0-3.0	13-20	0
	5-10	5.6-7.3	0.2-1.0	9-17	0
	10-27	5.6-7.3	0.2-0.5	15-22	0
	27-80	6.6-8.4	0.2-0.5	11-17	0-35
19F3:					
Sylvan----------	0-6	5.6-7.3	0.5-1.0	17-21	0
	6-30	5.6-7.3	0.0-0.5	15-22	0
	30-60	6.6-8.4	0.0-0.5	6-18	0-35
45A:					
Denny----------	0-9	5.6-7.3	3.0-4.0	18-24	0
	9-22	5.6-6.5	0.0-0.5	9-15	0
	22-45	5.6-6.5	0.0-1.0	21-29	0
	45-60	5.6-7.8	0.0-0.2	15-21	0
51A:					
Muscatune-------	0-16	6.1-7.3	3.5-5.0	16-32	0
	16-22	5.6-7.3	0.5-1.5	16-27	0
	22-46	5.6-7.3	0.5-1.5	17-31	0
	46-60	6.6-7.8	0.0-0.2	9-22	0-15

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
61A:					
Atterberry------	0-9	6.1-7.3	1.5-3.5	11-28	0
	9-17	5.6-6.5	0.1-1.0	9-24	0
	17-48	5.1-6.0	0.1-0.5	16-29	0
	48-60	5.6-7.3	0.1-0.5	9-23	0-8
68A:					
Sable----------	0-17	5.6-7.3	5.0-6.0	26-33	0
	17-23	5.6-7.3	2.0-4.0	20-30	0
	23-60	5.6-7.8	0.2-1.0	15-23	0
86B:					
Osco----------	0-14	5.1-7.3	3.0-4.0	18-25	0
	14-55	5.1-7.3	0.0-1.0	15-23	0
	55-60	5.6-7.3	0.0-0.5	12-18	0-15
86C2:					
Osco----------	0-9	5.1-7.3	2.0-3.0	18-25	0
	9-34	5.1-7.3	0.0-1.0	15-23	0
	34-60	5.6-7.3	0.0-0.5	12-18	0-15
87A:					
Dickinson-------	0-8	5.6-7.3	1.0-2.0	15-20	0
	8-20	5.6-7.3	0.5-1.5	7-17	0
	20-31	5.1-6.5	0.5-1.0	9-17	0
	31-36	5.1-6.5	0.0-0.5	0-10	0
	36-60	5.6-6.5	0.0-0.5	0-10	0
87C2:					
Dickinson-------	0-11	5.6-7.3	1.0-2.0	15-20	0
	11-29	5.1-6.5	0.5-1.0	15-20	0
	29-35	5.1-6.5	0.0-0.5	5-10	0
	35-60	5.6-6.5	0.0-0.5	5-10	0
88A:					
Sparta----------	0-17	5.1-7.3	1.0-2.0	2-12	0
	17-31	5.1-7.3	0.1-1.0	1-6	0
	31-72	5.1-6.0	0.0-0.5	1-9	0
172A:					
Hoopeston-------	0-14	5.1-7.3	2.0-3.0	9-17	0
	14-38	5.1-7.8	0.2-1.0	7-13	0-5
	38-60	4.5-8.4	0.1-0.5	1-7	0-20
212B:					
Thebes----------	0-9	5.1-7.3	2.0-3.0	15-20	0
	9-31	4.5-6.0	0.0-1.0	15-20	0
	31-40	5.1-6.5	0.0-0.5	15-20	0
	40-80	5.1-7.3	0.0-0.5	5-10	0
250D:					
Velma----------	0-16	5.1-7.3	3.0-4.0	18-24	0
	16-54	4.5-7.3	0.2-1.0	15-23	0
	54-80	7.4-8.4	0.2-0.5	12-19	5-30
261A:					
Niota----------	0-9	5.1-7.3	1.0-3.0	14-22	0
	9-16	5.1-6.0	0.0-0.5	11-16	0
	16-27	3.6-6.0	0.0-1.0	21-35	0
	27-36	4.5-6.0	0.0-0.5	15-25	0
	36-49	5.6-7.3	0.0-0.5	7-15	0
	49-60	5.6-8.4	0.1-0.5	6-13	0-20

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
274B:					
Seaton----------	0-9	5.6-7.3	1.0-3.0	8-19	0
	9-60	4.5-7.3	0.5-1.0	11-16	0
	60-80	5.6-8.4	0.2-0.5	6-15	0-35
274B2:					
Seaton----------	0-9	5.6-7.3	1.0-3.0	8-19	0
	9-53	4.5-7.3	0.5-1.0	11-16	0
	53-60	5.6-8.4	0.2-0.5	6-15	0-35
274C2:					
Seaton----------	0-7	5.6-7.3	0.5-2.0	10-17	0
	7-47	4.5-7.3	0.5-1.0	11-16	0
	47-60	5.6-8.4	0.2-0.5	6-15	0-35
274D2:					
Seaton----------	0-8	5.6-7.3	0.5-2.0	10-17	0
	8-52	4.5-7.3	0.5-1.0	11-16	0
	52-60	5.6-8.4	0.2-0.5	6-15	0-35
275A:					
Joy----------	0-15	5.6-7.3	2.0-4.0	13-23	0
	15-51	5.1-7.3	0.1-1.0	11-28	0
	51-60	6.1-8.4	0.0-0.2	7-14	0-30
278A:					
Stronghurst-----	0-8	5.1-7.3	1.0-3.0	14-22	0
	8-47	5.1-7.3	0.5-1.0	17-23	0
	47-60	5.6-7.8	0.2-0.5	12-17	0-15
279A:					
Rozetta---------	0-4	5.1-7.3	1.0-3.0	10-22	0
	4-11	4.5-7.3	0.2-0.5	7-17	0
	11-50	4.5-6.0	0.2-0.5	16-22	0
	50-60	5.6-7.8	0.2-0.5	12-17	0-15
279B:					
Rozetta---------	0-7	5.1-7.3	1.0-3.0	10-22	0
	7-11	4.5-7.3	0.1-1.0	7-17	0
	11-55	4.5-6.0	0.0-0.5	16-22	0
	55-60	5.6-7.8	0.0-0.5	12-17	0-15
280B:					
Fayette---------	0-9	5.1-7.3	1.0-3.0	15-20	0
	9-39	4.5-6.5	0.0-1.0	15-20	0
	39-60	5.1-7.8	0.0-0.5	15-20	0-15
280B2:					
Fayette---------	0-8	5.1-7.3	1.0-2.0	18-25	0
	8-56	4.5-6.0	0.0-0.5	15-20	0
	56-80	5.1-7.8	0.0-0.5	15-20	0-15
280C2:					
Fayette---------	0-8	5.1-7.3	1.0-2.0	18-25	0
	8-64	4.5-6.0	0.0-0.5	15-20	0
	64-80	5.1-7.8	0.0-0.5	15-20	0-15
280C3:					
Fayette---------	0-8	5.1-7.3	0.5-2.0	25-30	0
	8-48	4.5-6.0	0.0-0.5	15-20	0
	48-60	5.1-7.8	0.0-0.5	15-20	0-15

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
317A:					
Millsdale-------	0-8	6.1-7.3	4.0-7.0	21-32	0
	8-27	6.1-8.4	1.0-3.0	17-28	0-15
	27-60	---	---	---	---
430A:					
Raddle----------	0-21	5.6-7.3	2.0-4.0	12-18	0
	21-80	5.6-7.3	1.0-3.0	12-18	0
430B:					
Raddle----------	0-13	5.6-7.3	2.0-4.0	12-18	0
	13-60	5.6-7.3	1.0-3.0	12-18	0
525A:					
Joslin----------	0-20	5.6-7.8	2.0-3.0	9-25	0
	20-34	5.6-7.3	0.5-1.0	12-25	0
	34-51	5.6-7.3	0.0-0.4	16-22	0
	51-58	5.6-8.4	0.0-0.4	16-22	0-25
	58-80	---	---	---	---
567C2:					
Elkhart---------	0-8	5.6-7.8	1.0-3.0	18-27	0
	8-25	5.6-8.4	0.0-0.5	15-22	0-20
	25-60	7.4-8.4	0.0-0.1	12-21	10-40
567D2:					
Elkhart---------	0-10	5.6-7.8	2.0-3.0	16-24	0
	10-30	5.6-8.4	0.0-0.5	15-22	0-20
	30-60	7.4-8.4	0.0-0.1	12-21	10-40
570B:					
Martinsville----	0-9	5.1-7.3	1.0-3.0	5-16	0
	9-18	5.1-7.3	0.0-1.0	6-17	0
	18-33	5.1-7.3	0.0-0.5	8-17	0
	33-42	5.6-7.8	0.0-0.5	2-12	0-10
	42-72	7.4-8.4	0.0-0.5	1-10	10-40
570C3:					
Martinsville----	0-9	4.5-7.3	0.5-1.0	17-23	0
	9-30	4.5-7.3	0.0-0.5	16-22	0
	30-60	5.1-6.5	0.0-0.2	6-15	0
570D3:					
Martinsville----	0-9	4.5-7.3	0.5-1.0	17-23	0
	9-30	4.5-7.3	0.0-0.5	16-22	0
	30-60	5.1-6.5	0.0-0.2	6-15	0
647A:					
Lawler----------	0-10	5.6-7.3	4.0-5.0	20-25	0
	10-31	5.1-6.5	1.0-2.0	15-20	0
	31-60	5.1-7.3	0.0-0.5	5-10	0
671A:					
Biggsville------	0-13	5.1-8.4	3.0-5.0	19-29	0
	13-53	5.6-7.3	0.5-2.0	14-22	0
	53-80	5.6-8.4	0.0-0.5	11-20	0-35
671B:					
Biggsville------	0-13	5.1-8.4	3.0-5.0	19-29	0
	13-53	5.6-7.3	0.5-2.0	14-22	0
	53-80	5.6-8.4	0.0-0.5	11-20	0-35

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
675A:					
Greenbush-------	0-9	5.1-7.3	2.0-3.0	20-25	0
	9-16	5.1-7.3	0.5-1.0	20-25	0
	16-46	5.1-7.3	0.5-1.0	20-25	0
	46-60	5.6-7.3	0.0-0.5	20-25	0
675B:					
Greenbush-------	0-14	5.1-7.3	2.0-3.0	20-25	0
	14-60	4.5-7.3	0.5-1.0	25-30	0
	60-80	5.6-7.3	0.0-0.5	20-25	0
689B:					
Coloma----------	0-10	4.5-7.3	0.5-2.0	1-12	0
	10-27	4.5-7.3	0.0-0.5	.1-9	0
	27-60	4.5-7.3	0.0-0.5	.4-11	0
689D:					
Coloma----------	0-12	4.5-7.3	0.5-2.0	1-12	0
	12-25	4.5-7.3	0.0-0.5	.1-9	0
	25-60	4.5-7.3	0.0-0.5	.4-11	0
705A:					
Buckhart--------	0-20	5.6-7.3	3.0-4.0	18-25	0
	20-58	5.6-7.8	0.2-1.0	15-23	0
	58-60	6.6-7.8	0.0-0.5	12-18	0-15
727A:					
Waukee----------	0-14	5.1-7.3	3.0-4.0	20-25	0
	14-34	5.1-6.0	1.0-2.0	20-25	0
	34-60	5.6-6.5	0.0-1.0	5-10	0
741F:					
Oakville--------	0-3	4.5-7.3	0.5-2.0	1-2	0
	3-24	4.5-7.3	0.0-0.5	1-2	0
	24-60	5.6-7.3	0.0-0.5	1-2	0
763A:					
Joslin----------	0-15	5.6-7.8	4.0-5.0	15-23	0
	15-40	5.6-7.3	0.5-1.0	12-18	0
	40-60	5.6-7.3	0.0-0.5	21-30	0
	60-85	5.6-8.4	0.0-0.4	11-21	0-20
763B:					
Joslin----------	0-14	5.6-7.8	4.0-5.0	15-23	0
	14-48	5.6-7.3	0.5-1.0	12-18	0
	48-60	5.6-7.3	0.0-0.5	21-30	0
	60-85	5.6-8.4	0.0-0.4	11-21	0-20
764A:					
Coyne----------	0-23	5.6-7.3	2.0-4.0	7-19	0
	23-42	5.6-7.3	0.0-1.0	3-13	0
	42-60	5.6-7.3	0.0-0.5	11-22	0
764C:					
Coyne----------	0-23	5.6-7.3	2.0-4.0	7-19	0
	23-42	5.6-7.3	0.0-1.0	3-13	0
	42-55	5.6-7.3	0.0-0.5	11-22	0
	55-60	5.6-8.4	0.0-0.5	0-6	0-10
774A:					
Saude----------	0-14	5.6-7.3	3.0-4.0	20-25	0
	14-29	5.1-6.0	1.0-2.0	15-20	0
	29-60	5.1-6.5	0.0-0.5	5-10	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
800C:					
Psamments-------	0-60	4.5-7.3	0.0-0.5	.1-9.0	0
	60-80	4.5-7.3	0.0-0.3	.1-6.0	0
802B:					
Orthents--------	0-6	5.6-7.8	0.5-2.0	10-25	0-10
	6-60	5.6-7.8	0.2-1.0	10-20	0-20
864.					
Pits, quarries					
865.					
Pits, gravel					
898F3:					
Hickory---------	0-12	4.5-7.3	0.5-1.0	17-23	0
	12-48	4.5-7.3	0.0-0.5	16-22	0
	48-60	5.1-8.4	0.0-0.2	9-19	0-15
Sylvan----------	0-6	5.6-7.3	0.5-1.0	17-21	0
	6-30	5.6-7.3	0.0-0.5	15-22	0
	30-60	6.6-8.4	0.0-0.5	6-18	0-35
898G:					
Hickory---------	0-10	4.5-7.3	1.0-2.0	14-19	0
	10-35	4.5-7.3	0.0-0.5	16-22	0
	35-60	5.1-8.4	0.0-0.2	9-19	0-15
Sylvan----------	0-3	5.6-7.3	1.0-2.0	13-20	0
	3-7	5.6-7.3	0.2-1.0	9-17	0
	7-33	5.6-7.3	0.2-0.5	15-22	0
	33-60	6.6-8.4	0.2-0.5	11-17	0-35
913D2:					
Marseilles------	0-4	5.1-6.5	1.0-3.0	14-22	0
	4-38	4.5-6.5	0.0-0.5	16-27	0
	38-60	---	---	---	---
Hickory---------	0-6	4.5-7.3	1.0-2.0	14-19	0
	6-51	4.5-7.3	0.0-0.5	16-22	0
	51-60	5.1-8.4	0.0-0.2	9-19	0-15
913F:					
Marseilles------	0-12	5.1-6.5	1.0-3.0	14-22	0
	12-18	5.6-6.5	0.5-1.0	15-23	0
	18-34	4.5-6.5	0.5-1.0	16-27	0
	34-60	---	---	---	---
Hickory---------	0-8	4.5-7.3	1.0-2.0	14-19	0
	8-57	4.5-7.3	0.0-0.5	16-22	0
	57-60	5.1-8.4	0.0-0.2	9-19	0-15
913G:					
Marseilles------	0-9	5.1-6.5	1.0-3.0	14-22	0
	9-36	4.5-6.5	0.0-1.0	16-27	0
	36-60	---	---	---	---
Hickory---------	0-12	4.5-7.3	1.0-2.0	14-19	0
	12-53	4.5-7.3	0.0-0.5	16-22	0
	53-60	5.1-8.4	0.0-0.2	9-19	0-15

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
917C2:					
Oakville--------	0-7	4.5-7.3	0.5-2.0	1-2	0
	7-51	4.5-7.3	0.0-0.5	1-2	0
	51-60	5.6-7.3	0.0-0.5	1-2	0
Tell----------	0-7	5.1-7.3	1.0-3.0	5-20	0
	7-23	5.1-6.5	0.0-0.5	4-25	0
	23-27	5.1-6.5	0.0-0.5	2-20	0
	27-60	5.1-6.5	0.0-0.5	0-7	0
917D2:					
Oakville--------	0-9	4.5-7.3	0.5-2.0	1-2	0
	9-36	4.5-7.3	0.0-0.5	1-2	0
	36-60	5.6-7.3	0.0-0.5	1-2	0
Tell----------	0-8	5.1-7.3	1.0-3.0	5-20	0
	8-28	5.1-6.5	0.0-0.5	4-25	0
	28-32	5.1-6.5	0.0-0.5	2-20	0
	32-60	5.1-6.5	0.0-0.5	0-7	0
943D2:					
Seaton----------	0-4	5.6-7.3	0.5-2.0	10-17	0
	4-39	4.5-7.3	0.5-1.0	11-16	0
	39-60	5.6-8.4	0.2-0.5	6-15	0-35
Timula----------	0-5	6.1-7.8	1.0-2.0	8-15	0-5
	5-23	6.1-7.8	1.0-2.0	8-15	0-5
	23-60	7.4-8.4	0.2-0.5	6-12	5-35
943F2:					
Seaton----------	0-6	5.6-7.3	0.5-2.0	10-17	0
	6-49	4.5-7.3	0.5-1.0	11-16	0
	49-60	5.6-8.4	0.2-0.5	6-15	0-35
Timula----------	0-6	6.1-7.8	1.0-2.0	8-15	0-5
	6-28	6.1-7.8	1.0-2.0	8-15	0-5
	28-60	7.4-8.4	0.2-0.5	6-12	5-35
944D2:					
Velma----------	0-17	5.1-7.3	3.0-4.0	18-24	0
	17-56	4.5-7.3	0.2-1.0	15-23	0
	56-60	7.4-8.4	0.2-0.5	12-19	5-30
Coatsburg-------	0-12	5.1-7.8	3.0-5.0	18-26	0
	12-54	5.1-6.5	0.0-1.0	21-29	0
	54-72	5.6-7.8	0.0-0.5	12-22	0
946D3:					
Hickory---------	0-7	4.5-7.3	0.5-1.0	17-23	0
	7-42	4.5-7.3	0.0-0.5	16-22	0
	42-60	5.1-8.4	0.0-0.2	9-19	0-15
Atlas----------	0-6	4.5-7.3	0.5-1.0	19-26	0
	6-12	4.5-7.3	0.0-1.0	21-29	0
	12-55	4.5-7.8	0.0-1.0	18-29	0-25
	55-60	6.1-7.8	0.0-1.0	12-20	0-25
946F3:					
Hickory---------	0-6	4.5-7.3	0.5-1.0	17-23	0
	6-42	4.5-7.3	0.0-0.5	16-22	0
	42-60	5.1-7.8	0.0-0.2	9-19	0-15

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
946F3:					
Atlas----------	0-6	4.5-7.3	0.5-1.0	19-26	0
	6-12	4.5-7.3	0.0-1.0	21-29	0
	12-55	4.5-7.8	0.0-1.0	18-29	0-25
	55-60	6.1-7.8	0.0-1.0	12-20	0-25
959G:					
Strawn----------	0-12	6.1-7.3	1.0-3.0	13-22	0
	12-23	5.6-7.8	0.2-1.0	16-23	0
	23-60	7.4-8.4	0.2-0.5	12-19	5-30
Chute----------	0-3	6.6-8.4	0.5-2.0	1-9	0-20
	3-13	7.4-8.4	0.0-0.5	1-6	10-30
	13-60	7.4-8.4	0.0-0.5	1-6	10-30
960D2:					
Hickory---------	0-6	4.5-7.3	1.0-2.0	14-19	0
	6-51	4.5-7.3	0.0-0.5	16-22	0
	51-60	5.1-8.4	0.0-0.2	9-19	0-15
Sylvan----------	0-4	5.6-7.3	1.0-2.0	14-20	0
	4-32	5.6-7.3	0.0-0.5	15-22	0
	32-60	6.6-8.4	0.0-0.5	6-18	0-35
Fayette---------	0-6	5.1-7.3	1.0-2.0	18-25	0
	6-48	4.5-6.0	0.0-0.5	15-20	0
	48-60	5.1-7.8	0.0-0.5	15-20	0-15
960D3:					
Hickory---------	0-5	4.5-7.3	0.5-1.0	17-23	0
	5-30	4.5-7.3	0.0-0.5	16-22	0
	30-40	4.5-7.8	0.0-0.5	16-22	0
	40-60	5.6-8.4	0.0-0.5	5-15	0-25
Sylvan----------	0-9	5.6-7.3	0.5-1.0	17-21	0
	9-28	5.6-7.3	0.0-0.5	15-22	0
	28-60	6.6-8.4	0.0-0.5	6-18	0-35
Fayette---------	0-8	5.1-7.3	0.5-1.0	25-30	0
	8-36	4.5-6.0	0.0-0.5	15-20	0
	36-60	5.1-7.8	0.0-0.5	15-20	0-15
960F:					
Hickory---------	0-12	4.5-7.3	1.0-2.0	14-19	0
	12-48	4.5-7.3	0.0-0.5	16-22	0
	48-60	5.1-8.4	0.0-0.2	9-19	0-15
Sylvan----------	0-6	5.6-7.3	1.0-2.0	13-20	0
	6-30	5.6-7.3	0.2-0.5	15-22	0
	30-60	6.6-8.4	0.2-0.5	11-17	0-35
Fayette---------	0-10	5.1-7.3	2.0-3.0	15-20	0
	10-60	4.5-6.5	0.0-1.0	15-20	0
	60-70	5.1-7.8	0.0-0.5	15-20	0-15
961A:					
Burkhardt-------	0-13	5.1-6.5	2.0-3.0	5-15	0
	13-24	5.1-6.5	0.5-1.0	4-15	0
	24-60	5.6-6.5	0.0-0.5	0-6	0
Saude----------	0-14	5.6-7.3	3.0-4.0	20-25	0
	14-29	5.1-6.0	1.0-2.0	15-20	0
	29-60	5.1-6.5	0.0-0.5	5-10	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
962F:					
Sylvan----------	0-6	5.6-7.3	1.0-2.0	13-20	0
	6-30	5.6-7.3	0.2-0.5	15-22	0
	30-60	6.6-8.4	0.2-0.5	11-17	0-35
Bold----------	0-3	7.4-8.4	0.5-2.0	6-15	10-40
	3-60	7.4-8.4	0.0-0.5	5-12	10-50
1076A:					
Otter----------	0-31	6.1-7.8	3.0-5.0	16-36	0
	31-40	6.1-7.8	1.0-3.0	12-22	0
	40-64	6.1-8.4	0.5-2.0	10-21	0
1082A:					
Millington------	0-19	7.4-8.4	4.0-6.0	20-28	5-20
	19-35	7.4-8.4	1.0-3.0	12-27	5-30
	35-60	7.4-8.4	0.1-2.0	11-25	10-30
1107A:					
Sawmill---------	0-29	6.1-7.8	4.0-5.0	24-31	0
	29-38	6.1-7.8	1.0-3.0	17-27	0
	38-60	6.1-7.8	0.0-2.0	16-25	0-10
1334A:					
Birds----------	0-9	5.6-7.3	2.0-4.0	8-12	0
	9-37	5.6-7.8	0.5-1.0	8-14	0
	37-60	5.6-7.3	0.5-1.0	6-12	0
1400A:					
Calco----------	0-37	7.4-8.4	5.0-7.0	36-41	5-30
	37-49	7.4-8.4	3.0-5.0	36-41	5-30
	49-60	7.4-8.4	1.0-3.0	36-41	5-30
1654A:					
Moline----------	0-14	6.1-7.5	2.0-4.0	32-67	0-5
	14-33	6.1-7.8	0.5-1.2	37-62	0-10
	33-75	6.1-7.8	0.2-0.8	28-60	0-10
	75-98	7.4-8.4	0.0-0.5	14-35	5-35
3074A:					
Radford---------	0-12	5.6-7.8	2.0-4.0	15-24	0
	12-33	6.1-7.8	0.0-2.0	11-20	0
	33-60	6.1-7.8	0.0-1.0	14-23	0-20
3076A:					
Otter----------	0-43	6.1-7.8	3.0-5.0	16-36	0
	43-50	6.1-7.8	1.0-3.0	12-22	0
	50-60	6.1-8.4	0.5-2.0	10-21	0
3082A:					
Millington------	0-19	7.4-8.4	4.0-6.0	20-28	5-20
	19-35	7.4-8.4	1.0-3.0	12-27	5-30
	35-60	7.4-8.4	0.1-2.0	11-25	10-30
3083A:					
Wabash----------	0-15	5.1-7.3	2.0-4.0	30-35	0
	15-60	5.1-7.8	1.0-2.0	28-42	0
3107A:					
Sawmill---------	0-26	6.1-7.8	4.0-5.0	24-31	0
	26-54	6.1-7.8	1.0-3.0	17-27	0
	54-60	6.1-7.8	0.0-2.0	16-25	0-10

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
3239A:					
Dorchester------	0-9	7.4-8.4	0.5-2.0	15-20	5-30
	9-32	7.4-8.4	0.0-0.5	15-20	5-30
	32-60	6.6-8.4	1.0-4.0	15-20	0-15
3400A:					
Calco----------	0-34	7.4-8.4	5.0-7.0	36-41	5-30
	34-45	7.4-8.4	3.0-5.0	36-41	5-30
	45-60	7.4-8.4	1.0-3.0	36-41	5-30
3415A:					
Orion----------	0-7	5.6-7.8	1.0-3.0	7-20	0
	7-22	5.6-7.8	1.0-3.0	7-20	0
	22-60	5.6-7.8	3.0-8.0	10-35	0
	60-80	5.6-7.8	0.0-0.5	5-15	0
3428A:					
Coffeen---------	0-17	5.6-7.8	2.0-3.0	13-22	0
	17-33	5.6-7.3	0.0-2.0	6-15	0
	33-60	5.6-7.3	0.0-2.0	3-13	0
3451A:					
Lawson----------	0-14	6.1-7.8	2.0-4.0	11-28	0
	14-33	6.1-7.8	2.0-4.0	11-29	0
	33-80	6.1-7.8	0.0-1.0	11-23	0
3646L:					
Fluvaquents-----	0-9	5.6-7.3	2.0-4.0	8-12	0
	9-37	5.6-7.8	0.5-1.0	8-14	0
	37-60	5.6-7.3	0.5-1.0	6-12	0
7076A:					
Otter----------	0-38	6.1-7.8	3.0-10	16-36	0
	38-50	6.1-7.8	1.0-3.0	12-22	0
	50-60	6.1-8.4	0.5-2.0	10-21	0
7083A:					
Wabash----------	0-15	5.1-7.3	2.0-4.0	30-35	0
	15-60	5.1-7.8	1.0-2.0	28-42	0
7107A:					
Sawmill---------	0-10	6.1-7.8	4.0-5.0	24-31	0
	10-35	6.1-7.8	1.0-3.0	17-27	0
	35-60	6.1-7.8	0.2-1.0	12-23	0-10
7239A:					
Dorchester------	0-9	7.4-8.4	0.5-2.0	15-20	5-30
	9-32	7.4-8.4	0.0-0.5	15-20	5-30
	32-60	6.6-8.4	1.0-4.0	15-20	0-15
7304A:					
Landes----------	0-19	5.6-8.4	1.0-2.0	6-16	0
	19-32	5.6-8.4	0.5-1.0	3-15	0-10
	32-60	5.6-8.4	0.0-0.5	3-15	0-20
7415A:					
Orion----------	0-21	5.6-7.8	1.0-3.0	7-20	0
	21-27	5.6-7.8	1.0-3.0	7-20	0
	27-45	5.6-7.8	3.0-8.0	10-35	0
	45-60	5.6-7.8	0.0-0.5	5-15	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation-exchange capacity	Calcium carbonate
	In	pH	Pct	meq/100g	Pct
7428A:					
Coffeen---------	0-20	5.6-7.8	2.0-3.0	13-22	0
	20-32	5.6-7.3	0.0-2.0	6-15	0
	32-60	5.6-7.3	0.0-2.0	3-13	0
7451A:					
Lawson----------	0-14	6.1-7.8	3.0-7.0	11-28	0
	14-33	6.1-7.8	3.0-7.0	11-29	0
	33-80	6.1-7.8	1.0-4.0	11-23	0
7654A:					
Moline----------	0-14	6.1-7.5	2.0-4.0	32-67	0-5
	14-33	6.1-7.8	0.5-1.2	37-62	0-10
	33-75	6.1-7.8	0.2-0.8	28-60	0-10
	75-98	7.4-8.4	0.0-0.5	14-35	5-35
8107+:					
Sawmill---------	0-8	6.1-7.8	4.0-5.0	19-26	0
	8-14	6.1-7.8	1.0-3.0	17-27	0
	14-46	6.1-7.8	1.0-3.0	17-27	0
	46-60	6.1-7.8	0.0-2.0	16-25	0-10
8302A:					
Ambraw----------	0-9	5.6-7.3	2.0-3.0	15-27	0
	9-32	5.1-7.3	0.5-2.0	19-29	0
	32-38	5.1-7.3	0.5-1.0	15-23	0
	38-60	5.6-8.4	0.5-1.0	11-19	0
8400A:					
Calco----------	0-34	7.4-8.4	5.0-7.0	36-41	5-30
	34-45	7.4-8.4	3.0-5.0	36-41	5-30
	45-60	7.4-8.4	1.0-3.0	36-41	5-30
8404A:					
Titus----------	0-13	6.1-7.3	2.0-4.0	25-32	0
	13-68	6.1-7.8	0.2-1.0	21-29	0
	68-80	6.1-7.8	0.2-0.5	12-19	0-5

Table 21.--Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydrologic group	Month	Water table depth: Upper limit	Water table depth: Lower limit	Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
8D2, 8D3, 8F, 8F3:										
Hickory--------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
19C3, 19D, 19D3, 19F, 19F3:										
Sylvan---------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
45A:										
Denny----------	D									
		Jan-May	0.0	>6.0	Apparent	0.0-1.0	Brief	Frequent	---	---
51A:										
Muscatune-------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
61A:										
Atterberry------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
68A:										
Sable----------	B/D									
		Jan-May	0.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	---	---
86B, 86C2:										
Osco----------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---
87A, 87C2:										
Dickinson-------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
88A:										
Sparta----------	A									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
172A:										
Hoopeston-------	B									
		Jan-May	1.0-2.5	>6.0	Apparent	---	---	---	---	---
212B:										
Thebes----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
250D:										
Velma----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
261A:										
Niota----------	D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	---
274B, 274B2, 274C2, 274D2:										
Seaton---------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table depth: Upper limit	Water table depth: Lower limit	Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
275A:										
Joy----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
278A:										
Stronghurst-----	B									
		Mar-Jun	1.0-2.0	>6.0	Apparent	---	---	---	---	---
279A, 279B:										
Rozetta---------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---
280B, 280B2, 280C2, 280C3:										
Fayette--------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
317A:										
Millsdale-------	C/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Frequent	---	---
430A, 430B:										
Raddle----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
525A:										
Joslin----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
567C2, 567D2:										
Elkhart---------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---
570B, 570C3, 570D3:										
Martinsville---	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
647A:										
Lawler----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
671A, 671B:										
Biggsville------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---
675A, 675B:										
Greenbush-------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---
689B, 689D:										
Coloma----------	A									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
705A:										
Buckhart--------	B									
		Feb-Apr	2.0-3.5	>6.0	Apparent	---	---	---	---	---
727A:										
Waukee----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table depth: Upper limit	Water table depth: Lower limit	Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
741F:										
Oakville--------	A									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
763A, 763B:										
Joslin----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
764A, 764C:										
Coyne----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
774A:										
Saude----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
800C:										
Psamments-------	A									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
802B:										
Orthents--------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
864.										
Pits, quarries										
865.										
Pits, gravel										
898F3, 898G:										
Hickory---------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Sylvan----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
913D2, 913F, 913G:										
Marseilles-----	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Hickory--------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
917C2, 917D2:										
Oakville--------	A									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Tell----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
943D2, 943F2:										
Seaton----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Timula----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table depth: Upper limit	Water table depth: Lower limit	Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
944D2:										
Velma----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Coatsburg-------	D									
		Jan-May	0.0-1.0	1.0-3.0	Perched	---	---	---	---	---
946D3, 946F3:										
Hickory---------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Atlas----------	D									
		Jan-May	0.5-2.0	2.0-4.0	Perched	---	---	---	---	---
959G:										
Strawn----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Chute----------	A									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
960D2, 960D3, 960F:										
Hickory--------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Sylvan---------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Fayette--------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
961A:										
Burkhardt-------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Saude----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
962F:										
Sylvan----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
Bold----------	B									
		Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
1076A:										
Otter----------	B/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Nov-Dec	0.0-1.0	>6.0	Apparent	---	---	---	Long	Frequent
1082A:										
Millington------	B/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Nov-Dec	0.0-1.0	>6.0	Apparent	---	---	---	Long	Frequent
1107A:										
Sawmill---------	B/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Nov-Dec	0.0-1.0	>6.0	Apparent	---	---	---	Long	Frequent

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table depth: Upper limit	Water table depth: Lower limit	Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
1334A:										
Birds	B/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Nov-Dec	0.0-1.0	>6.0	Apparent	---	---	---	Long	Frequent
1400A:										
Calco	B/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
		Nov-Dec	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
1654A:										
Moline	D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Nov-Dec	0.0-1.0	>6.0	Apparent	---	---	---	Long	Frequent
3074A:										
Radford	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3076A:										
Otter	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3082A:										
Millington	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3083A:										
Wabash	D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3107A:										
Sawmill	B/D									
		Jan-May	0.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3239A:										
Dorchester	B									
		January	---	---	---	---	---	---	Brief	Frequent
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	Brief	Frequent
		May-Jun	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3400A:										
Calco	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Very brief	Occasional	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3415A:										
Orion	C									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table depth: Upper limit	Water table depth: Lower limit	Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
3428A:										
Coffeen---------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3451A:										
Lawson----------	C									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		Nov-Dec	---	---	---	---	---	---	Brief	Frequent
3646L:										
Fluvaquents-----	C									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Jul-Oct	0.0-1.0	>6.0	Apparent	---	---	---	---	---
		Nov-Dec	0.0-1.0	>6.0	Apparent	---	---	---	Long	Frequent
7076A:										
Otter----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		Nov-Dec	---	---	---	---	---	---	Very brief	Rare
7083A:										
Wabash----------	D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Rare
		June	---	---	---	---	---	---	Brief	Rare
		Nov-Dec	---	---	---	---	---	---	Brief	Rare
7107A:										
Sawmill---------	B/D									
		Jan-May	0.0-2.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		Nov-Dec	---	---	---	---	---	---	Very brief	Rare
7239A:										
Dorchester------	B									
		January	---	---	---	---	---	---	Very brief	Rare
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	Very brief	Rare
		May-Jun	---	---	---	---	---	---	Very brief	Rare
		Nov-Dec	---	---	---	---	---	---	Very brief	Rare
7304A:										
Landes----------	B									
		January	---	---	---	---	---	---	Very brief	Rare
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	Very brief	Rare
		May-Jun	---	---	---	---	---	---	Very brief	Rare
		Nov-Dec	---	---	---	---	---	---	Very brief	Rare
7415A:										
Orion----------	C									
		Jan-May	1.0-3.0	>6.0	Apparent	---	---	---	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		Nov-Dec	---	---	---	---	---	---	Very brief	Rare
7428A:										
Coffeen---------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		Nov-Dec	---	---	---	---	---	---	Very brief	Rare

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table depth: Upper limit	Water table depth: Lower limit	Kind of water table	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
7451A:										
Lawson----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		Nov-Dec	---	---	---	---	---	---	Very brief	Rare
7654A:										
Moline----------	D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Frequent	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		Nov-Dec	---	---	---	---	---	---	Very brief	Rare
8107+:										
Sawmill---------	B/D									
		Jan-May	0.0-2.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		Nov-Dec	---	---	---	---	---	---	Brief	Occasional
8302A:										
Ambraw----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		Nov-Dec	---	---	---	---	---	---	Brief	Occasional
8400A:										
Calco----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		Nov-Dec	---	---	---	---	---	---	Brief	Occasional
8404A:										
Titus----------	B									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		Nov-Dec	---	---	---	---	---	---	Brief	Occasional

Table 22.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In			
8D2, 8D3, 8F, 8F3:					
Hickory	---	---	Moderate	Moderate	Moderate
19C3, 19D, 19D3, 19F, 19F3:					
Sylvan	---	---	High	Moderate	Moderate
45A:					
Denny	---	---	High	High	Moderate
51A:					
Muscatune	---	---	High	High	Moderate
61A:					
Atterberry	---	---	High	High	Moderate
68A:					
Sable	---	---	High	High	Low
86B, 86C2:					
Osco	---	---	High	Moderate	Moderate
87A, 87C2:					
Dickinson	---	---	Moderate	Low	Moderate
88A:					
Sparta	---	---	Low	Low	Moderate
172A:					
Hoopeston	---	---	High	Low	Moderate
212B:					
Thebes	---	---	High	Moderate	Moderate
250D:					
Velma	---	---	Moderate	High	High
261A:					
Niota	---	---	High	High	High
274B, 274B2, 274C2, 274D2:					
Seaton	---	---	High	Low	Moderate
275A:					
Joy	---	---	High	High	Moderate
278A:					
Stronghurst	---	---	High	High	Moderate
279A, 279B:					
Rozetta	---	---	High	Moderate	Moderate
280B, 280B2, 280C2, 280C3:					
Fayette	---	---	High	Moderate	Moderate
317A:					
Millsdale	Bedrock (lithic)	20-40	High	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In			
430A, 430B:					
Raddle	---	---	High	Moderate	Moderate
525A:					
Joslin	Bedrock (lithic)	40-60	Moderate	Moderate	Moderate
567C2, 567D2:					
Elkhart	---	---	High	Moderate	Moderate
570B, 570C3, 570D3:					
Martinsville	---	---	Moderate	Moderate	Moderate
647A:					
Lawler	---	---	High	High	Moderate
671A, 671B:					
Biggsville	---	---	High	Low	Moderate
675A, 675B:					
Greenbush	---	---	High	Moderate	Moderate
689B, 689D:					
Coloma	---	---	Low	Low	Moderate
705A:					
Buckhart	---	---	High	Moderate	Moderate
727A:					
Waukee	---	---	Moderate	Low	Moderate
741F:					
Oakville	---	---	Low	Low	Moderate
763A, 763B:					
Joslin	---	---	Moderate	High	Moderate
764A, 764C:					
Coyne	---	---	Moderate	Moderate	Moderate
774A:					
Saude	---	---	Moderate	Low	Moderate
800C.					
Psamments					
802B:					
Orthents	---	---	Moderate	Moderate	Moderate
864.					
Pits, quarries					
865.					
Pits, gravel					
898F3, 898G:					
Hickory	---	---	Moderate	Moderate	Moderate
Sylvan	---	---	High	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In			
913D2, 913F, 913G:					
Marseilles	Bedrock (paralithic)	20-40	High	High	Moderate
Hickory	---	---	Moderate	Moderate	Moderate
917C2, 917D2:					
Oakville	---	---	Low	Low	Moderate
Tell	---	---	High	Moderate	Moderate
943D2, 943F2:					
Seaton	---	---	High	Low	Moderate
Timula	---	---	High	Low	Low
944D2:					
Velma	---	---	Moderate	High	High
Coatsburg	---	---	High	High	Moderate
946D3, 946F3:					
Hickory	---	---	Moderate	Moderate	Moderate
Atlas	---	---	High	High	Moderate
959G:					
Strawn	---	---	Moderate	Moderate	Moderate
Chute	---	---	Low	Low	Low
960D2, 960D3, 960F:					
Hickory	---	---	Moderate	Moderate	Moderate
Sylvan	---	---	High	Moderate	Moderate
Fayette	---	---	High	Moderate	Moderate
961A:					
Burkhardt	---	---	Low	Low	High
Saude	---	---	Moderate	Low	Moderate
962F:					
Sylvan	---	---	High	Moderate	Moderate
Bold	---	---	High	Low	Low
1076A:					
Otter	---	---	High	High	Low
1082A:					
Millington	---	---	High	High	Low
1107A:					
Sawmill	---	---	High	High	Low
1334A:					
Birds	---	---	High	Moderate	Low
1400A:					
Calco	---	---	High	High	Low

Table 22.--Soil Features--Continued

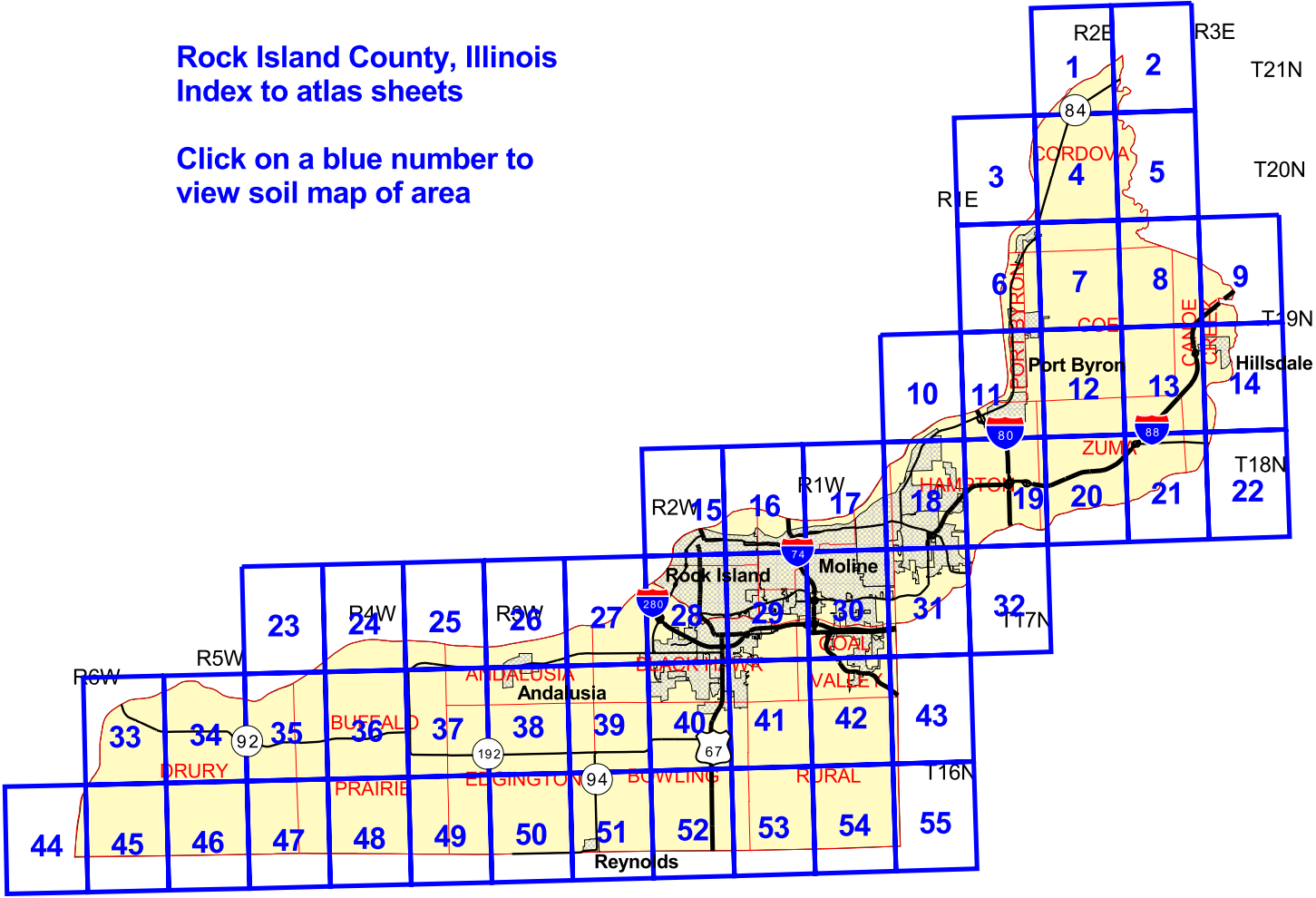
Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In			
1654A:					
Moline	---	---	High	High	Low
3074A:					
Radford	---	---	High	High	Moderate
3076A:					
Otter	---	---	High	High	Low
3082A:					
Millington	---	---	High	High	Low
3083A:					
Wabash	---	---	High	High	Moderate
3107A:					
Sawmill	---	---	High	High	Low
3239A:					
Dorchester	---	---	High	High	Low
3400A:					
Calco	---	---	High	High	Low
3415A:					
Orion	---	---	High	High	Low
3428A:					
Coffeen	---	---	High	High	Moderate
3451A:					
Lawson	---	---	High	Moderate	Low
3646L:					
Fluvaquents	---	---	High	Moderate	Low
7076A:					
Otter	---	---	High	High	Low
7083A:					
Wabash	---	---	High	High	Moderate
7107A:					
Sawmill	---	---	High	High	Low
7239A:					
Dorchester	---	---	High	High	Low
7304A:					
Landes	---	---	Moderate	Low	Low
7415A:					
Orion	---	---	High	High	Low
7428A:					
Coffeen	---	---	High	High	Moderate
7451A:					
Lawson	---	---	High	Moderate	Low
7654A:					
Moline	---	---	High	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Potential for frost action	Risk of corrosion	
	Kind	Depth to top		Uncoated steel	Concrete
		In			
8107+:					
Sawmill	---	---	High	High	Low
8302A:					
Ambraw	---	---	High	High	Moderate
8400A:					
Calco	---	---	High	High	Low
8404A:					
Titus	---	---	High	High	Low

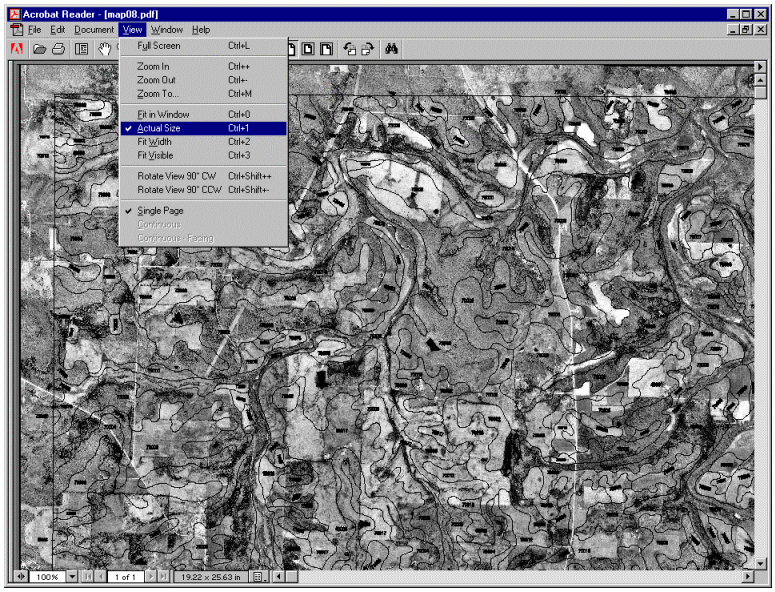
Rock Island County, Illinois
Index to atlas sheets

Click on a blue number to view soil map of area

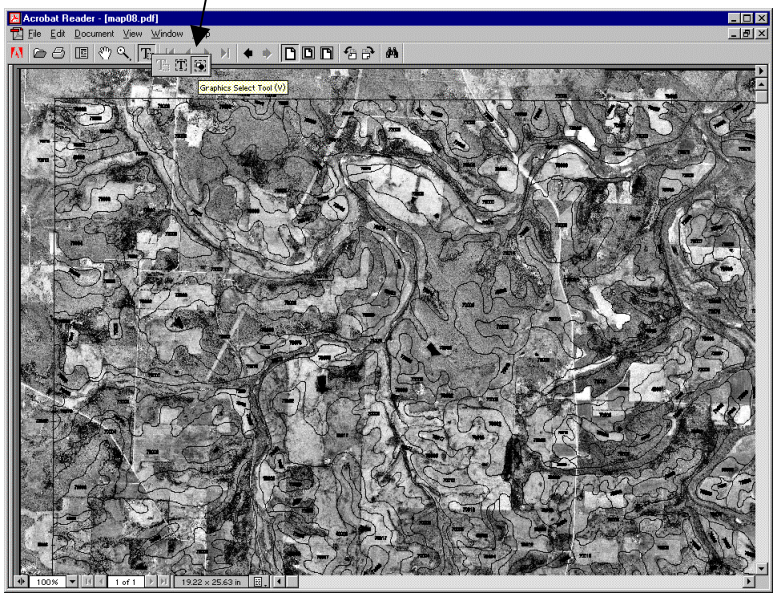


Printing Soil Survey Maps

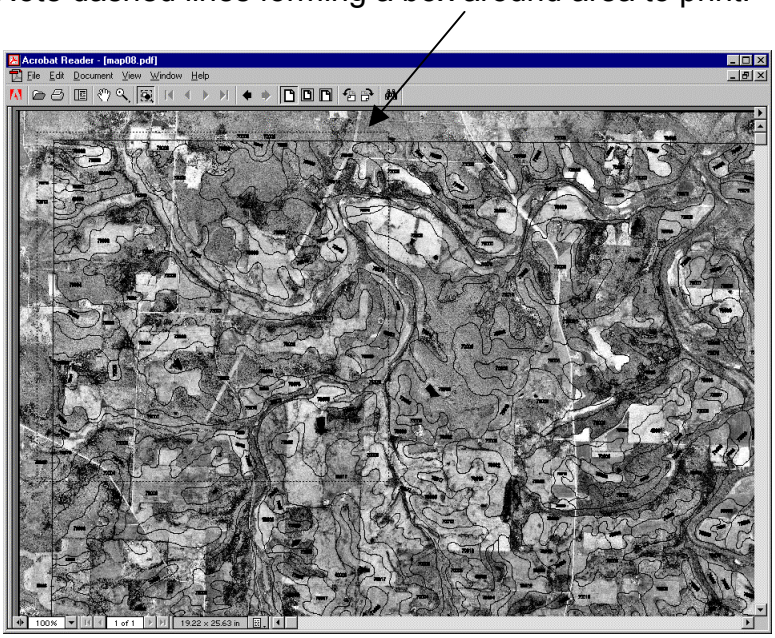
The soil survey maps were made at a scale of 1:12000 and were designed to be used at that scale. To print the maps at 1:12000 scale, set the view to Actual Size from the View pull down menu.



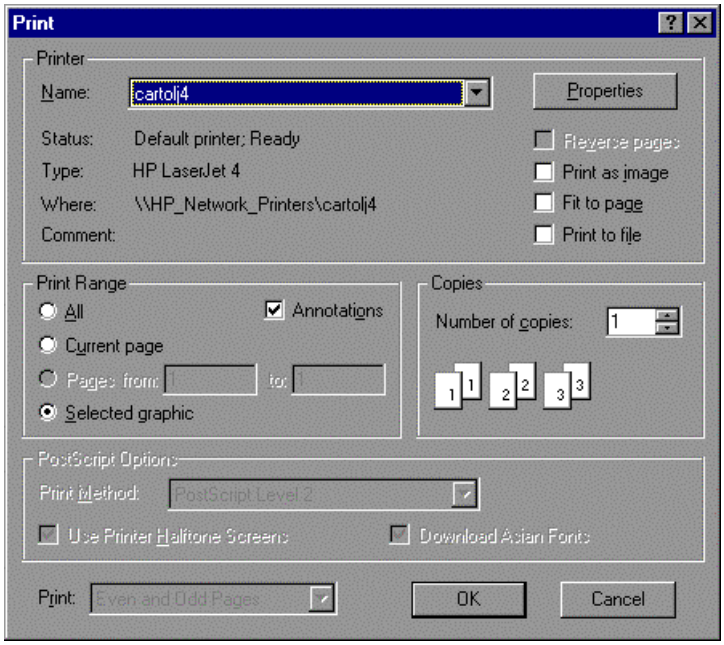
Using the pan tool, go to the area you would like to print. Select the Graphic Selection Tool by holding down the Text Selection Tool button and clicking on the Graphic Selection Tool button.



Then using the Graphic Selection Tool drag a box around the area you would like to print. Note dashed lines forming a box around area to print.



Select File Print. The Print Range will be set to Selected graphic. Click OK and the map will be sent to the printer.



NRCS SOILS 37A
3/95

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

DESCRIPTION SYMBOL

CULTURAL FEATURES

BOUNDARIES

- National, state, or province
- County or parish
- Minor civil division
- Reservation, (national forest or park, state forest or park)
- Land grant
- Limit of soil survey (label) and/or denied access areas
- Field sheet matchline & neatline
- Previously published survey

OTHER BOUNDARY (label)

- Airport, airfield — Davis airstrip
- Cemetery — St Johns Cemetery
- City / county Park — Central Park

STATE COORDINATE TICK

- LAND DIVISION CORNERS (section and land grants)
- GEOGRAPHIC COORDINATE TICK

TRANSPORTATION

- Divided roads
- Other roads
- # Trails

ROAD EMBLEMS & DESIGNATIONS

- Interstate — 79, 79 340
- Federal — 410, 410 224
- State — 92, 92 347
- County, farm, or ranch — 376

RAILROAD

POWER TRANSMISSION LINE (normally not shown)

PIPELINE (normally not shown)

FENCE (normally not shown)

LEVEES

- Without road
- With road
- With railroad
- Single side slope (showing actual feature location)

DAMS

- Medium or small — W

LANDFORM FEATURES

- Prominent Hill or Peak
- Soil Sample Site — S

* Cultural features for use in Illinois

DESCRIPTION SYMBOL

CULTURAL FEATURES (cont.)

MISCELLANEOUS CULTURAL FEATURES

- Farmland, house (omit in urban areas)
- Church
- School
- Other Religion (label) — Mt Carmel
- Located object (label) — Ranger Station
- Tank (label) — Petroleum
- Lookout Tower
- Oil and / or Natural Gas Wells
- Windmill
- Lighthouse

HYDROGRAPHIC FEATURES

STREAMS

- Perennial, double line
- Perennial, single line
- Intermittent
- Drainage end

DRAINAGE AND IRRIGATION

- Double line canal (label) — CANAL
- Perennial drainage and/or irrigation ditch
- Intermittent drainage and/or irrigation ditch

SMALL LAKES, PONDS, AND RESERVOIRS

- Perennial water
- Miscellaneous water
- Flood pool line — FLOOD POOL LINE

MISCELLANEOUS WATER FEATURES

- Spring
- Well, artesian
- Well, irrigation

DESCRIPTION SYMBOL

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS — DAM, W, Fe, BeC, M-W, LEVEE

LANDFORM FEATURES

ESCARPMENTS

- Bedrock
- Other than bedrock

SHORT STEEP SLOPE

GULLY

DEPRESSION, closed

SINKHOLE

EXCAVATIONS

PITS

- Borrow pit
- Gravel pit
- Mine or quarry

LANDFILL

MISCELLANEOUS SURFACE FEATURES

- Blowout
- Clay spot
- Gravelly spot
- Lava flow
- Marsh or swamp
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip
- Sodic spot
- Spoil area
- Stony spot
- Very stony spot
- Wet spot

RECOMMENDED AD HOC SOIL SYMBOLS

	SYMBOL_ID			SYMBOL_ID	
	1			23	
	2			24	
	3			25	
	4		Gray spot	26 GSP	
	5			27	
	6			28	
	7		Calcareous spot	29 CSP	
	8		Muck spot	30 MUC	
	9			31	
	10			32	
	11			33	
Dumps	12 DMP			34	
	13		Mine subsided Area	35 MSA	
	14			36	
Oil brine spot	15 OBS			37	
	16			38	
	17			39	
	18		Glacial Till spot	40 GLA	
	19			41	
Disturbed soil spot	20 DSS			42	
	21			43	
	22			44	

Descriptions of Special Features

Name	Description	Label
Blowout	A small saucer, cup, or trough-shaped hollow or depression formed by wind erosion, on a preexisting sand deposit. Typically 0.2 acre to 2.0 acres.	BLO
Borrow pit	An open excavation from which soil and underlying material have been removed, usually for construction purposes. Typically 0.2 acre to 2.0 acres.	BPI
Calcareous spot	An area in which the soil contains carbonates in the surface layer. The surface layer of the named soils in the surrounding map unit is non-calcareous. Typically 0.5 to 2.0 ares in size.	CSP
Clay spot	A spot where the surface layer is silty clay or clay in areas where the surface layer of the soils in the surrounding map unit is sandy loam, loam, silt loam, or coarser. Typically 0.2 acre to 2.0 acres.	CLA
Depression, closed	A shallow, saucer-shaped area that is slightly lower on the landscape than the surrounding area and is without a natural outlet for surface drainage. Typically 0.2 acre to 2.0 acres.	DEP
Disturbed soil spot	An area in which the soil has been removed and materials redeposited due to human activity. Typically 0.25 to 2.0 acres.	DSS
Dumps	Non-soil material that supports little or no vegetation. Typically 0.5 to 2.0 acres.	DMP
Escarpment, bedrock	A relatively continuous and steep slope or cliff, produced by erosion or faulting, that breaks the general continuity of more gently sloping land surfaces. Exposed material is hard or soft bedrock.	ESB
Escarpment, nonbedrock	A relatively continuous and steep slope or cliff, generally produced by erosion but in some places produced by faulting, that breaks the continuity of more gently sloping land surfaces. Exposed earthy material is nonsoil or very shallow soil.	ESO
Glacial till	An exposure of glacial till at the surface of the earth. Typically 0.25 to 2.0 acres.	GLA
Gravel pit	An open excavation from which soil and underlying material have been removed and used, without crushing, as a source of sand or gravel. Typically 0.2 acre to 2.0 acres.	GPI
Gravelly spot	A spot where the surface layer has more than 35 percent, by volume, rock fragments that are mostly less than 3 inches in diameter in an area with less than 15 percent rock fragments. Typically 0.2 acre to 2.0 acres.	GRA
Gully	A small channel with steep sides cut by running water through which water ordinarily runs only after a rain or after melting of ice or snow. It generally is an obstacle to wheeled vehicles and is too deep to be obliterated by ordinary tillage.	GUL
Iron bog	An accumulation of iron in the form of nodules, concretions, or soft masses on the surface or near the surface of soils. Typically 0.2 acre to 2.0 acres.	IBA
Landfill	An area of accumulated waste products of human habitation, either above or below natural ground level. Typically 0.2 acre to 2.0 acres.	LDF
Levee	An embankment that confines or controls water, especially one built along the LVS banks of a river to prevent overflow onto lowlands.	LVS

Name	Description	Label
Marsh or swamp	A water-saturated, very poorly drained area, intermittently or permanently covered by water. Sedges, cattails, and rushes are the dominant vegetation in marsh areas, and trees or shrubs are the dominant vegetation in swamps. Typically 0.2 acre to 2.0 acres.	MAR
Mine or quarry	An open excavation from which soil and underlying material have been removed and in which bedrock is exposed. Also denotes surface openings to underground mines. Typically 0.2 acre to 2.0 acres.	MPI
Mine subsided area	Areas that are lower than the soils in the surrounding map units due to subsurface coal mining. Typically 0.25 to 3 acres.	MSA
Miscellaneous water	A small, constructed water area that is used for industrial, sanitary, or mining applications and contains water most of the year. Typically 0.2 acre to 2.0 acres.	MIS
Muck spot	An area that occurs within an area of poorly drained or very poorly drained soil and that has a histic epipedon or an organic surface layer. The symbol is used only in map units consisting of mineral soil. Typically 0.2 acre to 2.0 acres.	MUC
Oil brine spot	An area of soil that has been severely damaged by the accumulation of oil brine, with or without liquid oily wastes. The area is typically barren but may have a vegetative cover of salt-tolerant plants. Typically 0.2 acre to 2.0 acres.	OBS
Perennial water	A small, natural or constructed lake, pond, or pit that contains water most of the year. Typically 0.2 acre to 2.0 acres.	WAT
Rock outcrop	An exposure of bedrock at the surface of the earth. Not used where the named soils of the surrounding map unit are shallow over bedrock or where “Rock outcrop” is a named component of the map unit. Typically 0.2 acre to 2.0 acres.	ROC
Saline spot	An area where the surface layer has an electrical conductivity of 8 mmhos/cm-1 more than the surface layer of the named soils in the surrounding map unit, in which electrical conductivity is 2 mmhos/cm-l or less. Typically 0.2 acre to 2.0 acres.	SAL
Sandy spot	A spot where the surface layer is loamy fine sand or coarser in areas where the surface layer of the named soils in the surrounding map unit is very fine sandy loam or finer. Typically 0.2 acre to 2.0 acres.	SAN
Severely eroded spot	An area where, on the average, 75 percent or more of the original surface layer has been lost because of accelerated erosion. Not used in map units in which “severely eroded,” “very severely eroded,” or “gullied” is part of the map unit name. Typically 0.2 acre to 2.0 acres	ERO
Short, steep slope	A narrow area of soil having slopes that are at least two slope classes steeper than the slope class of the surrounding map unit.	SLP
Sinkhole	A closed depression formed either by solution of the surficial rock or by collapse of underlying caves. Typically 0.2 acre to 2.0 acres.	SNK

Name	Description	Label
Slide or slip	A prominent landform scar or ridge caused by fairly recent mass movement or descent of earthy material resulting from failure of earth or rock under shear stress along one or several surfaces. Typically 0.2 acre to 2.0 acres	SLI
Sodic spot	An area where the surface layer has a sodium adsorption ratio that is at least 10 more than that of the surface layer of the named soils in the surrounding map unit, which have a sodium adsorption ratio of 5 or less. Typically 0.2 acre to 2.0 acres.	SOD
Spoil area	A pile of earthy materials, either smoothed or uneven, resulting from human activity. Typically 0.2 acre to 2.0 acres.	SPO
Stony spot	A spot where 0.01 to 0.1 percent of the surface cover is rock fragments that are more than 10 inches in diameter in areas where the surrounding soil has no surface stones. Typically 0.2 acre to 2.0 acres.	STN
Unclassified water	A small, natural or manmade lake, pond, or pit that contains water, of an unspecified nature, most of the year. Typically 0.2 acre to 2.0 acres.	UWT
Very stony spot	A spot where 0.1 to 3.0 percent of the surface cover is rock fragments that are more than 10 inches in diameter in areas where the surface cover of the surrounding soil is less than 0.01 percent stones. Typically 0.2 acre to 2.0 acres.	STV
Wet depression	A shallow, concave area within an area of poorly drained or very poorly drained soils in which water is ponded for intermittent periods. The concave area is saturated for appreciably longer periods of time than the surrounding soil. Typically 0.2 acre to 2.0 acres.	WDP
Wet spot	A somewhat poorly drained to very poorly drained area that is at least two drainage classes wetter than the named soils in the surrounding map unit. Typically 0.2 acre to 2.0 acres.	WET