United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with Illinois Agricultural Experiment Station

Soil Survey of Whiteside County, Illinois

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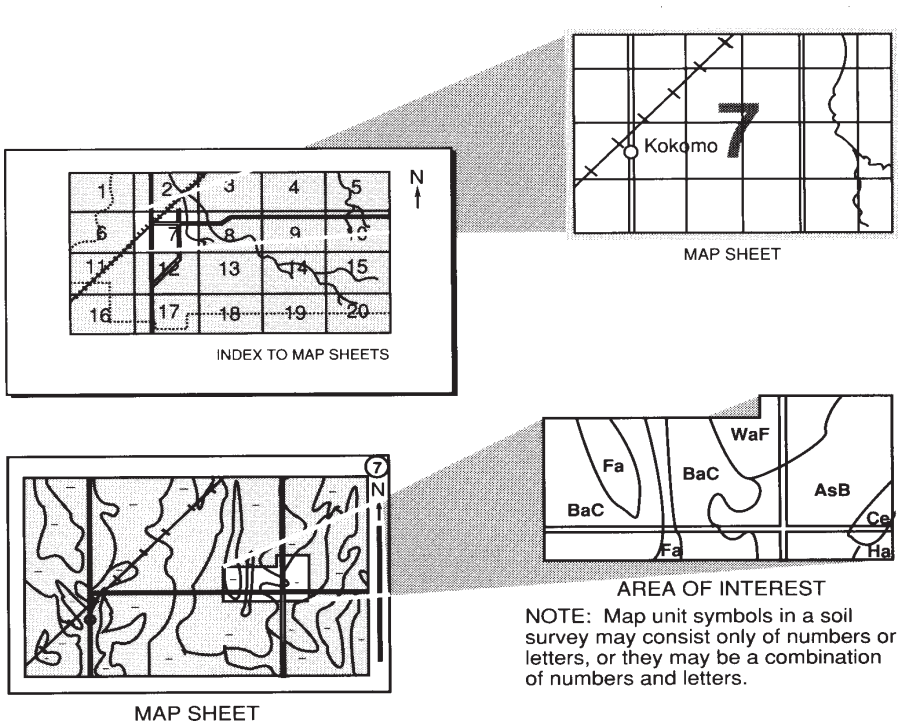
How To Use This Soil Survey

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 2003. Soil names and descriptions were approved in 2003. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2003. 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 Whiteside County Soil and Water Conservation District. Financial assistance was provided by the Whiteside 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: Contour stripcropping and grassed waterways in Whiteside County. Fayette soils are on the side slopes, and Greenbush soils are on the ridgetops.

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.

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Soil Survey of
Whiteside County, Illinois

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

Whiteside County is in northwestern Illinois (fig. 1). It has an area of 446,170 acres, or 697 square miles. It is bounded by Carroll and Ogle Counties on the north, Lee and Ogle Counties on the east, the Mississippi River and Rock Island County on the west, and Bureau and Henry Counties on the south.

Whiteside County was established in 1836. In 2000, the population was 60,653 (U.S. Department of Commerce, 2002). Morrison, the county seat, had a population of 4,402. Sterling, the largest town, had a population of 15,404.

This soil survey updates the survey of Whiteside County published in 1995 (Sabata, 1995) and subsequently updated at a scale of 1:24000 in 1997. The current update, at a scale of 1:12000, provides additional information and has larger maps, which show the soils in greater detail.

General Nature of the Survey Area

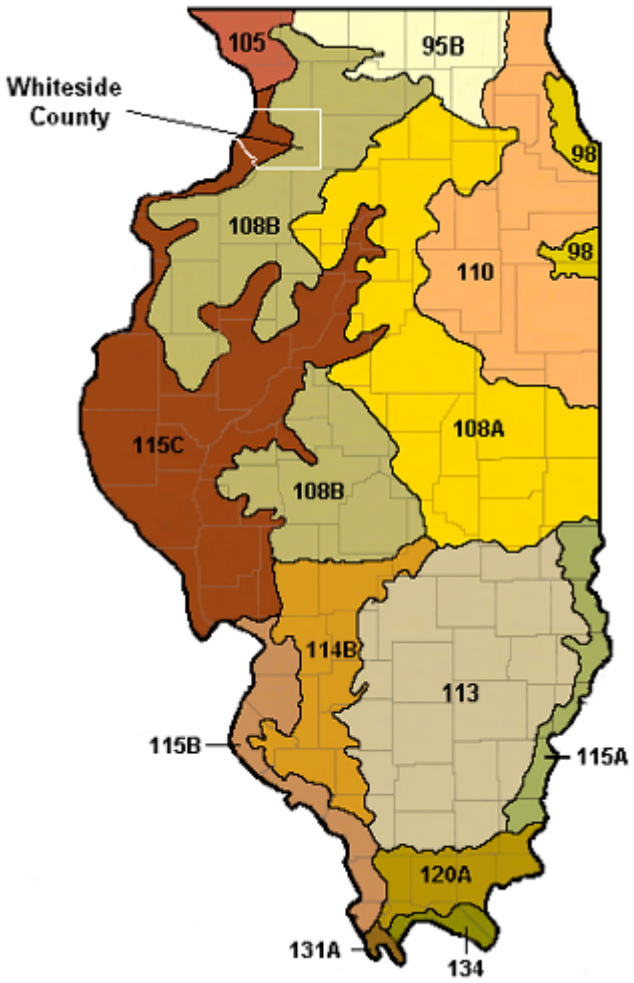
This section provides general information about the county. It describes transportation facilities and industry; farming; relief, physiography, and drainage; and climate.

Transportation Facilities and Industry

Whiteside County has a well developed system of transportation. U.S. Highways 84, 78, and 40 cross the county north and south. Interstate Highway 88 and U.S. Highway 30 cross the county east and west. The main secondary roads are blacktopped. Most rural areas are accessible by all-weather roads. Railroads furnish freight service to the county.

The Mississippi River and Lock and Dam No. 13 provide an excellent route for incoming and outgoing barge traffic (fig. 2). Barge terminals are at Albany and Fulton.

Several industries are established in the county, including hardware, appliances, steel, and farm equipment. The largest employers are in the Sterling and Rock Falls area where hardware, appliances, and steel rod are manufactured. Hardware is also manufactured in Morrison and Fulton. A number of rock quarries and sand and gravel pits provide materials for roads and building construction. Topsoil is mined commercially from the bottom land along the Cattail Channel (fig. 3).



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

110—Northern Illinois and Indiana Heavy Till Plain

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 Whiteside County and major land resource areas (MLRAs) in Illinois.

Farming

Farming has been a major enterprise in Whiteside County since the area was settled. In 1997, there were 1,039 operating farms in the county (Illinois Agricultural Statistics Service, 2001). The average farm size is about 304 acres. Corn, soybeans, wheat, and hay are the main crops. In 2001, the acreage used for corn was 189,600; for soybeans, 125,300; for wheat, 2,700; and for hay, less than 1,000 (Illinois Agricultural Statistics Service, 2001).

Hogs and cattle are the main livestock. In 2001, the total number of swine was 78,800 and the total number of cattle was 34,700 (Illinois Agricultural Statistics Service, 2001).

Relief, Physiography, and Drainage

The landscape of Whiteside County is generally characterized by four major landforms: uplands, outwash plains, stream terraces, and flood plains. These landforms are the products of continental glaciation and more recent stream erosion. The deposition of till and postglacial stream erosion have modified the original bedrock topography to create the present rolling terrain. The outwash plain consists of materials deposited by meltwater from the receding glacier. The flood plains and stream terraces are the result of the ongoing process of stream erosion. Stream courses have changed in the geologic past, resulting in several abandoned channels in the survey area (Anderson, 1968).

Figure 2.—The Mississippi River provides commercial and recreational opportunities in Whiteside County.

The uplands make up roughly the northern one-third to one-half of Whiteside County. They are divided by major stream channels and include the bluffs along the Mississippi River and Rock River flood plains. The uplands generally consist of 5 or more feet of loess over till and limestone bedrock, both of which are exposed at the surface in a few places along the steeper slopes. Elevation ranges from about 875 feet above sea level in the northeastern part of the county to about 575 feet above sea level near the base of the Mississippi River bluffs (fig. 4). Differences in local relief range to as much as 150 feet.

The southeastern part of the county south of the Rock River consists of a broad outwash plain. Stabilized sand dunes are common on the outwash plain. Smaller, scattered outwash areas also occur along some terraces. These formations were created where meltwater distributed sandy and loamy material westward from the receding glacial front to the east. Some parts of the outwash deposits were subsequently capped with a layer of loess, especially in the western half of the area. Elevation ranges from about 700 feet above sea level to 630 feet above sea level. Local relief is generally very low, but near the sand dunes it may be 30 to 70 feet.

The stream terraces are most extensive in the central part of the county immediately north of the Rock River flood plain. These areas are remnants of an old flood plain. Recent downcutting and channelization along the new flood plain have left the stream terrace positions at an elevation that is no longer subject to flooding. The terraces are typically separated from the active flood plain by a short, steep slope called a terrace escarpment. Elevation ranges from about 730 feet above sea level to 610 feet above sea level. Local relief is generally very low, commonly less than 10 feet.

The flood plains in the county are along the Mississippi, Rock, and Green Rivers and their adjoining tributaries. These major streams have changed course in the geologic past. Meredosia Slough and Cattail Channel, which connect the bottom land along the Mississippi and Rock Rivers, are old stream channels. The narrow, bedrock-constricted Rock Creek flood plain north of Morrison is an area where recent channelization has occurred across a pre-existing valley divide (Anderson, 1968). Elevation on the flood plains ranges from about 680 feet above sea level along major creeks in the northern part of the county to about 570 feet above sea level in Meredosia Slough near the Mississippi River. Local relief is very low, generally less than 10 feet.

Whiteside County is within the drainage basins of the Mississippi, Rock, and Green Rivers. Cattail Creek and Johnson Creek drain into the Mississippi River. Major tributaries that drain into the Rock River are Rock Creek and Elkhorn Creek. The main tributary of the Green River, the Winnebago drainage ditch, joins the river in Lee County.

Climate

Whiteside County is cold in winter. In summer it generally is hot but has occasional cool spells. Precipitation falls as snow during frequent snowstorms

Figure 3.—A stockpile of topsoil that has been mined from the bottom land along the Cattail Channel.

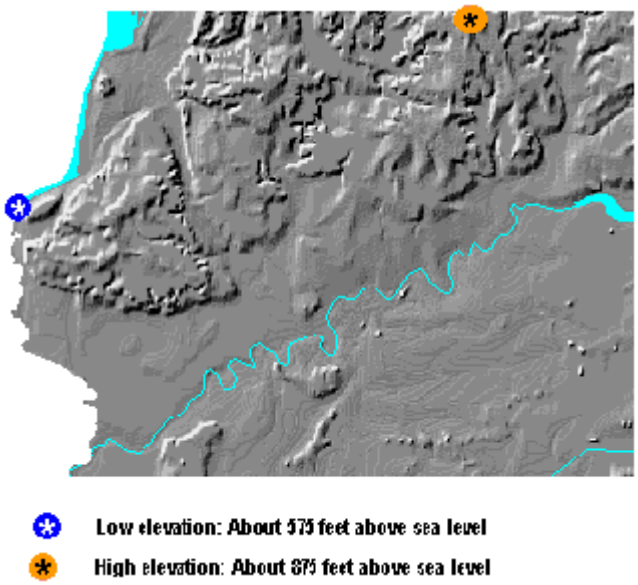


Figure 4.—A physiographic map of Whiteside County.

in winter and chiefly as rain showers, which often are heavy, during the warmer periods, when warm moist air moves in from the south. The amount of annual rainfall usually is adequate for corn, soybeans, and small grain.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Morrison 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.

In winter, the average temperature is 23 degrees F and the average daily minimum temperature is 14 degrees F. The lowest temperature on record, which occurred at Morrison on February 13, 1905, is -30 degrees. In summer, the average temperature is 72 degrees and the average daily maximum temperature is 83 degrees. The highest recorded temperature, which occurred at Morrison on July 14, 1936, is 112 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 37.60 inches. Of this total, 23.86 inches, or about 63 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 12.31 inches. The heaviest 1-day rainfall on record is 6.10 inches, which occurred on October 10, 1954. Thunderstorms occur on about 50 days each year.

The average seasonal snowfall is 34.7 inches. The greatest snow depth at any one time is 36 inches, occurring on February 18–19, 1979. On average, 60 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.

Tornadoes and severe thunderstorms strike occasionally. They are of local extent and of short duration and cause only sparse damage in narrow belts. Hailstorms sometimes occur during the warmer periods. The hail falls in scattered small areas.

How This Survey Was Made

This survey was made to provide updated information about the soils and miscellaneous areas in Whiteside 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 Whiteside 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.

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

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

Soil-forming processes act on deposited or accumulated geologic material. The characteristics of the soil at any given point are determined by the parent material, living organisms both on and in the soil, the climate, the topography, and the length of time that the forces of soil formation have acted on the soil material (Jenny, 1941).

Climate and living organisms are active factors of soil formation. As they act on the parent material that has accumulated through the weathering of rocks and that may have been relocated by water, glaciers, or wind, they slowly change the material into a natural body that has genetically related horizons. The effects of climate and living organisms are conditioned by topography. The parent material affects the kind of soil profile that forms. Finally, time is needed for changing the parent material into a soil. Usually, a long time is needed for the formation of distinct horizons. The importance of each factor differs from place to place, and each modifies the effect of the other four. In some areas one factor dominates the formation of a soil. Human activities, such as clearing forests, cultivating, and applying fertilizer, also affect soil formation.

Parent Material

Parent material is the unconsolidated mass in which a soil forms. It determines the chemical and mineralogical composition of the soil. Wind, glaciers, or meltwater from glaciers deposited some of the parent material in Whiteside County (Leighton and Brophy, 1961). In some areas the material was reworked and redeposited by subsequent actions of water and wind. Although all of the parent material in the county is of common glacial origin, its properties vary greatly, sometimes within small areas, depending on how the material was deposited. Loess, till, outwash, and alluvium are the dominant parent materials in the county. Parent materials of lesser extent include lacustrine deposits, organic material, and bedrock residuum.

Peoria loess is the major parent material in the county. The Mississippi River Valley was the main source of the loess. Wind picked up silt from the valley floor and redeposited it in the uplands. The loess is about 30 feet thick in nearly level areas on uplands. Osco soils formed in loess. These soils typically are moderately fine textured and have a strongly expressed structure.

Till is material laid down directly by glaciers with a minimum of water action. It consists of particles of different sizes that are mixed together. The small pebbles in till have sharp corners, indicating that they have not been worn by washing water. All of the till in the county is of Illinoian age. In some areas it retains a Sangamon paleosol. In many areas the paleosol has been removed by erosion. Hickory and other soils formed in these areas. In a few areas the till contains carbonates within a depth of 40 inches. Birkbeck and other soils formed in these areas.

Outwash material is deposited by running water from melting glaciers. The size of the particles varies, depending on the speed of the stream that carried the material. When the water slowed down, the coarser particles were deposited. The finer particles, such as very fine sand, silt, and clay, were carried by the more slowly moving water. Outwash deposits generally consist of layers of particles that are similar in size, such as silt loam, sandy loam, and sand. In many areas a thin layer of loess covers the outwash deposits. Ogle and Richwood soils are examples of soils that formed in this material. In some of these areas, the outwash is a thin deposit overlying till.

The alluvium in the county was recently deposited by floodwater from streams. It varies in texture, depending on the speed of the water from which it was deposited. Examples of alluvial soils are Otter and Sawmill soils.

Lacustrine material was deposited from still or ponded glacial meltwater. After the coarser fragments were deposited as outwash by moving water, the finer particles, such as very fine sand, silt, and clay, settled in the still water. As a result, the soils that formed in lacustrine deposits are typically fine textured. Niota

soils are examples of soils that formed in lacustrine material.

Organic material is made up of deposits of plant remains. After the glaciers withdrew from the area, water was left standing in depressions on outwash plains and lake plains. As the grasses and sedges growing around the edges of these lakes died, their remains fell to the bottom. Later, water-tolerant trees grew in the areas. As these trees died, their residue became part of the organic accumulation. When the lakes eventually were filled with organic material, areas of muck and peat formed. Palms soils are examples of soils that formed in organic material.

Limestone bedrock is predominantly buried by loess, till, outwash, and alluvium in Whiteside County. Along side slopes on dissected uplands, however, the material weathered from till and limestone bedrock (with or without a thin loess cap) is the parent material of some soils. Woodbine soils are examples.

Living Organisms

Plants are the principal living organisms affecting the soils in Whiteside County. Bacteria, fungi, and earthworms, however, also have affected soil formation. The chief contribution of plant and animal life is the addition of organic matter and nitrogen to the soil. The kind of organic material on and in the soil depends on the kind of plants that grew on the soil. The remains of these plants accumulate in the surface layer, decay, and eventually become organic matter. The roots of the plants provide channels for the downward movement of water through the soil and add organic material as they decay. Bacteria in the soil help to break down the organic matter and thus help to provide plant nutrients.

The native vegetation in the county was trees and prairie grasses. The sloping soils formed mainly under forests of oak, hickory, and similar trees. The nearly level soils formed under prairie grasses. They have a darker and thicker surface layer than the soils that formed under forest vegetation. Also, they have a higher content of organic matter. Fayette soils are examples of soils that formed under forest vegetation. Muscatune soils formed under prairie vegetation.

Climate

Climate is an important factor in the formation of soils. It influences the kind of plant and animal life on and in the soil. Precipitation affects the weathering of minerals and the transporting of soil material. Temperature determines the rate of chemical reaction that occurs in the soil. The general climate has had an important overall influence on the characteristics of the soils, but it does not cause major differences among soils in a relatively small area, such as a county.

The climate in Whiteside County is temperate and humid. It is probably similar to the climate under which the soils formed.

Topography

Topography, or relief, has a marked influence on the soils through its effect on natural drainage, erosion, plant cover, and soil temperature. In Whiteside County, the slopes dominantly range from 0 to 60 percent. Natural soil drainage ranges from excessively drained on sandy ridgetops to very poorly drained in depressions.

Topography influences the formation of soils by affecting runoff and drainage. Drainage in turn, through its effect on aeration of the soils, determines the color of the soil. Runoff is most rapid on the steeper slopes, but in low areas, water is temporarily ponded. Water and air move freely through well drained soils but slowly through poorly drained soils. In well aerated soils, the iron compounds that give most soils their color are brightly colored. In poorly aerated soils, the colors are gleyed and mottled. Fayette soils are examples of well drained, well aerated soils. Sable soils are examples of poorly drained, poorly aerated soils.

Time

The length of time needed for the formation of a soil depends on the other factors of soil formation. Differences in the length of time that the parent materials have been in place are commonly reflected in the degree of profile development. Soils form more rapidly and are more acid if the parent material is low in the content of calcium carbonate. The more rapidly permeable soils form more readily than slowly permeable soils because soluble minerals are leached more quickly. 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.

The soils in Whiteside County range from young to mature. Most of the soils on uplands are moderately developed. The soils in the southern part of the county and on terraces are weakly developed.

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 county. 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 clay loam, 10 to 18 percent slopes, severely 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 major soils or miscellaneous areas. These map units are called complexes. A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Seaton-Timula silt loams, 18 to 35 percent slopes, eroded, is an example.

This survey includes miscellaneous areas. Such areas have little or no soil material and support little or no vegetation. The 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.

Ade Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Lamellic Argiudolls

Typical Pedon

Ade loamy fine sand, 2 to 7 percent slopes; 1,820 feet east and 105 feet north of the southwest corner of sec. 15, T. 20 N., R. 4 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 42 minutes 52 seconds N. and long. 90 degrees 01 minute 43 seconds W., NAD 27:

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) loamy fine sand, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; moderately acid; abrupt smooth boundary.

BA—10 to 16 inches; brown (10YR 4/3) loamy fine sand; weak medium subangular blocky structure; friable; many faint very dark grayish brown (10YR 3/2) organic films on faces of peds; slightly acid; clear smooth boundary.

Bw—16 to 27 inches; dark yellowish brown (10YR 4/4) loamy fine sand; weak medium subangular blocky structure; friable; slightly acid; abrupt smooth boundary.

E&Bt1—27 to 41 inches; dark yellowish brown (10YR 4/4) fine sand (E); single grain; loose; lamellae of brown (7.5YR 4/4) loam (Bt) about 6 inches apart and 4 to 5 inches thick; moderate medium subangular blocky structure; friable; slightly acid; clear smooth boundary.

E&Bt2—41 to 60 inches; yellowish brown (10YR 5/4) fine sand (E); single grain; loose; lamellae of brown (7.5YR 4/4) sandy loam and loamy sand (Bt) about 5 inches apart and 1 to 3 inches thick; weak medium subangular blocky structure; friable; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Ap or A horizon:
- Hue—10YR
- Value—2 or 3
- Chroma—1 to 3
- Texture—loamy fine sand, loamy sand, or fine sand

Bw horizon:
- Hue—10YR or 7.5YR
- Value—4 or 5
- Chroma—3 to 6
- Texture—loamy fine sand or fine sand

E part of the E&Bt horizon:
- Hue—10YR
- Value—4 to 6
- Chroma—3 to 6
- Texture—loamy fine sand, fine sand, or sand

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

98B—Ade loamy fine sand, 2 to 7 percent slopes

Setting

Landform: Dunes
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have silt loam in the lower part of the subsoil
- Soils that are dominantly fine sand throughout

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

Properties and Qualities of the Ade Soil

Parent material: Eolian sands
Drainage class: Somewhat 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: 1 to 3 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

Adrian Series

Taxonomic classification: Sandy or sandy-skeletal, mixed, euic, mesic Terric Haplosaprists

Typical Pedon

Adrian muck, 0 to 2 percent slopes; 2,080 feet west and 1,200 feet south of the northeast corner of sec. 35, T. 19 N., R. 4 E.; in Whiteside County, Illinois; USGS Spring Hill topographic quadrangle; lat. 41 degrees 35 minutes 42 seconds N. and long. 90 degrees 00 minutes 18 seconds W., NAD 27:

Oap—0 to 10 inches; sapric material, black (N 2/0) broken face and rubbed; about 5 percent fiber, 2 percent rubbed; weak fine subangular blocky structure parting to weak fine granular; friable; strongly acid; abrupt smooth boundary.

Oa—10 to 22 inches; sapric material, black (N 2/0) broken face, black (5YR 2.5/1) rubbed; about 15 percent fiber, 2 percent rubbed; massive; friable; strongly acid; abrupt smooth boundary.

C—22 to 60 inches; pale brown (10YR 6/3) and brown (10YR 5/3) sand; single grain; loose; thin strata of dark grayish brown (10YR 4/2) sandy loam between depths of 22 and 28 inches; few fine faint light brownish gray (10YR 6/2) iron depletions; few medium faint yellowish brown (10YR 5/4) and few medium distinct strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; few fine pebbles; neutral.

Range in Characteristics

Thickness of organic deposits: 16 to 51 inches

Surface tier:
Hue—5YR to 10YR or N
Value—2
Chroma—0 to 3

C horizon:
Hue—5YR to 5Y or N
Value—2 to 6
Chroma—0 to 4
Texture—coarse sand to loamy sand or the gravelly or very gravelly analogs of these textures

777A—Adrian muck, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Depressions

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the substratum
- Soils that have 60 or more inches of muck over the underlying mineral soil
- Soils that are underlain by sedimentary peat

Dissimilar soils:
- The poorly drained Gilford and Marshan soils in landform positions similar to those of the Adrian soil

Properties and Qualities of the Adrian Soil

Parent material: Herbaceous organic material over outwash
Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow
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 11.1 inches
Content of organic matter in the surface layer: 55 to 75 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Ponding depth: 1 foot, November through June
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: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

7777A—Adrian muck, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the substratum
- Soils that have 60 or more inches of muck over the underlying mineral soil
- Soils that are underlain by sedimentary peat

Dissimilar soils:
- Soils that are subject to occasional or frequent flooding

Properties and Qualities of the Adrian Soil

Parent material: Herbaceous organic material over alluvium
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
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 13.8 inches
Content of organic matter in the surface layer: 55 to 75 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Ponding depth: 1 foot, November through June
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

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; 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, dark grayish brown (2.5Y 4/2) 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, sandy clay loam, and clay loam

3302A—Ambraw silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface layer more than 24 inches thick
- Soils that contain more clay
- Soils that have a calcareous subsoil

Dissimilar soils:
- Soils that are subject to less frequent flooding
- The moderately well drained Medway soils in the higher positions

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 8.8 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: At the surface, January through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible

Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very low

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

7302A—Ambraw clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface layer more than 24 inches thick
- Soils that contain more clay
- Soils that have a calcareous subsoil
- Soils that contain more sand
- Soils that are underlain by limestone bedrock within a depth of 60 inches

Dissimilar soils:
- Soils that are subject to more frequent flooding

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 9.7 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: At the surface, January through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

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

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface layer more than 24 inches thick
- Soils that contain more clay
- Soils that have a calcareous subsoil
- Soils that do not have a seasonal high water table within a depth of 2 feet

Dissimilar soils:
- Soils that are not subject to flooding
- The moderately well drained Medway soils in the higher positions

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 through May
Ponding depth: 0.5 foot, January through May

Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

2408A—Aquents-Urban land complex, 0 to 2 percent slopes

Setting

Landform: Depressions

Map Unit Composition

Aquents and similar soils: 60 percent
Urban land: 40 percent

Minor Components

Soils that are similar to the Aquents:
- Soils that are mostly silt loam or silty clay loam
- Soils that do not have a seasonal high water table at the surface

Properties and Qualities of the Aquents

Parent material: Excavated spoil or earthy fill
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Variable
Permeability below a depth of 60 inches: Variable
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: High
Content of organic matter in the surface layer: Moderately high
Shrink-swell potential: Not rated
Depth and months of the highest apparent seasonal high water table: At the surface all year
Flooding: None
Potential for frost action: Not rated
Hazard of corrosion: Not rated
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

General Definition of Urban Land

- Urban land consists of areas covered by streets, parking lots, buildings, and other structures.

Interpretive Groups

Land capability classification: Not assigned
Prime farmland status: Not prime farmland
Hydric soil status: Aquents—hydric

Ashdale Series

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

Typical Pedon

Ashdale silt loam, 2 to 5 percent slopes; 18 feet east and 660 feet south of the center of sec. 36, T. 22 N., R. 11 E.; in Lee County, Illinois; USGS Ashton topographic quadrangle; lat. 41 degrees 51 minutes 04 seconds N. and long. 89 degrees 10 minutes 43 seconds W., NAD 27:

Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few fine roots throughout; slightly acid; abrupt smooth boundary.

AB—9 to 13 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—13 to 19 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to moderate fine granular; friable; few fine roots between peds; common faint dark grayish brown (10YR 3/2) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—19 to 26 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—26 to 35 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine prismatic structure parting to moderate fine subangular blocky; firm; few fine roots between peds; few faint brown (10YR 4/3) clay films on faces of peds; few distinct light brownish gray (10YR 6/2) (dry) clay depletions on faces of peds; slightly acid; clear smooth boundary.

Bt4—35 to 44 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; few faint brown

(10YR 4/3) clay films on faces of peds; few distinct light brownish gray (10YR 6/2) (dry) clay depletions on faces of peds; slightly acid; clear smooth boundary.

Bt5—44 to 48 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; firm; few fine roots between peds; few faint brown (10YR 4/3) clay films on faces of peds; 1 percent pebbles about 1 to 5 mm in diameter; neutral; clear smooth boundary.

2BC—48 to 52 inches; mixed yellowish red (5YR 4/6) and dark yellowish brown (10YR 4/4) silty clay; moderate fine subangular blocky structure; firm; few fine roots between peds; neutral; clear smooth boundary.

2R—52 inches; mixed brownish yellow (10YR 6/6) and reddish brown (5YR 4/4), fractured limestone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the loess: 36 to 50 inches
Thickness of the residuum: 2 to 20 inches
Thickness of the solum: 40 to 60 inches
Depth to bedrock: 40 to 60 inches

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

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

2BC horizon:
Hue—5YR to 10YR
Value—3 to 5
Chroma—3 to 6
Texture—silty clay or clay

411B—Ashdale silt loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that contain more sand in the surface layer and the upper part of the subsoil
- Soils that have fractured limestone bedrock within a depth of 40 inches
- Soils that have thin sandy subhorizons in the lower part of the subsoil

Dissimilar soils:
- The well drained Ogle soils on summits and shoulders

Properties and Qualities of the Ashdale Soil

Parent material: Loess over residuum
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity to a depth of 60 inches: About 10.5 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Atterberry Series

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

Typical Pedon

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 prominent 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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have a lighter colored surface layer
- Soils that do not have a seasonal high water table within a depth of 3 feet
- Soils that have a dark surface layer more than 10 inches thick

Dissimilar soils:
- 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 through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Beaucoup Series

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

Typical Pedon

Beaucoup silty clay loam, 0 to 2 percent slopes, rarely flooded; 1,540 feet north and 1,860 feet east of the southwest corner of sec. 26, T. 20 N., R. 4 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 41 minutes 21 seconds N. and long. 90 degrees 00 minutes 34 seconds W., NAD 27:

Ap—0 to 10 inches; black (N 2/0) silty clay loam, very dark gray (10YR 3/1) dry; weak medium and fine subangular blocky structure parting to moderate fine granular; friable; neutral; abrupt smooth boundary.

AB—10 to 16 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium subangular blocky structure parting to moderate fine granular; friable; few fine distinct dark yellowish brown (10YR 4/4) masses of iron oxide in the matrix; neutral; clear smooth boundary.

Bg1—16 to 24 inches; dark gray (10YR 4/1) silty clay loam; moderate medium and fine subangular blocky structure; friable; few fine distinct dark yellowish brown (10YR 4/4) masses of iron oxide in the matrix; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.

Bg2—24 to 33 inches; dark gray (10YR 4/1) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine distinct brown (10YR 5/3) iron masses in the matrix; few fine iron-manganese concretions; neutral; clear smooth boundary.

Bg3—33 to 43 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine prominent dark yellowish brown (10YR 4/4) masses of iron oxide in the matrix; neutral; clear smooth boundary.

BCg—43 to 50 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak medium prismatic structure; friable; very dark gray (10YR 3/1) krotovinas 2 inches wide at a depth of 46 inches; few fine prominent dark yellowish brown (10YR 4/6) masses of iron oxide in the matrix; slightly alkaline; gradual smooth boundary.

Cg—50 to 60 inches; grayish brown (2.5Y 5/2) and light brownish gray (2.5Y 6/2) silt loam; massive; friable; common medium and fine prominent strong brown (7.5YR 4/6) masses of iron oxide in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the solum: 35 to 65 inches

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

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

BCg and/or Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silty clay loam or silt loam; thin strata of loam, sandy loam, fine sandy loam, or very fine sandy loam in some pedons

7070A—Beaucoup silty clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are somewhat poorly drained
- Soils that are stratified within a depth of 10 inches

Dissimilar soils:
- The somewhat poorly drained Elburn soils on adjacent low terrace summits
- Soils that do not have a seasonal high water table within a depth of 6 feet; on adjacent low terrace summits and shoulders

Properties and Qualities of the Beaucoup 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
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: 5 to 6 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Ponding depth: As much as 0.5 foot during wet periods
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very low

Interpretive Groups

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

Bertrand Series

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

Typical Pedon

Bertrand silt loam, 2 to 5 percent slopes; 1,540 feet west and 2,280 feet south of the northeast corner of sec. 17, T. 21 N., R. 7 E.; in Whiteside County, Illinois; USGS Sterling topographic quadrangle; lat. 41 degrees 48 minutes 34 seconds N. and long. 89 degrees 42 minutes 50 seconds W., NAD 27:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; friable; neutral; abrupt smooth boundary.

E—9 to 12 inches; brown (10YR 4/3) silt loam; weak medium platy structure; friable; slightly acid; clear smooth boundary.

Bt1—12 to 17 inches; yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; common faint brown (10YR 4/3) clay films on faces of peds; few faint pale brown (10YR 6/3) (dry) clay depletions on faces of peds; slightly acid; clear smooth boundary.

Bt2—17 to 25 inches; yellowish brown (10YR 5/4) silt loam; moderate medium and fine subangular blocky structure; friable; many faint brown (10YR 4/3) clay films on faces of peds; few faint pale brown (10YR 6/3) (dry) clay depletions on faces of peds; moderately acid; clear smooth boundary.

Bt3—25 to 33 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few faint pale brown (10YR 6/3) (dry) clay depletions on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of iron in the matrix; few fine

manganese stains; strongly acid; clear smooth boundary.

Bt4—33 to 40 inches; yellowish brown (10YR 5/4) silt loam; moderate coarse subangular blocky structure; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few faint pale brown (10YR 6/3) (dry) clay depletions on faces of peds; many sand grains on faces of peds; few fine faint pale brown (10YR 6/3) and many fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; few fine manganese stains; strongly acid; clear smooth boundary.

2Bt5—40 to 72 inches; yellowish brown (10YR 5/4) silt loam; thin strata of loam and sandy loam; moderate coarse subangular blocky structure; friable; common faint brown (10YR 4/3) clay films on faces of peds; few faint pale brown (10YR 6/3) (dry) clay depletions on faces of peds; few fine faint pale brown (10YR 6/3) and many fine distinct yellowish brown (10YR 5/6) masses of iron in the matrix; few fine manganese stains; strongly acid; clear smooth boundary.

2C—72 to 80 inches; yellowish brown (10YR 5/4), stratified silt loam and loamy sand; thin strata of brown (7.5YR 5/4) sandy loam; massive; friable; many fine distinct yellowish brown (10YR 5/6) masses of iron in the matrix; few fine rounded manganese concentrations; strongly acid.

Range in Characteristics

Thickness of the loess: 40 to 55 inches
Thickness of the solum: 55 to 72 inches

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

E horizon:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam

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

2Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—stratified silt loam, loam, fine sandy loam, sandy loam, or loamy fine sand

2C horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—stratified silt loam, loam, fine sandy loam, sandy loam, or loamy sand

486B—Bertrand silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have loamy material within a depth of 40 inches
- Soils that are silt loam throughout
- Soils that have a seasonal high water table within a depth of 4 to 6 feet
- Soils that are underlain by loamy till within a depth of 60 inches
- Soils in nearly level areas

Dissimilar soils:
- The somewhat poorly drained Elburn soils in low areas
- The somewhat poorly drained Orion soils in drainageways

Properties and Qualities of the Bertrand Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
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 11.5 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
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: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

486C2—Bertrand silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have loamy material within a depth of 40 inches
- Soils that are silt loam throughout
- Soils that have a seasonal high water table within a depth of 4 to 6 feet
- Soils that are underlain by loamy till within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Orion soils in drainageways

Properties and Qualities of the Bertrand Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately 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 11.5 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

Birkbeck Series

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

Typical Pedon

Birkbeck silt loam, 2 to 5 percent slopes; 792 feet north and 2,442 feet west of the southeast corner of sec. 24, T. 16 N., R. 10 E.; in Bureau County, Illinois; USGS Depue topographic quadrangle; lat. 41 degrees 21 minutes 07 seconds N. and long. 89 degrees 17 minutes 10 seconds W., NAD 27:

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; few very fine and fine roots throughout; slightly acid; abrupt smooth boundary.

Bt1—10 to 14 inches; yellowish brown (10YR 5/4) silt loam; moderate fine 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.

Bt2—14 to 23 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine 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.

Bt3—23 to 32 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few prominent light gray (10YR 7/2) (dry) clay depletions on faces of peds; few fine distinct grayish brown (10YR 5/2) iron depletions; common fine distinct dark yellowish brown (10YR 4/6) masses of iron in the matrix; common prominent black (5YR 2/1) soft accumulations of iron-manganese throughout the matrix; moderately acid; clear smooth boundary.

Bt4—32 to 42 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few prominent light gray (10YR 7/2) (dry) clay depletions on faces of peds; many fine distinct light brownish gray (10YR 6/2) iron depletions; common fine distinct dark yellowish brown (10YR 4/6) masses of iron in the matrix; common prominent black (5YR 2/1) soft accumulations of iron-manganese throughout the matrix; moderately acid; clear smooth boundary.

Bt5—42 to 57 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few prominent light gray (10YR 7/2) (dry) clay depletions on faces of peds; common medium distinct light brownish gray (10YR 6/2) iron depletions; few fine prominent dark brown (7.5YR 3/4) masses of iron in the matrix; common prominent black (5YR 2/1) soft accumulations of iron-manganese throughout the matrix; moderately acid; clear smooth boundary.

2Bt6—57 to 60 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure; friable; few faint brown (10YR 4/3) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions; common fine distinct dark yellowish brown (10YR 4/6) masses of iron in the matrix; moderately acid.

Range in Characteristics

Thickness of the loess: 40 to 60 inches
Depth to free carbonates: 44 to 70 inches
Thickness of the solum: 44 to more than 60 inches

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam or silty clay loam

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

2Bt or 2BC horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture—clay loam, loam, silty clay loam, or silt loam

2C horizon (if it occurs):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—loam, clay loam, silty clay loam, or silt loam

233C2—Birkbeck silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have loamy material within a depth of 40 inches
- Soils that are silt loam throughout the subsoil
- Soils that do not have a seasonal high water table within a depth of 6 feet
- Soils that have thin sandy subhorizons in the subsoil

Dissimilar soils:
- The somewhat poorly drained Orion soils in drainageways

Properties and Qualities of the Birkbeck Soil

Parent material: Loess over loamy till
Drainage class: Moderately 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 10.3 inches
Content of organic matter in the surface layer: 1.0 to 2.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium

Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

Blackoar Series

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

Typical Pedon

Blackoar silt loam, 0 to 2 percent slopes, rarely flooded; 100 feet west and 1,960 feet north of the southeast corner of sec. 21, T. 20 N., R. 4 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 42 minutes 18 seconds N. and long. 90 degrees 02 minutes 44 seconds W., NAD 27:

Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; neutral; abrupt smooth boundary.

A—9 to 13 inches; very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure parting to moderate fine granular; friable; neutral; clear smooth boundary.

Bg1—13 to 23 inches; dark grayish brown (2.5Y 4/2) silt loam; moderate medium and fine subangular blocky structure; friable; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; very dark gray (10YR 3/1) krotovina 1 inch wide at a depth of 22 inches; common fine distinct dark yellowish brown (10YR 4/4) and common fine prominent brown (7.5YR 4/4) masses of iron in the matrix; neutral; clear smooth boundary.

Bg2—23 to 37 inches; dark grayish brown (2.5Y 4/2) silt loam; moderate medium subangular blocky structure; friable; common fine and medium prominent brown (7.5YR 4/4) masses of iron in the matrix; common fine rounded iron-manganese concretions; neutral; clear smooth boundary.

BCg—37 to 58 inches; dark grayish brown (2.5Y 4/2) and dark gray (10YR 4/1) silt loam; weak medium prismatic structure; friable; common fine and medium prominent brown (7.5YR 4/4) masses of iron in the matrix; common fine rounded iron-manganese concretions; neutral; clear smooth boundary.

Cg—58 to 60 inches; dark gray (5Y 4/1) silt loam; massive; friable; few fine prominent brown (7.5YR 4/4) masses of iron in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches
Thickness of the solum: 36 to 60 inches

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

Bg horizon:
Hue—2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam or silt loam that has thin strata of silty clay loam

BCg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam or silt loam that has thin strata of silty clay loam

Cg horizon:
Hue—2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam

7603A—Blackoar silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

Blackoar 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 1 to 3 feet
- Soils that contain more clay
- Soils that have a dark surface layer more than 24 inches thick
- Soils that have carbonates in the subsoil and underlying material
- Soils that have a deposit of silt loam overwash on the surface

Dissimilar soils:
- Soils that are subject to more frequent flooding

Properties and Qualities of the Blackoar 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: 2 to 4 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are not calcareous
- Soils in which the surface soil is less than 24 inches thick
- Soils that contain more sand and less silt

Dissimilar soils:
- The moderately well drained Medway soils on the slightly higher parts of 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, November through June
Ponding depth: As much as 0.5 foot during wet periods
Frequency and most likely period of flooding: Frequent, November through June (fig. 5)
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

Map Unit Composition

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

Figure 5.—Early spring flooding in an area of Calco silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded.

Minor Components

Similar soils:
- Soils that are not calcareous
- Soils in which the surface soil is less than 24 inches thick
- Soils that contain more sand and less silt

Dissimilar soils:
- The moderately well drained Medway soils on the higher parts of 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 through May
Ponding depth: As much as 0.5 foot during wet periods
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface layer less than 30 inches thick
- Soils that have thin sandy layers in the substratum
- Soils that have a deposit of light-colored silt loam overwash
- Soils that have less clay in the surface layer and the subsoil

Dissimilar soils:
- The moderately well drained Du Page soils in the slightly higher positions

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 through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

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) masses of iron oxide accumulation 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) masses of iron oxide accumulation 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 4/4) and dark yellowish brown (10YR 4/4)

masses of iron oxide accumulation 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 20 inches
Thickness of the solum: 30 to 55 inches

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

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

BCg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 8
Chroma—1 to 3
Texture—silt loam or silt loam that has thin strata of loam, fine sandy loam, or sandy loam

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 8
Chroma—1 to 3
Texture—silt loam or silt loam that has thin strata of loam, fine sandy loam, or sandy loam

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

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the surface soil is either more than 24 inches thick or less than 10 inches thick
- Soils that have a seasonal high water table at a depth of more than 3 feet
- Soils that contain more clay
- Soils that have lighter colored silt loam overwash on the surface

Dissimilar soils:
- The poorly drained Beaucoup soils in the slightly lower positions
- Soils in the slightly higher positions that are subject to less frequent flooding

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: 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 through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the surface soil is either more than 24 inches thick or less than 10 inches thick
- Soils that have a seasonal high water table at a depth of more than 3 feet
- Soils that contain more clay
- Soils that have lighter colored silt loam overwash on the surface

Dissimilar soils:
- The poorly drained Beaucoup soils in the slightly lower positions
- Soils in the slightly lower positions that are subject to more frequent flooding

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: 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 through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Cohoctah Series

Taxonomic classification: Coarse-loamy, mixed, active, mesic Fluvaquentic Endoaquolls

Typical Pedon

Cohoctah loam, 0 to 2 percent slopes, occasionally flooded; 1,420 feet north and 820 feet west of the southeast corner of sec. 27, T. 19 N., R. 7 E.; in Whiteside County, Illinois; USGS New Bedford topographic quadrangle; lat. 41 degrees 36 minutes 12 seconds N. and long. 89 degrees 40 minutes 24 seconds W., NAD 27:

Ap—0 to 10 inches; black (N 2/0) loam, very dark gray (10YR 3/1) dry; weak medium subangular blocky structure parting to moderate fine granular; friable; common very fine roots; slightly acid; abrupt wavy boundary.

A—10 to 19 inches; black (N 2/0) loam; thin strata of very dark grayish brown (10YR 3/2) sandy loam, clay loam, and sand; dark gray (10YR 4/1) dry; weak fine and medium subangular blocky structure; friable; common very fine roots throughout; few fine prominent dark yellowish brown (10YR 4/4) masses of iron oxide accumulation in the matrix; neutral; clear wavy boundary.

Cg1—19 to 28 inches; grayish brown (10YR 5/2) loamy sand; thin strata of black (N 2/0) loam and sandy loam; weak medium and coarse subangular blocky structure; very friable; common fine faint brown (10YR 5/3) and few fine distinct yellowish brown (10YR 5/4) masses of iron oxide accumulation in the matrix; neutral; clear wavy boundary.

Cg2—28 to 40 inches; pale brown (10YR 6/3) fine sand; thin strata of very dark gray (10YR 3/1), very dark grayish brown (10YR 3/2), and dark grayish brown (10YR 4/2) sandy loam and loam; single grain; loose; neutral; gradual wavy boundary.

Cg3—40 to 60 inches; pale brown (10YR 6/3) sand; thin strata of very dark grayish brown (10YR 3/2) loam; single grain; loose; few fine faint light brownish gray (10YR 6/2) iron depletions; few fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Ap or A horizon:
Hue—10YR, 2.5Y, or N
Value—2 or 3
Chroma—0 to 2
Texture—loam, silt loam, sandy loam, or fine sandy loam

Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 to 6
Chroma—0 to 3
Texture—loam, sandy loam, loamy sand, fine sand, or sand that has thin strata of coarser textured material

8166A—Cohoctah loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Cohoctah and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have a dark surface layer more than 24 inches thick
- Soils that contain more clay
- Soils that contain more sand in the upper part

Properties and Qualities of the Cohoctah Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately rapid
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 9.9 inches
Content of organic matter in the surface layer: 3 to 6 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

BE—9 to 16 inches; brown (10YR 4/3) sand; single grain; loose; neutral; gradual wavy boundary.

Bw1—16 to 29 inches; dark yellowish brown (10YR 4/4) sand; single grain; loose; slightly acid; gradual wavy boundary.

Bw2—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 the 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 the 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 the 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

Map Unit Composition

Coloma and similar soils: 100 percent

Minor Components

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

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

Map Unit Composition

Coloma and similar soils: 100 percent

Minor Components

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

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
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
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

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

Denrock Series

Taxonomic classification: Fine, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Denrock silt loam, 0 to 2 percent slopes; 100 feet south and 740 feet west of the northeast corner of sec. 7, T. 19 N., R. 5 E.; in Whiteside County, Illinois; USGS Prophetstown topographic quadrangle; lat. 41 degrees

39 minutes 20 seconds N. and long. 89 degrees 57 minutes 42 seconds W., NAD 27:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure parting to weak medium granular; friable; moderately acid; abrupt smooth boundary.

A—7 to 13 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak medium subangular blocky structure parting to weak medium granular; friable; many distinct dark brown (7.5YR 3/2) organic coatings on faces of peds; moderately acid; clear smooth boundary.

BA—13 to 18 inches; brown (7.5YR 4/4) silty clay loam; moderate medium and fine subangular blocky structure; friable; few distinct dark brown (7.5YR 3/2) organic coatings on faces of peds; few distinct reddish brown (5YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt1—18 to 26 inches; reddish brown (5YR 4/4) silty clay loam; moderate medium and fine subangular blocky structure; friable; many faint reddish brown (5YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt2—26 to 36 inches; reddish brown (5YR 4/4) silty clay; moderate medium prismatic structure parting to strong medium angular blocky; firm; common faint reddish brown (5YR 4/3) clay films on faces of peds; few fine prominent brown (7.5YR 5/2) and red (2.5YR 4/6) masses of iron oxide accumulation in the matrix; moderately acid; abrupt smooth boundary.

3Bt3—36 to 40 inches; brown (10YR 5/3) loam; moderate coarse angular blocky structure; friable; common distinct brown (7.5YR 4/4) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6), few fine prominent strong brown (7.5YR 4/6), and few fine faint pale brown (10YR 6/3) masses of iron oxide accumulation in the matrix; slightly acid; abrupt smooth boundary.

3Bt4—40 to 48 inches; yellowish brown (10YR 5/4) sandy loam; weak coarse subangular blocky structure; friable; few prominent brown (7.5YR 4/4) clay films on faces of peds; few fine distinct grayish brown (10YR 5/2) iron depletions and few fine distinct yellowish brown (10YR 5/4) masses of iron oxide accumulation in the matrix; slightly acid; clear smooth boundary.

3C—48 to 60 inches; brown (7.5YR 5/4) sand; single grain; loose; few medium prominent yellowish brown (10YR 5/4) and few fine faint strong brown (7.5YR 5/8) masses of iron oxide accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 16 inches
Thickness of the solum: 36 to 60 inches

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

2Bt horizon:
Hue—5YR or 2.5YR
Value—3 to 5
Chroma—3 to 6
Texture—silty clay loam, silty clay, or clay

3Bt horizon:
Hue—2.5YR to 2.5Y
Value—4 or 5
Chroma—2 to 4
Texture—clay loam, loam, sandy loam, or sandy clay loam; stratified

3C horizon:
Hue—5YR, 7.5YR, or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—loamy sand or sand with strata of finer textures

262A—Denrock silt loam, 0 to 2 percent slopes

Setting

Landform: Lake plains
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less clay in the subsoil

Dissimilar soils:
- Soils near stream channels that are subject to flooding
- Fine-loamy soils that do not have a seasonal high water table within a depth of 6 feet
- The poorly drained Niota soils in the lower positions

Properties and Qualities of the Denrock Soil

Parent material: Glaciolacustrine deposits
Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow
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 7.8 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1 foot, January through June
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Dickinson Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
Taxadjunct features: The Dickinson soil in map unit 87B2 has a thinner dark surface layer than is defined as the range for the series. This soil is classified as a coarse-loamy, mixed, superactive, mesic Dystric Eutrudept.

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 and stream terraces
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the dark surface soil is more than 24 inches thick
- Soils that have more sand or gravel
- Soils that have more clay
- Soils in which the dark surface soil is less than 10 inches thick
- Soils that have thin clayey subhorizons in the subsoil
- Soils that are calcareous in the lower part of the subsoil and in the substratum

Dissimilar soils:
- The poorly drained Gilford soils on outwash plains
- 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
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

87B2—Dickinson sandy loam, 2 to 7 percent slopes, eroded

Setting

Landform: Stream terraces
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more clay in the subsoil
- Soils that have a lighter colored surface layer
- Soils in which the subsoil contains thin subhorizons of reddish brown or yellowish red silty clay

Dissimilar soils:
- The poorly drained Gilford soils on outwash plains
- 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 4.8 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

2087B—Dickinson-Urban land complex, 1 to 7 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

Dickinson and similar soils: 60 percent
Urban land: 40 percent

Minor Components

Soils that are similar to the Dickinson soil:
- Soils that have been altered by leveling, cutting, or filling
- Soils that contain more sand in the surface layer and the subsoil
- Soils that have a thinner surface layer
- Soils that have a seasonal high water table at a depth of 3 to 6 feet
- Soils that contain more clay in the surface layer and the subsoil
- Soils that have slopes of more than 7 percent

Properties and Qualities of the Dickinson Soil

Parent material: 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 5.7 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

General Definition of Urban Land

- Urban land consists of areas covered by streets, parking lots, buildings, and other structures.

Interpretive Groups

Land capability classification: Dickinson—3e; Urban land—not assigned
Prime farmland status: Not prime farmland
Hydric soil status: Dickinson—not hydric

Drummer Series

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

Typical Pedon

Drummer silty clay loam, 0 to 2 percent slopes; 1,600 feet east and 300 feet north of the southwest corner of sec. 19, T. 19 N., R. 9 E.; in Champaign County, Illinois; USGS Urbana topographic quadrangle; lat. 40 degrees 05 minutes 04 seconds N. and long. 88 degrees 13 minutes 58 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak very fine granular structure; firm; many fine roots; moderately acid; clear smooth boundary.

A—7 to 14 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine subangular blocky structure parting to weak fine granular; firm; many fine and medium roots throughout; slightly acid; clear smooth boundary.

BA—14 to 19 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate fine and medium subangular blocky structure; firm; many fine and medium roots between peds; few fine distinct very dark grayish brown (2.5Y 3/2) iron depletions; slightly acid; gradual smooth boundary.

Bg—19 to 25 inches; dark gray (10YR 4/1) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; firm; many fine roots between peds; many wormholes throughout; common fine distinct yellowish brown (10YR 5/4) masses of iron oxide accumulation in the matrix; neutral; gradual smooth boundary.

Btg1—25 to 32 inches; grayish brown (2.5Y 5/2) silty clay loam; weak fine and medium prismatic structure parting to moderate fine angular blocky; firm; many fine roots; few distinct dark gray (N 4/0) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/4) masses of iron and manganese oxide accumulation in the matrix; neutral; gradual wavy boundary.

Btg2—32 to 41 inches; gray (N 5/0) silty clay loam; weak medium prismatic structure parting to weak medium angular blocky; firm; few fine roots between peds; few prominent dark gray (N 4/0) clay films on face of peds; many medium prominent gray (N 5/0) iron depletions; neutral; clear wavy boundary.

2Btg3—41 to 47 inches; gray (N 5/0) loam; weak coarse subangular blocky structure; friable; few fine roots between peds; few prominent dark gray (10YR 4/1) clay films on faces of peds; common medium prominent gray (N 5/0) iron depletions; neutral; abrupt wavy boundary.

2Cg—47 to 60 inches; dark gray (10YR 4/1), stratified loam and sandy loam; massive; friable; many medium prominent olive brown (2.5Y 4/4) masses of iron oxide accumulation and gray (N 5/0) iron depletions in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 22 inches
Thickness of the loess: 40 to 60 inches

Depth to free carbonates: 40 to more than 60 inches
Thickness of the solum: 42 to more than 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, 5Y, or N
Value—3 to 6
Chroma—0 to 4
Texture—silty clay loam or silt loam

2Bg or 2Btg horizon:
Hue—7.5YR to 5Y or N
Value—4 to 6
Chroma—0 to 2
Texture—loam or silt loam with strata of sandy loam, clay loam, sandy clay loam, or silty clay loam

2C horizon:
Hue—7.5YR to 5Y or N
Value—4 to 7
Chroma—0 to 8
Texture—stratified loam, silt loam, clay loam, sandy clay loam, silty clay loam, or sandy loam

152A—Drummer silty clay loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have unstratified silt loam in the substratum
- Soils that contain more sand throughout
- Soils that do not have a seasonal high water table within a depth of 2 feet
- Soils in which the surface layer is more than 24 inches thick
- Soils that contain less clay in the subsurface layer and the upper part of the subsoil

Dissimilar soils:
- Soils that are subject to rare flooding; along drainage ditches

Properties and Qualities of the Drummer Soil

Parent material: Loess over outwash
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 12.3 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 through May
Ponding depth: 0.5 foot, January through May
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: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Du Page Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Du Page silt loam, 0 to 2 percent slopes, frequently flooded; 1,160 feet east and 1,820 feet south of the northwest corner of sec. 36, T. 20 N., R. 4 E.; in Whiteside County, Illinois; USGS Prophetstown topographic quadrangle; lat. 41 degrees 40 minutes 47 seconds N. and long. 89 degrees 59 minutes 35 seconds W., NAD 27:

Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; weak medium and fine subangular blocky structure parting to weak medium granular; friable; few snail-shell fragments; strongly effervescent; mildly alkaline; abrupt smooth boundary.

A1—9 to 17 inches; very dark grayish brown (10YR 3/2) silt loam, dark gray (10YR 4/1) dry; weak medium and fine subangular blocky structure parting to weak medium granular; friable; many faint very dark gray (10YR 3/1) organic coatings

on faces of peds; few snail-shell fragments; strongly effervescent; mildly alkaline; clear smooth boundary.

A2—17 to 27 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; moderate medium and fine subangular blocky structure; friable; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; few snail-shell fragments; violently effervescent; mildly alkaline; clear smooth boundary.

A3—27 to 34 inches; dark brown (10YR 3/3) loam, grayish brown (10YR 5/2) dry; weak medium and fine subangular blocky structure; friable; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few very dark gray (10YR 3/1) wormcasts; few snail-shell fragments; violently effervescent; mildly alkaline; clear smooth boundary.

C—34 to 60 inches; dark grayish brown (10YR 4/2) loam; thin strata of brown (10YR 5/3) sandy loam; massive; friable; few fine distinct dark yellowish brown (10YR 4/4) masses of iron oxide accumulation in the matrix; few very dark grayish brown (10YR 3/2) wormcasts; few snail-shell fragments; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 40 inches
Thickness of the solum: 24 to 50 inches

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

C horizon:
Hue—10YR
Value—3 or 4
Chroma—1 to 4
Texture—loam, silt loam, or sandy loam

3321A—Du Page silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Du Page and similar soils: 85 percent
Dissimilar soils: 15 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 seasonal high water table at a depth of 2 to 4 feet
- Soils that have a dark surface layer less than 24 inches thick
- Soils that are not calcareous
- Soils that have sandy subhorizons in the substratum

Dissimilar soils:
- The poorly drained Ambraw and Millington soils in the lower positions

Properties and Qualities of the Du Page 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 9.8 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: 4 feet, February through April
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

8321A—Du Page silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Du Page and similar soils: 85 percent
Dissimilar soils: 15 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 seasonal high water table at a depth of 2 to 4 feet
- Soils that have a dark surface layer less than 24 inches thick
- Soils that are not calcareous
- Soils that have sandy subhorizons in the substratum

Dissimilar soils:
- The poorly drained Ambraw and Millington soils in the slightly lower positions

Properties and Qualities of the Du Page 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 9.8 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: 4 feet, February through April
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Elburn Series

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

Typical Pedon

Elburn silt loam, 0 to 2 percent slopes; 1,320 feet north and 50 feet west of the southeast corner of sec. 2, T. 20 N., R. 2 E.; in Logan County, Illinois; USGS Lincoln East topographic quadrangle; lat. 40 degrees 12 minutes 30 seconds N. and long. 89 degrees 16 minutes 27 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; common very fine roots throughout; slightly alkaline; abrupt smooth boundary.

A—7 to 13 inches; black (10YR 2/1) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; common very fine roots throughout; slightly alkaline; clear smooth boundary.

Bt1—13 to 17 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots between peds; common distinct black (10YR 2/1) organo-clay films on faces of peds; slightly acid; clear smooth boundary.

Bt2—17 to 25 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots between peds; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few very fine black (5YR 2/1) concretions of iron-manganese throughout the matrix; few fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; few fine faint grayish brown (10YR 5/2) iron depletions; moderately acid; clear smooth boundary.

Bt3—25 to 35 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to moderate medium and coarse subangular blocky; firm; few very fine roots between peds; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; very few distinct very dark gray (10YR 3/1) and black (10YR 2/1) organic coatings on faces of peds, root channels, and wormholes; few fine black (5YR 2/1) concretions of iron-manganese throughout the matrix; common fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; common fine distinct grayish brown (10YR 5/2) iron depletions; slightly acid; clear smooth boundary.

Bt4—35 to 44 inches; mixed yellowish brown (10YR 5/4) and light olive brown (2.5Y 5/4) silty clay loam; weak coarse prismatic structure parting to moderate coarse subangular blocky; friable; few very fine roots between peds; few prominent dark grayish brown (10YR 4/2) and very dark gray (10YR 3/1) clay films on face of peds; neutral; abrupt smooth boundary.

2Btg—44 to 50 inches; mixed light brownish gray

(10YR 6/2) and strong brown (7.5YR 5/8) sandy loam; weak coarse subangular blocky structure; friable; very few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; neutral; clear smooth boundary.

2BCg—50 to 65 inches; mixed dark grayish brown (10YR 4/2), strong brown (7.5YR 5/8), and yellowish brown (10YR 5/6) sandy loam with strata of loam 1 or 2 inches thick; weak coarse subangular blocky structure; friable; slightly alkaline; clear smooth boundary.

2C1—65 to 77 inches; brown (10YR 5/3), stratified sandy loam and sand; massive; friable; common medium prominent strong brown (7.5YR 5/8) and yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; common medium distinct light brownish gray (10YR 6/2) iron depletions; about 5 percent gravel; slightly alkaline; clear smooth boundary.

2C2—77 to 80 inches; mixed dark grayish brown (10YR 4/2) and brown (10YR 4/3), stratified sandy loam and sand; massive; friable; about 5 percent gravel; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches
Thickness of the loess: 40 to 60 inches
Thickness of the solum: 50 to 65 inches

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

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

2Btg, 2BCg, 2Bg, 2Bt, and/or 2BC horizon:
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—2 to 8
Texture—loam, silt loam, sandy loam, clay loam, or silty clay loam

2C horizon:
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—2 to 8
Texture—loam or sandy loam with strata of loamy sand, sand, or silt loam

198A—Elburn silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a lighter colored subsurface layer
- Soils that are not underlain by loamy layers within a depth of 60 inches
- Soils that contain less clay or more sand in the subsoil
- Soils that are underlain by clayey till below a depth of 40 inches
- Soils that have a seasonal high water table at a depth of 3 to 6 feet
- Soils that are underlain by sandy textures within a depth of 60 inches

Dissimilar soils:
- Soils that have slopes of more than 2 percent
- The poorly drained Drummer soils on outwash plains

Properties and Qualities of the Elburn Soil

Parent material: Loess over outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
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 11.6 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: 1 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

2198A—Elburn-Urban land complex, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Map Unit Composition

Elburn and similar soils: 60 percent
Urban land: 40 percent

Minor Components

Soils that are similar to the Elburn soil:
- Soils that have been altered by leveling, cutting, or filling
- Soils that contain more sand in the surface layer and the subsoil
- Soils that have a thinner surface layer
- Soils that have a seasonal high water table at a depth of 3 to 6 feet
- Soils that contain more clay in the surface layer and the subsoil
- Soils that have slopes of more than 2 percent

Properties and Qualities of the Elburn Soil

Parent material: Loess over outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
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 11.6 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: 1 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

General Definition of Urban Land

- Urban land consists of areas covered by streets, parking lots, buildings, and other structures.

Interpretive Groups

Land capability classification: Elburn—1; Urban land—not assigned
Prime farmland status: Not prime farmland
Hydric soil status: Elburn—not hydric

Elvers Series

Taxonomic classification: Coarse-silty, mixed, superactive, nonacid, mesic Thapto-Histic Fluvaquents

Typical Pedon

Elvers silt loam, 0 to 2 percent slopes, rarely flooded; 560 feet west and 1,780 feet south of the northeast corner of sec. 7, T. 21 N., R. 4 E.; in Whiteside County, Illinois; USGS Union Grove topographic quadrangle; lat. 41 degrees 49 minutes 29 seconds N. and long. 90 degrees 04 minutes 40 seconds W., NAD 27:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine subangular blocky structure; friable; few faint pale brown (10YR 6/3) sand grains on faces of peds; neutral; abrupt smooth boundary.

Cg—8 to 28 inches; stratified grayish brown (10YR 5/2) and dark grayish brown (10YR 4/2) silt loam; few thin strata of pale brown (10YR 6/3) and very dark gray (10YR 3/1) silt loam and very fine sand; massive; friable; common fine prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix and few fine faint gray (10YR 5/1) iron depletions; few fine manganese stains; neutral; abrupt wavy boundary.

Oa—28 to 60 inches; sapric material, black (N 2/0) broken face and rubbed; about 20 percent fiber, less than 5 percent rubbed; weak medium platy structure; friable; neutral.

Range in Characteristics

Thickness of the silty material: 16 to 40 inches

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

Cg horizon:
Hue—10YR
Value—4 to 6
Chroma—1 or 2
Texture—silt loam or silt loam that has thin strata of loam, fine sandy loam, or very fine sand

Oa horizon:
Hue—N
Value—2
Chroma—0

7345A—Elvers silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more than 40 inches of mineral soil over the underlying muck
- Soils that consist entirely of muck
- Soils that are not subject to ponding

Dissimilar soils:
- Somewhat poorly drained soils in the slightly higher positions

Properties and Qualities of the Elvers Soil

Parent material: Alluvium over herbaceous organic material
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
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 18.9 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: At the surface, January through May
Ponding depth: 1 foot, January through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Faxon Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Taxadjunct features: The Faxon soils in this survey area have a lower content of sand coarser than very fine sand in the series control section than is defined as the range for the series. Also, they have an irregular decrease in content of organic matter.

Typical Pedon

Faxon silty clay loam, 0 to 2 percent slopes, rarely flooded; 760 feet west and 180 feet south of the center of sec. 30, T. 21 N., R. 3 E.; in Whiteside County, Illinois; USGS Clinton, Iowa, topographic quadrangle; lat. 41 degrees 46 minutes 45 seconds N. and long. 90 degrees 12 minutes 02 seconds W., NAD 27:

Ap—0 to 9 inches; black (N 2/0) silty clay loam, black (5YR 2.5/1) dry; weak medium subangular blocky structure parting to weak fine and medium granular; friable; neutral; abrupt smooth boundary.
AB—9 to 16 inches; very dark gray (5Y 3/1) silty clay loam, dark gray (5Y 4/1) dry; moderate fine and medium subangular blocky structure; friable; few fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; mildly alkaline; clear smooth boundary.
Bg—16 to 20 inches; dark grayish brown (2.5Y 4/2) silty clay loam; strong fine and medium angular blocky structure; friable; common faint very dark grayish brown (2.5YR 3/2) organic coatings on faces of peds; common fine faint light brownish gray (2.5Y 6/2) iron depletions; moderately alkaline; clear smooth boundary.
BCg—20 to 27 inches; olive gray (5Y 5/2) silt loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few faint dark olive gray (5Y 3/2) organic coatings on faces of peds; few prominent black (N 2/0) soft manganese accumulations on faces of peds; few prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; common fine faint olive

gray (5Y 4/2) iron depletions; mildly alkaline; clear irregular boundary.

2R—27 inches; hard, fractured limestone bedrock; white (2.5Y 8/0), soft, calcareous, weathered limestone in the upper 2 inches.

Range in Characteristics

Thickness of the mollic epipedon: 13 to 24 inches
Thickness of the solum: 20 to 40 inches
Depth to limestone bedrock: 20 to 40 inches

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

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

7516A—Faxon silty clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

Faxon and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that are underlain by limestone bedrock within a depth of 10 to 20 inches
- Soils that are underlain by limestone bedrock at a depth of more than 40 inches
- Soils that have more clay in the subsoil
- Soils that have a seasonal high water table within a depth of 1 to 3 feet

Properties and Qualities of the Faxon Soil

Parent material: Silty alluvium over limestone
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity to a depth of 60 inches: About 5.3 inches
Content of organic matter in the surface layer: 5 to 15 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very low

Interpretive Groups

Land capability classification: 3w
Prime farmland status: Prime farmland where drained
Hydric soil status: 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 dark brown (10YR 4/3) 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: Shoulders and summits

Map Unit 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 at a depth of 4 to 6 feet
- Soils that contain less clay in the subsoil

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

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: Backslopes and shoulders

Map Unit 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 at a depth of 4 to 6 feet
- Soils that contain less clay in the subsoil

Dissimilar soils:
- Soils that contain loamy till within a depth of 60 inches

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: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

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

Fella Series

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

Typical Pedon

Fella silty clay loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 619 feet; 890 feet south and 2,100 feet east of the northwest corner of sec. 16, T. 17 N., R. 6 E.; in Bureau County, Illinois; USGS Mineral topographic quadrangle; lat. 41 degrees 27 minutes 50 seconds N. and long. 89 degrees 48 minutes 41 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; weak fine angular blocky structure parting to weak fine granular; friable; common fine and medium roots throughout; neutral; abrupt smooth boundary.

A—7 to 11 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; weak medium angular blocky structure parting to moderate medium granular; firm; common fine and medium roots throughout; neutral; clear smooth boundary.

BA—11 to 20 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; moderate medium angular blocky structure; firm; few fine prominent strong brown (7.5YR 4/6) masses of iron oxide accumulation with diffuse boundaries along linings in root channels; common fine roots between peds; neutral; clear smooth boundary.

Bg—20 to 29 inches; gray (5Y 5/1) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots between peds; few fine prominent strong brown (7.5YR 4/6) masses of iron oxide accumulation along linings in root channels; common thick black (10YR 2/1) organic coatings on faces of peds; few black krotovinas; neutral; clear wavy boundary.

Bkg1—29 to 37 inches; gray (5Y 5/1) silty clay loam; weak medium prismatic structure parting to moderate medium angular blocky; friable; few fine roots between peds; common medium calcium carbonate nodules; few very dark grayish brown (10YR 3/2) organic coatings in root channels; many fine and medium prominent strong brown (7.5YR 4/6) masses of iron oxide accumulation with diffuse boundaries throughout the matrix and along pore linings; violently effervescent; moderately alkaline; clear smooth boundary.

Bkg2—37 to 43 inches; gray (5Y 6/1) silty clay loam; weak coarse prismatic structure parting to weak medium angular blocky; friable; few fine roots between peds; common medium calcium carbonate nodules; few very dark grayish brown (10YR 3/2) organic coatings in root channels; common medium prominent strong brown (7.5YR 4/6) iron masses with diffuse boundaries throughout the matrix; violently effervescent; moderately alkaline; clear smooth boundary.

2BCg—43 to 54 inches; gray (5Y 6/1) and dark grayish

brown (10YR 4/2), stratified silt loam and very fine sandy loam; weak coarse prismatic structure; friable; few medium prominent strong brown (7.5YR 5/6) irregularly shaped masses of iron oxide accumulation with diffuse boundaries in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.

2Cg1—54 to 61 inches; yellowish brown (10YR 5/4) fine sand; single grain; loose; common medium distinct yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; few medium distinct dark grayish brown (10YR 4/2) iron depletions; slightly effervescent; slightly alkaline; clear smooth boundary.

2Cg2—61 to 80 inches; dark gray (5Y 4/1), stratified loamy fine sand and fine sandy loam; massive; very friable; few medium prominent yellowish brown (10YR 5/8) iron masses in the matrix; 2-inch layer of black (N 2/0) sapric material at a depth of 61 to 63 inches; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to free carbonates: 6 to 40 inches
Thickness of the solum: 30 to 60 inches

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

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

2BC or 2Bg horizon (if it occurs):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—stratified sandy loam, very fine sandy loam, loam, or silt loam

2Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 or 5
Chroma—1 to 4
Texture—stratified sand, fine sand, loamy sand, loamy fine sand, sandy loam, or fine sandy loam; thin strata of finer textures

8499A—Fella silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are silty clay loam throughout and are not stratified in the underlying material
- Soils that have a dark surface layer more than 24 inches thick
- Soils that contain less clay
- Soils that are not calcareous within a depth of 40 inches
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- Soils in the slightly higher positions that are not subject to flooding

Properties and Qualities of the Fella Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
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 12.4 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 through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very low

Interpretive Groups

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

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

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a seasonal high water table at a depth of 1 to 3 feet
- Soils that have a dark buried soil within a depth of 40 inches

Dissimilar soils:
- The well drained Zumbro soils in the higher areas that are not subject to ponding
- 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: 0.5 foot all year
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Gilford Series

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

Typical Pedon

Gilford fine sandy loam, 0 to 2 percent slopes; 1,840 feet north and 1,180 feet east of the southwest corner of sec. 14, T. 19 N., R. 4 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 37 minutes 55 seconds N. and long. 90 degrees 00 minutes 42 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) fine sandy loam, very dark gray (10YR 3/1) dry; weak fine subangular blocky structure parting to weak fine granular; friable; slightly acid; abrupt smooth boundary.

A—8 to 18 inches; black (10YR 2/1) fine sandy loam, very dark gray (10YR 3/1) dry; weak medium subangular blocky structure parting to weak medium and fine granular; friable; neutral; clear smooth boundary.

BA—18 to 22 inches; dark grayish brown (2.5Y 4/2) sandy loam; weak medium and fine subangular blocky structure; very friable; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine prominent yellowish brown (10YR 5/8) masses of iron oxide in the matrix; neutral; clear smooth boundary.

Bg—22 to 32 inches; grayish brown (2.5Y 5/2) sandy loam; weak medium subangular blocky structure; very friable; very dark gray (10YR 3/1) krotovinas between depths of 29 and 32 inches; few fine prominent yellowish brown (10YR 5/8) masses of iron oxide in the matrix; neutral; abrupt wavy boundary.

2Cg—32 to 60 inches; light brownish gray (10YR 6/2) sand; single grain; loose; neutral.

Range in characteristics

Thickness of the mollic epipedon: 10 to 22 inches
Thickness of the solum: 20 to 40 inches

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

Texture—loam, sandy loam, or fine sandy loam or the mucky analogs of these textures

Bg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—fine sandy loam or sandy loam

2Cg horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 to 3
Texture—loamy sand, sand, coarse sand, or fine sand

201A—Gilford fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface layer more than 24 inches thick
- Soils that contain more clay or sand
- Soils that have a dark surface layer less than 10 inches thick
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- Soils that are subject to rare flooding; along drainage ditches

Properties and Qualities of the Gilford Soil

Parent material: Outwash
Drainage class: 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 7.1 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: At the surface, January through May
Ponding depth: 0.5 foot, January through May
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: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

Greenbush Series

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

Typical Pedon

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 oxide accumulation in the matrix; common medium prominent gray (5Y 6/1) iron depletions within peds; common prominent black (N 2/0) 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 oxide accumulation in the matrix; common medium prominent gray (5Y 6/1) iron depletions within peds; common prominent black (N 2/0) 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 oxide accumulation in the matrix; common prominent black (N 2/0) 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 (N 2/0) 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, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam

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

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker dark surface layer
- Soils that have a lighter colored surface layer
- Soils that have a seasonal high water table at a depth of less than 4 feet or more than 6 feet
- Soils that contain less clay in the subsoil

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

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 through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

675C2—Greenbush silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker dark surface layer
- Soils that have a lighter colored surface layer
- Soils that have a seasonal high water table at a depth of less than 4 feet or more than 6 feet
- Soils that contain less clay in the subsoil
- Soils that have till within a depth of 60 inches

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

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 11.5 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 through April
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil (fig. 6)
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not 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.

Figure 6.—Alfalfa hay provides a good vegetative cover and thus helps to control erosion in this area of Greenbush silt loam, 5 to 10 percent slopes, eroded.

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 (N 2/0) concretions of iron-manganese oxide in the matrix; slightly acid; clear smooth boundary.

Bt2—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 (N 2/0) concretions of iron-manganese oxide in the matrix; neutral; clear smooth boundary.

Bt3—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 (N 2/0) concretions of iron-manganese oxide in the matrix; neutral; gradual wavy boundary.

Bt4—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 (N 2/0) concretions of iron-manganese oxide in the matrix; 5 percent gravel; neutral; clear smooth boundary.

BC—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 (N 2/0) concretions of iron-manganese oxide in the matrix; 5 percent gravel; slightly acid; clear smooth boundary.

C—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) masses of iron oxide accumulation in the matrix; 4 percent gravel; effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: Less than 20 inches
Depth to the base of 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

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

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more clay in the subsoil
- Soils that are less severely eroded and that have less clay in the surface layer
- Soils that contain less sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Orion and Lawson soils in drainageways

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: Low

Interpretive Groups

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

8F2—Hickory silt loam, 18 to 35 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more clay in the subsoil
- Soils that have slopes of more than 35 percent
- Soils that contain less sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Orion and Lawson soils in drainageways

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: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

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

Hononegah Series

Taxonomic classification: Sandy, mixed, mesic Entic Hapludolls

Typical Pedon

Hononegah loamy sand, 0 to 3 percent slopes; 1,720 feet east and 1,020 feet north of the southwest corner of sec. 16, T. 20 N., R. 6 E.; in Whiteside County, Illinois; USGS Tampico topographic quadrangle; lat. 41 degrees 43 minutes 03 seconds N. and long. 89 degrees 49 minutes 06 seconds W., NAD 27:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) loamy sand, dark grayish brown (10YR 4/2) dry; weak fine granular structure; very friable; neutral; abrupt smooth boundary.

A1—7 to 13 inches; very dark grayish brown (10YR 3/2) loamy sand, brown (10YR 4/3) dry; weak fine and medium granular structure; very friable; neutral; clear smooth boundary.

A2—13 to 19 inches; very dark grayish brown (10YR 3/2) loamy sand, brown (10YR 4/3) dry; weak fine and medium subangular blocky structure; very friable; slightly acid; clear smooth boundary.

Bw—19 to 23 inches; dark brown (10YR 3/3) loamy sand, brown (10YR 4/3) dry; weak fine and medium subangular blocky structure; very friable; few pebbles; neutral; abrupt smooth boundary.

2BC—23 to 28 inches; brown (10YR 4/3) gravelly loamy sand; weak fine subangular blocky structure; very friable; neutral; abrupt smooth boundary.

2C1—28 to 37 inches; dark yellowish brown (10YR 4/4) gravelly sand; single grain; loose; neutral; abrupt smooth boundary.

2C2—37 to 54 inches; yellowish brown (10YR 5/4) very gravelly sand; single grain; loose; slightly

effervescent; slightly alkaline; abrupt smooth boundary.

2C3—54 to 60 inches; brown (10YR 4/3) very gravelly sand; single grain; loose; slightly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to carbonates: 20 to 40 inches
Depth to sand and gravel: 20 to 40 inches
Thickness of the solum: 20 to 40 inches

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

Bw horizon:
Hue—10YR or 7.5YR
Value—3 or 4
Chroma—2 to 5
Texture—loamy sand, sand, or loamy coarse sand

2BC horizon:
Hue—10YR or 7.5YR
Value—3 or 4
Chroma—2 to 5
Texture—gravelly or very gravelly loamy sand, sand, or loamy coarse sand

2C horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2 to 6
Texture—loose sand and gravel

354A—Hononegah loamy sand, 0 to 3 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the surface layer and the subsoil
- Soils that are sandy throughout and do not have any gravel in the underlying material
- Soils that have slopes of more than 3 percent
- Soils underlain by limestone bedrock within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Watseka soils in low areas

Properties and Qualities of the Hononegah Soil

Parent material: Eolian sands over outwash
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 1.8 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 4s
Prime farmland status: Not prime farmland
Hydric soil status: 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) masses of iron oxide accumulation 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 prominent yellowish brown (10YR 5/8) masses of iron oxide 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) masses of iron oxide 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: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more sand or clay in the subsoil
- Soils that have a seasonal high water table at a depth of more than 3 feet

Dissimilar soils:
- The very poorly drained Gilford soils in depressions

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 through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

Hooppole Series

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

Typical Pedon

Hooppole loam, 0 to 2 percent slopes; 470 feet south and 1,940 feet west of the northeast corner of sec. 18, T. 17 N., R. 6 E.; in Bureau County, Illinois; USGS Mineral topographic quadrangle; lat. 41 degrees 27 minutes 55 seconds N. and long. 89 degrees 50 minutes 46 seconds W., NAD 27:

Apk—0 to 7 inches; black (N 2/0) loam, very dark gray (10YR 3/1) dry; moderate medium granular structure; friable; common fine roots throughout; violently effervescent; slightly alkaline; abrupt smooth boundary.

Ak—7 to 12 inches; black (N 2/0) loam, black (10YR 2/1) dry; moderate medium subangular blocky structure; friable; few fine roots throughout; violently effervescent; slightly alkaline; clear smooth boundary.

A—12 to 17 inches; black (10YR 2/1) loam, very dark grayish brown (10YR 3/2) dry; moderate fine subangular blocky structure parting to moderate medium granular; friable; few fine roots throughout; few fine prominent dark grayish brown (2.5Y 4/2) iron depletions; slightly effervescent; slightly alkaline; clear smooth boundary.

BA—17 to 22 inches; very dark grayish brown (2.5Y 3/2) loam, dark grayish brown (2.5Y 4/2) dry; moderate fine subangular blocky structure; friable; few fine roots between peds; black (10YR 2/1) loamy krotovina; light brownish gray (10YR 6/2) sandy krotovina; few fine faint grayish brown (2.5Y 5/2) iron depletions; few fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.

Bg1—22 to 30 inches; dark grayish brown (2.5Y 4/2) loam; moderate medium subangular blocky structure; friable; few fine roots between peds; black (10YR 2/1) loamy krotovina; light brownish gray (10YR 6/2) sandy krotovina; common very dark gray (10YR 3/1) organic coatings on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; few fine faint grayish brown (2.5Y 5/2) iron depletions; slightly effervescent; slightly alkaline; clear smooth boundary.

Bg2—30 to 38 inches; olive gray (5Y 5/2) loam; moderate medium subangular blocky structure; friable; few fine roots between peds; very dark grayish brown (10YR 3/2) loamy krotovina; common dark gray (5Y 4/1) organic coatings on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; few fine faint gray (5Y 6/1) iron depletions; strongly effervescent; slightly alkaline; clear smooth boundary.

BCg—38 to 44 inches; dark grayish brown (2.5Y 4/2) sandy loam; weak medium subangular blocky structure; friable; black (10YR 2/1) loamy krotovina; common distinct dark gray (5Y 4/1) organic coatings on faces of peds; few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine distinct gray (5Y 5/1) iron depletions; slightly effervescent; slightly alkaline; clear smooth boundary.

2Cg—44 to 60 inches; very dark gray (5Y 3/1) and grayish brown (2.5Y 5/2) sand; single grain; loose; few fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to free carbonates: Less than 10 inches
Thickness of the solum: 30 to 50 inches

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

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

2Cg horizon:
Hue—7.5YR to 5Y
Value—3 to 6
Chroma—1 to 4
Texture—sand or loamy sand

488A—Hooppole loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are underlain by sandy material within a depth of 40 inches
- Soils that have a dark surface layer less than 10 inches thick
- Soils that have a dark surface soil more than 24 inches thick
- Soils that contain gravel in the substratum
- Soils that contain more sand in the surface layer and the subsoil

Dissimilar soils:
- Soils that are subject to occasional flooding; along drainage ditches

Properties and Qualities of the Hooppole Soil

Parent material: Outwash
Drainage class: Poorly 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 9.6 inches
Content of organic matter in the surface layer: 4 to 8 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Houghton Series

Taxonomic classification: Euic, mesic Typic Haplosaprists

Typical Pedon

Houghton muck, 0 to 2 percent slopes; 312 feet north and 384 feet west of the southeast corner of sec. 2, T. 16 N., R. 6 E.; in Bureau County, Illinois; USGS Mineral topographic quadrangle; lat. 41 degrees 23 minutes 42 seconds N. and long. 89 degrees 45 minutes 45 seconds W., NAD 27:

Oap—0 to 10 inches; sapric material, black (N 2/0) broken face and rubbed, black (10YR 2/1) dry; about 20 percent fiber, less than 5 percent rubbed; moderate medium granular structure; very friable; many very fine to medium roots throughout; slightly acid; abrupt smooth boundary.

Oa1—10 to 21 inches; sapric material, black (N 2/0) broken face and rubbed; about 25 percent fiber, 10 percent rubbed; moderate medium subangular blocky structure; very friable; few fine roots throughout; neutral; clear smooth boundary.

Oa2—21 to 29 inches; sapric material, black (10YR 2/1) broken face and rubbed; about 50 percent fiber, 15 percent rubbed; moderate medium subangular blocky structure; very friable; few fine roots throughout; neutral; clear smooth boundary.

Oa3—29 to 37 inches; sapric material, black (N 2/0) broken face and rubbed; about 50 percent fiber, 15 percent rubbed; weak medium subangular blocky structure; very friable; few fine roots throughout; neutral; clear smooth boundary.

Oa4—37 to 60 inches; sapric material, black (N 2/0) broken face and rubbed; about 50 percent fiber, 15 percent rubbed; massive; very friable; few fine roots throughout; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the organic deposits: More than 51 inches

Surface tier:
Hue—10YR or N
Value—2
Chroma—0 or 1

Subsurface tier:
Hue—7.5YR, 10YR, or N
Value—2 or 3
Chroma—0 to 2

7103A—Houghton muck, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a surface layer of silt loam overwash
- Soils that contain sandy strata

Dissimilar soils:
- Soils that are subject to more frequent flooding; near drainageways

Properties and Qualities of the Houghton Soil

Parent material: Herbaceous organic material over alluvium
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow to moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 23.9 inches
Content of organic matter in the surface layer: 70 to 100 percent
Shrink-swell potential: Not rated
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Ponding depth: 1 foot, November through June
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

Huntsville Series

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

Typical Pedon

Huntsville silt loam, 0 to 2 percent slopes, frequently flooded; 2,475 feet east and 495 feet south of the northwest corner of sec. 1, T. 12 N., R. 4 E.; in Knox County, Illinois; USGS La Fayette topographic quadrangle; lat. 41 degrees 03 minutes 37 seconds N. and long. 89 degrees 59 minutes 42 seconds W., NAD 27:

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure; friable; slightly acid; clear smooth boundary.
A1—10 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.
A2—16 to 27 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine granular structure; friable; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.
AC—27 to 52 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; friable; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.
C—52 to 60 inches; dark brown (10YR 3/3) silt loam; massive; friable; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 40 inches

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

AC horizon:
Value—4 or 5
Chroma—3 or 4
Texture—silt loam

C horizon:
Value—3 to 5
Texture—silt loam

3077A—Huntsville silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more sand

- Soils that have a dark surface soil less than 24 inches thick
- Soils that have a light-colored deposit of silt loam overwash

Dissimilar soils:
- Soils that are subject to less frequent flooding; in the slightly higher positions
- The somewhat poorly drained Lawson soils in the slightly lower positions
- The poorly drained Sawmill soils on flood plains

Properties and Qualities of the Huntsville 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 13.4 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: 4 feet, February through April
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

Joslin Series

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

Typical Pedon

Joslin silt loam, 2 to 5 percent slopes; 2,470 feet north and 1,810 feet west of the southeast corner of sec. 8, T. 18 N., R. 1 E.; in Rock Island 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 8 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—8 to 14 inches; mixed very dark gray (10YR 3/1) and black (10YR 2/1) silt loam; moderate fine and medium granular structure; friable; few sand grains; neutral; clear smooth boundary.

BA—14 to 18 inches; mixed brown (10YR 4/3), dark brown (10YR 3/3), and very dark gray (10YR 3/1) silt loam; weak fine and medium subangular blocky structure; friable; root channels lined with black (10YR 2/1) organic coatings; light gray (10YR 7/1) (dry) clay depletions on faces of peds; few sand grains; slightly acid; clear smooth boundary.

Bt1—18 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; some very dark grayish brown (10YR 3/2) and very dark gray (10YR 3/1) organic coatings in root channels; few wormcasts; 22 percent sand; few igneous 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; firm; common prominent dark brown (7.5YR 4/2) clay films on faces of peds; few root channels filled with black (10YR 2/1) material; 12 percent sand; moderately acid; gradual smooth boundary.

Bt3—37 to 48 inches; yellowish brown (10YR 5/4) silt loam; weak coarse prismatic structure; friable; common prominent dark brown (7.5YR 4/2) clay films on faces of peds; few root channels filled with black (10YR 2/1) material; few black (10YR 2/1) wormcasts; few strata of reddish brown (2.5YR 4/4) silty clay; 3 percent sand; slightly acid; clear smooth boundary.

2Bt4—48 to 60 inches; dusky red (2.5YR 4/4) silty clay; moderate medium and coarse prismatic structure; very firm; few faint dusky 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.

3C—60 to 85 inches; variegated grayish brown (10YR 5/2), light brownish gray (10YR 6/2), yellowish brown (10YR 5/4 and 5/6), brownish yellow (10YR 6/6), and strong brown (7.5YR 5/6) silt loam; massive; firm; few strata of reddish brown (2.5YR 4/4) silty clay; few dark concretions of iron and

manganese throughout the matrix; moderately 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—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or loam

2Bt or 2BC horizon:
Hue—2.5YR
Value—4 to 6
Chroma—3 to 5
Texture—silty clay loam, silty clay, or clay

3C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam, silty clay loam, loam, or clay loam; thin strata of clay to sand and gravel in some pedons

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

Setting

Landform: Lake plains

Map Unit Composition

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

Minor Components

Similar soils:
• Soils that have a dark surface soil less than 10 inches thick
• Soils that have a dark surface soil more than 24 inches thick

Dissimilar soils:
• The somewhat poorly drained Denrock soils on footslopes

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 11.1 inches
Content of organic matter in the surface layer: 4 to 5 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
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 Henry 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 (N 2/0) coatings of iron-manganese on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation 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 (N 2/0) 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) masses of iron oxide accumulation 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 distinct grayish brown (10YR 5/2) clay films on faces of peds; few prominent black (N 2/0) 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 (N 2/0) coatings of iron-manganese along cleavage planes; many medium prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation 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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less silt and more sand in the substratum
- Soils that have a dark surface soil more than 24 inches thick or less than 10 inches thick
- Soils that have a seasonal high water table at a depth of more than 4 feet

Dissimilar soils:
- The well drained Port Byron soils on shoulders and summits
- 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, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Joyce Series

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

Typical Pedon

Joyce silt loam, 0 to 2 percent slopes, at an elevation of 630 feet; 180 feet south and 1,640 feet west of the northeast corner of sec. 33, T. 19 N., R. 6 E.; in Whiteside County, Illinois; USGS Yorktown topographic quadrangle; lat. 41 degrees 35 minutes 20 seconds N. and long. 89 degrees 48 minutes 30 seconds W., NAD 27:

Ap—0 to 9 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine subangular blocky structure parting to moderate fine granular; friable; common very fine roots throughout; slightly acid; abrupt smooth boundary.

A—9 to 15 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium subangular blocky structure; friable; common very fine roots throughout; slightly acid; clear smooth boundary.

AB—15 to 20 inches; dark brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium subangular blocky structure; friable; common very fine roots between peds; common distinct very dark gray (10YR 3/1) organic coatings and few distinct gray (10YR 6/1) (dry) clay depletions on faces of peds; slightly acid; clear smooth boundary.

Bt1—20 to 28 inches; brown (10YR 4/3) silt loam; moderate fine and medium angular blocky structure; friable; few distinct very dark grayish brown (10YR 3/2) organic coatings and many faint dark grayish brown (10YR 4/2) clay films on faces of peds; few distinct gray (10YR 6/1) (dry) clay depletions on faces of peds; few fine faint light brownish gray (10YR 6/2) redoximorphic depletions; few fine prominent yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

Bt2—28 to 37 inches; brown (10YR 5/3) silt loam; weak medium prismatic structure parting to weak coarse subangular blocky; friable; common 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; many medium distinct light brownish gray (10YR 6/2) iron depletions; moderately acid; clear smooth boundary.

Btg—37 to 44 inches; light brownish gray (10YR 6/2) silt loam; weak medium prismatic structure; friable; few faint grayish brown (10YR 5/2) clay films on faces of peds; few fine prominent yellowish brown (10YR 5/8), few fine distinct yellowish brown (10YR 5/4), and few fine faint pale brown (10YR 6/3) iron masses in the matrix; moderately acid; abrupt smooth boundary.

2BC—44 to 47 inches; brown (10YR 5/3) loam; weak medium prismatic structure; friable; few faint grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/8) iron masses in the matrix; few fine faint light brownish gray (10YR 6/2) iron depletions; moderately acid; abrupt wavy boundary.

2C—47 to 60 inches; yellowish brown (10YR 5/4) loamy sand; single grain; loose; common fine faint pale brown (10YR 6/3) and common fine distinct yellowish brown (10YR 5/8) iron masses in the matrix; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the loess: 35 to 55 inches
Depth to free carbonates: More than 48 inches
Thickness of the solum: 35 to 55 inches

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

Bt, Btg, and/or Bg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silt loam

2Bg or 2BC horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—loam or sandy loam with thin strata of silt loam, clay loam, loamy sand, or sand

2C horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 4
Texture—sand, fine sand, loamy sand, or loamy fine sand

487A—Joyce silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less sand and more silt in the substratum
- Soils that have a dark surface soil more than 24 inches thick or less than 10 inches thick
- Soils that have a seasonal high water table at a depth of more than 4 feet

Dissimilar soils:
- The well drained Port Byron soils on summits and shoulders
- The poorly drained Sable soils on ground moraines

Properties and Qualities of the Joyce Soil

Parent material: Loess over outwash
Drainage class: Somewhat poorly 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 11.1 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Lacrescent Series

Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Typic Hapludolls

Typical Pedon

Lacrescent cobbly loam, 25 to 60 percent slopes; 1,980 feet east and 700 feet north of the southwest corner of sec. 5, T. 22 N., R. 4 E.; in Whiteside County, Illinois; USGS Thomson topographic quadrangle; lat. 41 degrees 55 minutes 07 seconds N. and long. 90 degrees 04 minutes 03 seconds W., NAD 27:

A1—0 to 5 inches; very dark grayish brown (10YR 3/2) cobbly loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; very friable; few fine roots throughout; about 15 percent cobblestones and pebbles; slightly effervescent; slightly alkaline; clear smooth boundary.

A2—5 to 12 inches; dark brown (10YR 3/3) cobbly loam, brown (10YR 5/3) dry; weak moderate and fine granular structure; very friable; few fine roots throughout; about 15 percent cobblestones and pebbles; violently effervescent; slightly alkaline; clear smooth boundary.

Bw—12 to 36 inches; brown (10YR 4/3) very cobbly loam; weak fine subangular blocky structure parting to weak fine granular; very friable; few fine roots between peds; few faint very dark grayish brown (10YR 3/2) organic coatings in root channels; about 40 percent cobblestones and pebbles; violently effervescent; slightly alkaline; clear smooth boundary.

C—36 to 60 inches; yellowish brown (10YR 5/4) very cobbly loam; massive; very friable; about 60 percent cobblestones and pebbles; violently effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches
Depth to free carbonates: 0 to 36 inches
Thickness of the solum: 20 to 36 inches
Depth to limestone bedrock: 3.5 to 10.0 feet

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

Bw horizon:
Hue—10YR
Value—4

Chroma—3 or 4
Texture—very cobbly fine sandy loam or very cobbly loam

C horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 or 4
Texture—very cobbly loam or very cobbly fine sandy loam

785G—Lacrescent cobbly loam, 25 to 60 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes (fig. 7)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have slopes of less than 25 percent
- Soils that have a surface layer of channery loam

Dissimilar soils:
- The well drained Lamont and Timula soils on summits and shoulders
- The well drained Seaton soils on shoulders and summits

Properties and Qualities of the Lacrescent Soil

Parent material: Colluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
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 5.8 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Figure 7.—A vertical exposure of limestone in an area of Lacrescent cobbly loam, 25 to 60 percent slopes.

Interpretive Groups

Land capability classification: 7e
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Lamont Series

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

Typical Pedon

Lamont fine sandy loam, 2 to 5 percent slopes; 2,180 feet north and 1,460 feet east of the southwest corner of sec. 14, T. 18 N., R. 7 E.; in Bureau County, Illinois; USGS New Bedford topographic quadrangle; lat. 41 degrees 32 minutes 48 seconds N. and long. 89 degrees 39 minutes 42 seconds W., NAD 27:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) fine sandy loam, yellowish brown (10YR 5/4) dry; moderate fine granular structure; very friable; few very fine roots throughout; slightly acid; abrupt smooth boundary.

Bt1—9 to 13 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; very friable; few very fine roots between peds; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; neutral; clear smooth boundary.

Bt2—13 to 20 inches; yellowish brown (10YR 5/4) fine sandy loam; moderate medium subangular blocky

structure; very friable; few very fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—20 to 29 inches; yellowish brown (10YR 5/4) fine sandy loam; moderate medium subangular blocky structure; very friable; few fine roots between peds; many prominent brown (7.5YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

BC—29 to 39 inches; yellowish brown (10YR 5/4) loamy fine sand; thin strata of brown (7.5YR 4/4) loamy fine sand; weak coarse subangular blocky structure; very friable; strongly acid; clear smooth boundary.

E&Bt—39 to 60 inches; yellowish brown (10YR 5/4) fine sand (E); single grain; loose; thin lamellae of brown (7.5YR 4/4) loamy fine sand about 1/2 to 1 inch thick at depths of 43 and 53 inches and lamellae of fine sandy loam at a depth of 59 inches (Bt); slightly acid.

Range in Characteristics

Thickness of the solum: 30 to more than 60 inches

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—1 or 2
Texture—fine sandy loam, sandy loam, or loam

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—sandy clay loam, loam, or fine sandy loam

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

175B2—Lamont fine sandy loam, 2 to 5 percent slopes, eroded

Setting

Landform: Dunes
Position on the landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a darker surface soil
- Soils that have less clay and more sand in the subsoil
- Soils that are silt loam in the surface layer and in the upper part of the subsoil

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

Properties and Qualities of the Lamont 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 8.3 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

175D2—Lamont fine sandy loam, 10 to 18 percent slopes, eroded

Setting

Landform: Dunes
Position on the landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a darker surface soil

• Soils that have less clay and more sand in the subsoil
• Soils that are silt loam in the surface layer and in the upper part of the subsoil

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

Properties and Qualities of the Lamont 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 8.4 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

175F—Lamont fine sandy loam, 18 to 35 percent slopes

Setting

Landform: Dunes
Position on the landform: Backslopes and summits

Map Unit Composition

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

Minor Components

Similar soils:
• Soils that have a darker surface soil
• Soils that have less clay and more sand in the subsoil
• Soils that are silt loam in the surface layer and in the upper part of the subsoil

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

Properties and Qualities of the Lamont 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 9 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 7e
Prime farmland status: Not 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 prominent yellowish brown (10YR 5/8) masses of iron oxide accumulation 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) masses of iron oxide accumulation 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 (N 2/0) concretions of iron and manganese oxide in the matrix; common fine prominent yellowish brown (10YR 5/8) masses of iron oxide accumulation 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) masses of iron oxide accumulation in the matrix; about 5 percent gravel; slightly acid; abrupt smooth boundary.

2Cg—54 to 60 inches; dark grayish brown (2.5Y 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 AB horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—loam, silt loam, or sandy loam

Bw or Bg 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 6
Chroma—1 to 6
Texture—sand, loamy sand, coarse sand, or gravelly coarse sand

647A—Lawler loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the surface soil is more than 24 inches thick
- Soils that have a higher pH in the substratum
- Soils in which the underlying sandy material is at a depth of more than 40 inches
- Soils that have a dark surface soil less than 10 inches thick
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils that have more sand in the subsoil

Dissimilar soils:
- The well drained Dickinson soils on summits and shoulders
- The very poorly drained Marshan soils on outwash plains

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 through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low

Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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) masses of iron oxide accumulation 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) masses of iron oxide accumulation 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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface soil less than 24 inches thick
- Soils that have a light-colored deposit of silt loam overwash
- Soils that have a buried soil within a depth of 60 inches
- Soils that contain more sand in the surface soil

Dissimilar soils:
- The well drained Huntsville soils in the slightly higher positions
- The poorly drained Otter soils in the slightly 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: 2 to 4 percent

Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

8451A—Lawson silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface soil less than 24 inches thick
- Soils that have a light-colored deposit of silt loam overwash
- Soils that have a buried soil within a depth of 60 inches
- Soils that contain more sand in the surface soil

Dissimilar soils:
- The poorly drained Otter soils in the slightly lower positions on flood plains
- The well drained Huntsville soils in the slightly higher positions on flood plains

Properties and Qualities of the Lawson Soil

Parent material: Silty 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 through May
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Lena Series

Taxonomic classification: Euic, mesic Typic Haplosaprists

Typical Pedon

Lena silt loam, depressional, 0 to 2 percent slopes, overwash; 706 feet south and 1,056 feet east of the northwest corner of sec. 8, T. 16 N., R. 7 E.; in Bureau County, Illinois; USGS Manlius topographic quadrangle; lat. 41 degrees 23 minutes 33 seconds N. and long. 89 degrees 43 minutes 13 seconds W., NAD 27:

Ap—0 to 9 inches; black (N 2/0) silt loam, black (10YR 2/1) dry; moderate fine granular structure; friable; common fine roots throughout; few snail-shell fragments; violently effervescent; slightly alkaline; abrupt smooth boundary.

A—9 to 14 inches; black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; moderate medium subangular blocky structure; friable; few fine roots between peds; common snail shells and fragments; violently effervescent; slightly alkaline; abrupt smooth boundary.

Oa1—14 to 20 inches; sapric material, black (N 2/0) broken face and rubbed, black (10YR 2/1) dry; about 2 percent fiber, less than 1 percent rubbed; weak thin platy structure; friable; few fine roots throughout; few snail-shell fragments; violently effervescent; slightly alkaline; clear smooth boundary.

Oa2—20 to 37 inches; sapric material, black (10YR 2/1) broken face and rubbed; about 15 percent fiber, 3 percent rubbed; weak thin platy structure;

friable; many snail-shell fragments; violently effervescent; slightly alkaline; clear smooth boundary.

Oa3—37 to 60 inches; sapric material, black (N 2/0) broken face and rubbed; about 15 percent fiber, 3 percent rubbed; massive; friable; common snail shells and fragments; violently effervescent; slightly alkaline.

Range in Characteristics

Thickness of the overwash: 6 to 16 inches
Depth to free carbonates: Less than 10 inches

Surface tier:
Hue—10YR or N
Value—2 or 3
Chroma—0 or 1

Subsurface tier:
Hue—7.5YR, 10YR, or N
Value—2 or 3
Chroma—0 to 2

7210A—Lena muck, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a light-colored deposit of silt loam overwash
- Soils that have a thin sandy substratum
- Soils that have silt loam within a depth of 50 inches

Dissimilar soils:
- The very poorly drained Houghton soils in positions similar to those of the Lena soil
- Soils that are subject to more frequent flooding; near drainageways

Properties and Qualities of the Lena Soil

Parent material: Highly decomposed organic material
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Moderately rapid
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 23.9 inches
Content of organic matter in the surface layer: 60 to 99 percent
Shrink-swell potential: Not rated
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Ponding depth: 1 foot, November through June
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

Littleton Series

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

Typical Pedon

Littleton silt loam, 0 to 2 percent slopes; 200 feet north and 1,420 feet east of the southwest corner of sec. 16, T. 20 N., R. 4 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 42 minutes 52 seconds N. and long. 90 degrees 02 minutes 57 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 fine subangular blocky structure parting to moderate fine granular; friable; few very fine roots throughout; slightly acid; clear smooth boundary.

A1—8 to 20 inches; very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; moderate fine and very fine subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; few very thin strata of brown (10YR 5/3) silt loam; slightly acid; clear smooth boundary.

A2—20 to 36 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine and very fine subangular blocky structure; friable; few fine roots between peds; slightly acid; gradual smooth boundary.

BA—36 to 52 inches; brown (10YR 5/3) silt loam; moderate medium subangular blocky structure;

friable; many faint grayish brown (10YR 5/2) coatings on faces of peds and root channels; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; neutral; clear smooth boundary.

Bg—52 to 61 inches; grayish brown (10YR 5/2) silty clay loam; strong medium prismatic structure; friable; many faint grayish brown (10YR 5/2) coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few faint black (N 2/0) iron-manganese concretions; neutral; clear smooth boundary.

Cg—61 to 80 inches; grayish brown (10YR 5/2) silt loam; massive; friable; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few faint black (N 2/0) iron-manganese concretions; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches
Thickness of the solum: 30 to 62 inches

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

B horizon:
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—2 or 3
Texture—silt loam or silty clay loam

C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam; thin strata of silty clay loam in some pedons

81A—Littleton silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces and alluvial fans
Position on the landform: Footslopes and summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more sand
- Soils that have a seasonal high water table at a depth of more than 3 feet
- Soils that have slopes of more than 2 percent

Dissimilar soils:
- The somewhat poorly drained Lawson soils that are subject to flooding; in the lower positions

Properties and Qualities of the Littleton 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 13.1 inches
Content of organic matter in the surface layer: 3 to 4 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Marshan Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Marshan loam, sandy substratum, 0 to 2 percent slopes; 100 feet west and 1,680 feet north of the southeast corner of sec. 11, T. 20 N., R. 7 E.; in Whiteside County, Illinois; USGS Hahnaman topographic quadrangle; lat. 41 degrees 44 minutes 02 seconds N. and long. 89 degrees 39 minutes 05 seconds W., NAD 27:

Ap—0 to 9 inches; black (N 2/0) loam, very dark grayish brown (10YR 3/2) dry; weak fine and medium granular structure; friable; few fine roots throughout; neutral; abrupt smooth boundary.

A—9 to 16 inches; black (N 2/0) clay loam, dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure parting to moderate medium granular; friable; few fine roots throughout; slightly acid; clear smooth boundary.

AB—16 to 23 inches; black (5Y 2.5/1) clay loam, dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure; friable; few fine roots between peds; few fine iron stains on faces of peds; neutral; clear wavy boundary.

2Bg—23 to 34 inches; mixed gray (5Y 5/1) and dark gray (5Y 4/1) loam; weak medium subangular blocky structure; friable; few fine roots between peds; black (5Y 2.5/1) krotovinas; few fine prominent dark yellowish brown (10YR 4/6) and few fine distinct olive (5Y 4/4) masses of iron oxide accumulation in the matrix; few pebbles; neutral; abrupt smooth boundary.

2Cg—34 to 49 inches; grayish brown (2.5Y 5/2) coarse sand; single grain; loose; about 2 percent gravel; neutral; abrupt smooth boundary.

2C—49 to 60 inches; pale brown (10YR 6/3) sand; single grain; loose; about 2 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches
Thickness of the solum: 24 to 40 inches

Ap, A, or AB horizon:
Hue—5Y or N
Value—2 or 3
Chroma—0 to 2
Texture—loam, silty clay loam, silt loam, or clay loam

2Bg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 or 5
Chroma—1 or 2
Texture—clay loam, loam, clay loam, or sandy loam

2C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 or 3
Texture—sand, coarse sand, gravelly sand, or gravelly coarse sand

760A—Marshan loam, sandy substratum, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface soil less than 10 inches thick or more than 24 inches thick
- Soils in which the underlying sandy material is at a depth of more than 40 inches
- Soils that contain less clay in the surface layer and the subsoil

Dissimilar soils:
- The somewhat poorly drained Lawler soils in the slightly higher positions

Properties and Qualities of the Marshan Soil

Parent material: Outwash
Drainage class: Poorly 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 8.7 inches
Content of organic matter in the surface layer: 4 to 8 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
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: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Medway Series

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

Typical Pedon

Medway loam, 0 to 2 percent slopes, rarely flooded; 440 feet north and 2,460 feet west of the southeast corner of sec. 26, T. 20 N., R. 4 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 41 minutes 10 seconds N. and long. 90 degrees 00 minutes 22 seconds W., NAD 27:

Ap—0 to 11 inches; black (10YR 2/1) loam, very dark gray (10YR 3/1) dry; moderate medium and fine subangular blocky structure; friable; few fine roots throughout; few pebbles; neutral; abrupt smooth boundary.

A—11 to 19 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate medium and fine subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; many faint black (10YR 2/1) organic coatings on faces of peds; few pebbles; neutral; clear smooth boundary.

BA—19 to 27 inches; brown (10YR 4/3) loam; moderate medium and fine subangular blocky structure; friable; few fine roots between peds; many distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few pebbles; few fine faint grayish brown (10YR 5/2) iron depletions; neutral; gradual smooth boundary.

Bw1—27 to 37 inches; brown (10YR 5/3) clay loam; weak coarse and medium subangular blocky structure; friable; few fine roots between peds; few distinct dark gray (10YR 4/1) organic coatings in root channels; few pebbles; few fine rounded dark reddish brown (5YR 2.5/2) soft accumulations of iron-manganese throughout; few fine faint grayish brown (10YR 5/2) iron depletions and few fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; neutral; abrupt smooth boundary.

Bw2—37 to 50 inches; yellowish brown (10YR 5/4) sandy clay loam; thin strata of sandy loam and gravelly sandy loam; weak coarse and medium subangular blocky structure; friable; few faint brown (10YR 5/3) coatings in root channels; band of very dark grayish brown (10YR 3/2) sandy clay loam 1 inch thick at a depth of 44 inches; few fine rounded black (N 2/0) concretions of manganese; few pebbles; few fine distinct grayish brown (10YR 5/2) iron depletions and many fine prominent strong brown (7.5YR 5/8 and 5/6) masses of iron oxide accumulation in the matrix; neutral; abrupt smooth boundary.

C—50 to 60 inches; stratified dark grayish brown (10YR 4/2) sandy loam and loamy sand and brown (10YR 5/3) and yellowish brown (10YR 5/6) sand; massive; very friable; few fine rounded black (N 2/0) concretions of manganese; few pebbles; few fine prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the solum: 28 to 60 inches

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

BA or Bw horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—3 to 5
Chroma—2 to 4
Texture—loam, silt loam, silty clay loam, clay loam, or sandy clay loam

C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—1 to 6
Texture—stratified sandy loam to sand; thin strata of gravel below a depth of 40 inches

7682A—Medway loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface soil less than 10 inches thick or more than 24 inches thick
- Soils that have sandy subhorizons within a depth of 40 inches

Dissimilar soils:
- The poorly drained Ambraw soils in the slightly lower positions

- The moderately well drained Du Page soils in the slightly higher positions

Properties and Qualities of the Medway Soil

Parent material: Alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
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 10.3 inches
Content of organic matter in the surface layer: 1.5 to 4.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1.5 feet, February through April
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Milford Series

Taxonomic classification: Fine, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Milford silty clay loam, 0 to 2 percent slopes; 1,120 feet south and 540 feet west of the northeast corner of sec. 30, T. 19 N., R. 5 E.; in Whiteside County, Illinois; USGS Hooppole topographic quadrangle; lat. 41 degrees 36 minutes 08 seconds N. and long. 89 degrees 57 minutes 39 seconds W., NAD 27:

Ap—0 to 7 inches; black (N 2/0) silty clay loam, dark gray (N 4/0) dry; moderate very fine subangular blocky structure; friable; few very fine roots between peds; slightly acid; abrupt smooth boundary.

A—7 to 17 inches; black (N 2/0) silty clay, dark gray (N 4/0) dry; moderate fine and very fine subangular blocky structure; friable; few very fine roots between peds; slightly acid; clear smooth boundary.

AB—17 to 24 inches; very dark gray (10YR 3/1) silty clay, dark gray (10YR 4/1) dry; moderate fine prismatic structure parting to strong fine subangular blocky; friable; few fine roots between peds; many faint black (N 2/0) organic coatings on faces of peds; neutral; clear smooth boundary.

Bg1—24 to 34 inches; dark gray (5Y 4/1) silty clay loam; moderate fine prismatic structure parting to strong fine angular blocky; friable; black (N 2/0) krotovinas 1 inch wide at a depth of 26 inches; few prominent very dark gray (10YR 3/1) organic coatings on faces of peds; few fine faint gray (5Y 5/1) iron depletions and few fine prominent yellowish brown (10YR 5/4) masses of iron oxide accumulation in the matrix; neutral; gradual smooth boundary.

Bg2—34 to 43 inches; olive gray (5Y 5/2) silty clay loam; moderate medium prismatic structure; friable; few prominent dark gray (10YR 4/1) organic coatings in root channels; many fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation and few fine faint dark gray (5Y 4/1) iron depletions in the matrix; neutral; abrupt smooth boundary.

Cg—43 to 60 inches; gray (5Y 6/1) silt loam; massive; friable; strata of silt at a depth of 48 inches; common dark gray (5Y 4/1) krotovinas; few fine prominent light olive brown (2.5Y 5/6) masses of iron oxide accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches
Thickness of the solum: 38 to 50 inches

Ap, A, or AB horizon:
Hue—10YR or N
Value—2 or 3
Chroma—0 or 1
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

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

69A—Milford silty clay loam, 0 to 2 percent slopes

Setting

Landform: Lake plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more clay
- Soils that have a dark surface soil less than 10 inches thick or more than 24 inches thick
- Soils that have a surface layer of silt loam
- Soils that have a subsoil of reddish brown or yellowish red

Dissimilar soils:
- Soils that are subject to flooding; in the slightly lower positions

Properties and Qualities of the Milford Soil

Parent material: Glaciolacustrine deposits
Drainage class: Poorly 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 11.9 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 through May
Ponding depth: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Medium

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: 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 long. 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) masses of iron oxide accumulation 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 36 inches
Thickness of the solum: 24 to 60 inches

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

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

Cg horizon:
Hue—2.5Y, 5Y, or N
Value—4 or 5
Chroma—0 to 2
Texture—stratified sandy loam to silty clay loam

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

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have sandy layers in the subsoil and substratum
- Soils that have less sand in the surface layer and the subsoil
- Soils that are not subject to ponding

Dissimilar soils:
- Soils that are subject to occasional flooding

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 through June
Ponding depth: 0.5 foot, November through June
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

7082A—Millington clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have sandy layers in the subsoil and substratum
- Soils that have less sand in the surface layer and the subsoil
- Soils that are not subject to ponding

Dissimilar soils:
- Soils that are subject to more frequent flooding

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 11.1 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 through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

M-W—Miscellaneous water

• This map unit consists of bodies of water at municipal sewage treatment plants and animal waste treatment facilities.

Mt. Carroll Series

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

Typical Pedon

Mt. Carroll silt loam, 2 to 5 percent slopes; 2,250 feet south and 720 feet east of the northwest corner of sec. 32, T. 22 N., R. 5 E.; in Whiteside County, Illinois; USGS Morrison topographic quadrangle; lat. 41 degrees 51 minutes 09 seconds N. and long. 89 degrees 57 minutes 22 seconds W., NAD 27:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium granular structure; friable; common very fine and fine roots throughout; slightly acid; clear smooth boundary.

E—7 to 10 inches; dark grayish brown (10YR 4/2) silt loam; moderate medium platy structure; friable; few fine roots throughout; many faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; slightly acid; clear smooth boundary.

BE—10 to 17 inches; brown (10YR 4/3) silt loam; moderate fine subangular blocky structure; friable; few fine roots between peds; many faint dark brown (10YR 3/3) organic coatings on faces of peds; few faint very dark grayish brown (10YR 3/2) organic coatings in root channels; moderately acid; clear smooth boundary.

Bt1—17 to 25 inches; dark yellowish brown (10YR 4/4) silt loam; moderate fine and medium subangular blocky structure; friable; few fine roots between peds; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels; many faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—25 to 39 inches; yellowish brown (10YR 5/4) 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; common prominent very dark grayish brown (10YR 3/2) wormcasts; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; moderately acid; gradual smooth boundary.

Bt3—39 to 55 inches; yellowish brown (10YR 5/4) silt loam; weak medium and coarse subangular blocky structure; friable; common faint brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; moderately acid; gradual smooth boundary.

BC—55 to 62 inches; yellowish brown (10YR 5/4) silt loam; weak medium prismatic structure; friable; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; few fine dark reddish brown (5YR 2.5/2) soft masses of iron-manganese; moderately acid; gradual smooth boundary.

C—62 to 80 inches; mixed yellowish brown (10YR 5/4) and pale brown (10YR 6/3) silt loam; massive; friable; common fine and medium black (5YR 2.5/1) soft masses of iron-manganese; few fine distinct light brownish gray (10YR 6/2) iron depletions and few fine faint yellowish brown (10YR 5/6 and 5/8) masses of iron oxide accumulation in the matrix; slightly acid.

Range in Characteristics

Thickness of the dark surface layer: 6 to 9 inches
Thickness of the solum: 36 to 70 inches

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

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

C horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam

268B—Mt. Carroll silt loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

Mt. Carroll and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a dark surface soil more than 10 inches thick or less than 6 inches thick
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils that contain more clay in the subsoil

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

Properties and Qualities of the Mt. Carroll 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: 2 to 3 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

268C2—Mt. Carroll silt loam, 5 to 10 percent slopes, eroded

Setting

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

Map Unit Composition

Mt. Carroll and similar soils: 99 percent
Dissimilar soils: 1 percent

Minor Components

Similar soils:
- Soils that have a dark surface soil more than 10 inches thick or less than 6 inches thick
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils that contain more clay in the substratum
- Soils that contain more sand or coarse silt in the substratum

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

Properties and Qualities of the Mt. Carroll 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: 2 to 3 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland status: Not prime farmland
Hydric soil status: Not 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) masses of iron oxide accumulation 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) masses of iron oxide accumulation 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) masses of iron oxide accumulation 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) masses of iron oxide accumulation 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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more sand in the lower part of the subsoil
- Soils that have a seasonal high water table at a depth of more than 4 feet
- Soils that have less clay in the subsoil
- Soils that have slopes of more than 2 percent

Dissimilar soils:
- The poorly drained Sable soils on ground moraines
- 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 through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Muskego Series

Taxonomic classification: Coprogenous, euic, mesic Limnic Haplosaprists

Typical Pedon

Muskego muck, 0 to 2 percent slopes; 710 feet west and 320 feet north of the southeast corner of sec. 31, T. 17 N., R. 7 E.; in Bureau County, Illinois; USGS Manlius topographic quadrangle; lat. 41 degrees 24 minutes 35 seconds N. and long. 89 degrees 43 minutes 32 seconds W., NAD 27:

Oap—0 to 10 inches; sapric material, black (N 2/0) broken face and rubbed, black (10YR 2/1) dry; about 5 percent fiber, less than 2 percent rubbed; weak fine subangular blocky structure parting to weak fine granular; friable; few fine roots throughout; neutral; abrupt smooth boundary.

Oa—10 to 18 inches; sapric material, black (N 2/0) broken face and black (10YR 2/1) rubbed; about 5 percent fiber, less than 2 percent rubbed; moderate medium subangular blocky structure; friable; few fine roots throughout; neutral; clear smooth boundary.

A—18 to 22 inches; black (10YR 2/1) mucky silt loam; moderate medium subangular blocky structure; friable; few fine roots between peds; neutral; clear smooth boundary.

Lco—22 to 28 inches; brown (10YR 4/3) coprogenous earth; weak coarse subangular blocky structure; very friable; many prominent black (10YR 2/1) and common distinct dark brown (10YR 3/3) mucky organic coatings on faces of peds and in pores; neutral; clear smooth boundary.

Lca1—28 to 42 inches; grayish brown (2.5Y 5/2) coprogenous earth; massive; very friable; common medium prominent yellow (10YR 7/6) and common medium prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; few fine distinct dark gray (10YR 4/1) iron depletions; many snail-shell fragments; violently effervescent; slightly alkaline; clear wavy boundary.

Lca2—42 to 60 inches; dark gray (5Y 4/1) coprogenous earth; massive; very friable; common medium prominent brown (7.5YR 4/4) masses of iron oxide accumulation in the matrix; common snail-shell fragments; violently effervescent; slightly alkaline.

Range in Characteristics

Thickness of organic deposits: 16 to 51 inches

Surface tier:
Hue—10YR or N
Value—2 or 3
Chroma—0 or 1

Subsurface tier:
Hue—7.5YR, 10YR, or N
Value—2 or 3
Chroma—0 to 2

Lco and Lca horizons:
Hue—7.5YR, 10YR, 2.5Y, 5Y, or N
Value—2 to 5
Chroma—0 to 3

638A—Muskego muck, 0 to 2 percent slopes

Setting

Landform: Lake plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have loamy material in the substratum
- Soils that have deposits of muck more than 36 inches thick

Dissimilar soils:
- The poorly drained Gilford and Marshan soils in positions similar to those of the Muskego soil

Properties and Qualities of the Muskego Soil

Parent material: Herbaceous organic material
Drainage class: Very 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 16.8 inches
Content of organic matter in the surface layer: 60 to 90 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Ponding depth: 1 foot, November through June
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 4w
Prime farmland status: Not prime farmland
Hydric soil status: 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 Rock Island 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 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 (5YR 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 (5YR 4/6) masses of iron oxide accumulation in the matrix; very strongly acid; gradual smooth boundary.

3Btg2—37 to 53 inches; gray (5Y 6/1) silt loam; weak coarse prismatic structure parting to weak medium subangular blocky; friable; common prominent reddish gray (5YR 5/2) clay films on faces of peds; many prominent black (N 2/0) 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 (5YR 4/6) masses of iron oxide accumulation 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 (5YR 4/6) masses of iron oxide accumulation 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

E 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: Depressions
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
• Soils that have a dark surface soil more than 10 inches thick or less than 6 inches thick
• Soils that have less clay in the subsoil
• Soils that have more clay in the surface layer and the subsoil
• Soils that have a perched seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
• Soils that are subject to flooding; in the slightly lower positions near stream channels
• The well drained Joslin soils on summits and shoulders

Properties and Qualities of the Niota Soil

Parent material: Glaciolacustrine deposits
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Impermeable
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 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 through May
Ponding depth: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and high for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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 to 6
Texture—fine sand, loamy sand, or sand

C horizon:
Hue—10YR
Value—4 to 7
Chroma—3 to 6
Texture—fine sand

917C2—Oakville-Tell complex, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes or shoulders

Map Unit 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 dark surface layer
- Soils that contain more clay in the soil

Dissimilar soils:
- The somewhat poorly drained Joyce 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: Some mixing of the surface layer and the subsoil
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
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: Some mixing of the surface layer and the subsoil
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: Low

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: Backslopes

Map Unit 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 dark surface layer
- Soils that contain more clay

Dissimilar soils:
- The somewhat poorly drained Joyce 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 4.3 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
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: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

Land capability classification: Oakville—6s; Tell—4e
Prime farmland status: Not prime farmland
Hydric soil status: Oakville—not hydric; Tell—not hydric

Ogle Series

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

Typical Pedon

Ogle silt loam, 2 to 5 percent slopes, at an elevation of 792 feet; 75 feet north and 495 feet east of the southwest corner of the SE1/4 of sec. 30, T. 24 N., R. 7 E.; in Carroll County, Illinois; USGS Lanark topographic quadrangle; lat. 42 degrees 02 minutes 20 seconds N. and long. 89 degrees 43 minutes 57 seconds W., NAD 27:

A—0 to 11 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; slightly acid; gradual smooth boundary.

AB—11 to 15 inches; dark brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; moderate very fine subangular blocky structure; friable; moderately acid; gradual smooth boundary.

Bt1—15 to 22 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; firm; few very dark grayish brown (10YR 3/2) wormcasts; strongly acid; gradual smooth boundary.

Bt2—22 to 33 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; few thin discontinuous dark brown (7.5YR 3/4) clay films on faces of peds; moderately acid; gradual smooth boundary.

Bt3—33 to 40 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; thin patchy dark brown (7.5YR 3/4) clay films on faces of peds; moderately acid; gradual wavy boundary.

2Bt4—40 to 60 inches; reddish brown (5YR 4/4) clay loam; strong medium and coarse subangular blocky structure; firm; thick continuous faint dark reddish brown (5YR 3/4) clay films on faces of peds; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to carbonates: Commonly more than 60 inches

Ap, A, or AB horizon:
Value—2 or 3
Chroma—1 to 3
Texture—silt loam

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

2Bt or 2BC horizon:
Hue—2.5YR, 5YR, or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture—sandy clay loam, clay loam, or silty clay loam that has a moderate content of sand

2C horizon (if it occurs):
Texture—loam, clay loam, or sandy loam

412B—Ogle silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have sandy subhorizons in the subsoil
- Soils that have loamy textures within a depth of 30 inches

Dissimilar soils:
- The well drained Ashdale soils on summits and shoulders

Properties and Qualities of the Ogle Soil

Parent material: Loess over 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 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

412C—Ogle silt loam, 5 to 10 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have sandy subhorizons in the subsoil
- Soils that have loamy textures within a depth of 30 inches

Dissimilar soils:
- The well drained Ashdale soils on backslopes

Properties and Qualities of the Ogle Soil

Parent material: Loess over 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 8.9 inches
Content of organic matter in the surface layer: 3 to 5 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

Orio Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Mollic Endoaqualfs

Typical Pedon

Orio loam, 0 to 2 percent slopes, at an elevation of 610 feet; 1,190 feet west and 925 feet north of the southeast corner of sec. 8, T. 18 N., R. 4 E.; in Henry County, Illinois; USGS Spring Hill topographic quadrangle; lat. 41 degrees 33 minutes 55 seconds N. and long. 90 degrees 03 minutes 23 seconds W., NAD 27:

Ap—0 to 9 inches; very dark gray (10YR 3/1) loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; many fine roots throughout; moderately acid; abrupt smooth boundary.

E1—9 to 13 inches; grayish brown (10YR 5/2) fine sandy loam, light brownish gray (10YR 6/2) dry; weak medium platy structure; friable; common fine and very fine roots throughout; common medium prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

E2—13 to 18 inches; grayish brown (10YR 5/2) fine sandy loam; weak medium platy structure; friable; common fine roots throughout; common medium prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; neutral; clear smooth boundary.

Btg1—18 to 30 inches; dark grayish brown (10YR 4/2) clay loam; moderate medium subangular blocky structure; friable; common very fine roots between peds; few distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; neutral; clear wavy boundary.

Btg2—30 to 35 inches; olive gray (5Y 5/2) clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few faint olive gray (5Y 4/2) clay films on faces of peds; many medium prominent yellowish red (5YR 5/8) masses of iron oxide accumulation in the matrix; neutral; clear wavy boundary.

BCg—35 to 41 inches; grayish brown (2.5Y 5/2) sandy loam; weak medium subangular blocky structure; friable; few fine prominent yellowish red (5YR 5/8) masses of iron oxide accumulation in the matrix; neutral; clear wavy boundary.

2Cg—41 to 60 inches; grayish brown (2.5Y 5/2) sand; single grain; loose; slightly alkaline.

Range in Characteristics

Thickness of the solum: 35 to 60 inches

Ap or A horizon:
- Value—2 or 3
- Chroma—1 to 3
- Texture—loam, sandy loam, fine sandy loam, or silt loam

E or Eg horizon:
- Hue—10YR or 2.5Y
- Value—4 to 6
- Chroma—1 or 2
- Texture—loam, sandy loam, fine sandy loam, loamy sand, or loamy fine sand

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

2Cg horizon:
- Hue—10YR, 2.5Y, or 5Y
- Value—4 to 6
- Chroma—1 or 2
- Texture—sand, fine sand, loamy fine sand, or loamy sand

200A—Orio loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains or depressions
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface soil more than 10 inches thick
- Soils that have more sand in the subsoil
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- Soils that are subject to flooding; in the lower positions

Properties and Qualities of the Orio Soil

Parent material: Outwash
Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow
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 8.4 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Ponding depth: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more sand in the upper part
- Soils that have a seasonal high water table within a depth of 1 foot

- Soils that have a seasonal high water table at a depth of more than 3 feet
- Soils in which the buried soil is at a depth of more than 40 inches

Dissimilar soils:
- The poorly drained Beaucoup soils in depressions
- The poorly drained Sawmill soils 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 through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

8415A—Orion silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more sand in the upper part
- Soils that have a seasonal high water table within a depth of 1 foot
- Soils that have a seasonal high water table at a depth of more than 3 feet
- Soils in which the buried soil is at a depth of more than 40 inches

Dissimilar soils:
- The poorly drained Beaucoup soils in depressions
- The poorly drained Sawmill soils 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 through May
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

802B—Orthents, loamy, undulating

Setting

Slope range: 1 to 7 percent
Landform: Ground moraines

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are mostly silt loam or silty clay loam

• Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
• The well drained Hickory soils on backslopes
• The somewhat poorly drained Orion soils on flood plains

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

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 fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

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 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: Shoulders and summits

Map Unit 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
- Soils that contain less clay in the subsoil

Dissimilar soils:
- The poorly drained Sable soils in depressions and drainageways

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 through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland status: Prime farmland (fig. 8)
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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the lower part

Figure 8.—Residential development in an area of Osco silt loam, 2 to 5 percent slopes, which is prime farmland.

- Soils that have a seasonal high water table within a depth of 4 feet
- Soils that contain less clay in the subsoil

Dissimilar soils:
- The poorly drained Sable soils in depressions and drainageways

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 through April
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

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, frequently flooded; 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 (N 2/0) 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) masses of iron oxide accumulation 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 (N 2/0) mucky silt loam, black (N 2/0) dry; weak medium subangular blocky structure; friable; few fine prominent strong brown (7.5YR 4/6) masses of iron accumulation 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) masses of iron oxide accumulation 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) masses of iron oxide accumulation 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) masses of iron oxide accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 30 to 45 inches
Thickness of the solum: 36 to 50 inches

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

B horizon:
Hue—10YR, 2.5Y, or N

Value—4 to 6
Chroma—0 to 4
Texture—silt loam

C horizon:
Hue—10YR, 2.5Y, or N
Value—4 to 6
Chroma—0 to 4
Texture—silt loam or silt loam that has strata of silty clay loam, loam, or sandy loam

3076A—Otter silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the surface layer and the subsoil
- Soils that have sandy layers in the substratum
- Soils that have a dark surface soil less than 24 inches thick
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The well drained Huntsville soils in the slightly higher positions

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 through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the surface layer and the subsoil
- Soils that have sandy layers in the substratum
- Soils that have a dark surface soil less than 24 inches thick
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The well drained Huntsville soils in the slightly higher positions

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 through May
Ponding depth: 0.5 foot, January through May

Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Palms Series

Taxonomic classification: Loamy, mixed, euic, mesic Terric Haplosaprists

Typical Pedon

Palms muck, 0 to 2 percent slopes, rarely flooded; 2,040 feet east and 140 feet south of the northwest corner of sec. 6, T. 21 N., R. 4 E.; in Whiteside County, Illinois; USGS Union Grove topographic quadrangle; lat. 41 degrees 50 minutes 37 seconds N. and long. 90 degrees 05 minutes 06 seconds W., NAD 27:

Oap—0 to 10 inches; sapric material, black (N 2/0) broken face and rubbed; about 10 percent fiber, 5 percent rubbed; weak fine granular structure; friable; slightly acid; abrupt smooth boundary.

Oa—10 to 28 inches; sapric material, black (10YR 2/1) broken face and rubbed; about 10 percent fiber, 5 percent rubbed; weak medium platy structure; friable; few thin strata of very dark gray (10YR 3/1) silt loam that has few fine distinct dark yellowish brown (10YR 4/4) masses of iron oxide accumulation in the matrix; few fine faint dark reddish brown (5YR 2.5/2) coatings of iron on faces of peds; neutral; clear smooth boundary.

2Cg1—28 to 36 inches; very dark gray (10YR 3/1) mucky silt loam; massive; friable; few fine prominent reddish brown (2.5YR 4/4) masses of iron oxide accumulation in the matrix; neutral; clear smooth boundary.

2Cg2—36 to 41 inches; gray (5Y 5/1) silt loam; massive; friable; few very dark gray (10YR 3/1) krotovinas; common fine prominent light olive brown (2.5Y 5/4), brown (7.5YR 5/4), and reddish brown (5YR 5/3) masses of iron oxide accumulation in the matrix; neutral; clear smooth boundary.

2Cg3—41 to 60 inches; gray (5Y 5/1) silt loam; massive; friable; few fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the organic material: 16 to 50 inches

Oap or Oa horizon:
Hue—10YR or N
Value—2 or 3
Chroma—0 to 2

2Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 2

7100A—Palms muck, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Backswamps

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are muck to a depth of more than 60 inches
- Soils that are underlain by a clayey or sandy substratum

Dissimilar soils:
- The poorly drained Cohoctah and Fella soils in positions similar to or slightly higher than those of the Palms soil
- Calcareous, fine-loamy soils

Properties and Qualities of the Palms Soil

Parent material: Herbaceous organic material over loamy alluvium
Drainage class: Very 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 16.9 inches
Content of organic matter in the surface layer: 75 to 99 percent
Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Ponding depth: 1 foot, November through June
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

Parkway Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Parkway soil in map unit 686C2 has a thinner dark surface layer than is defined as the range for the series. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Parkway silt loam, 2 to 5 percent slopes, at an elevation of 632 feet; 1,220 feet north and 1,340 feet west of the southeast corner of sec. 15, T. 17 N., R. 3 E.; in Henry County, Illinois; USGS Geneseo topographic quadrangle; lat. 41 degrees 27 minutes 26 seconds N. and long. 90 degrees 07 minutes 49 seconds W., NAD 27:

Ap—0 to 7 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; moderately acid; abrupt smooth boundary.
A1—7 to 14 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure; friable; moderately acid; gradual smooth boundary.
A2—14 to 18 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine and medium subangular blocky structure; friable; moderately acid; clear smooth boundary.
BA—18 to 22 inches; brown (10YR 4/3) silt loam; weak medium subangular blocky structure; friable; common very dark grayish brown (10YR 3/2) organic coatings on faces of peds; moderately acid; clear smooth boundary.
Bt1—22 to 28 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; friable; common faint dark brown (10YR 3/3) clay films on faces of peds; neutral; gradual wavy boundary.
Bt2—28 to 39 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common faint brown (10YR 4/3) clay films on faces of peds; neutral; gradual wavy boundary.
Bt3—39 to 49 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; neutral; clear wavy boundary.
2BC—49 to 60 inches; light olive brown (2.5Y 5/4) silty clay loam; moderate medium subangular blocky structure; friable; effervescent; moderately alkaline; 5 percent gravel; clear wavy boundary.
2C—60 to 80 inches; light olive brown (2.5Y 4/4) loam; massive; friable; about 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of the argillic horizon: 45 to 60 inches
Depth to carbonates: 40 to 60 inches

Ap, A, or AB horizon:
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or silty clay loam

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

2Bt, 2BC, or 2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—3 to 8
Texture—clay loam, loam, silty clay loam, or silt loam

686B—Parkway silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders or summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have till within a depth of 40 inches
- Soils that have till at a depth of more than 60 inches
- Soils that have a dark surface soil less than 10 inches thick
- Soils that have a seasonal high water table at a depth of more than 6 feet

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

Properties and Qualities of the Parkway Soil

Parent material: Loess over 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 12.3 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 through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

686C2—Parkway silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have till within a depth of 40 inches
- Soils that have till at a depth of more than 60 inches
- Soils that have a seasonal high water table at a depth of more than 6 feet

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

Properties and Qualities of the Parkway Soil

Parent material: Loess over 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: 3 to 4 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4 feet, February through April
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

Pecatonica Series

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

Typical Pedon

Pecatonica silt loam, 5 to 10 percent slopes, eroded; 2,140 feet east and 1,760 feet north of the southwest corner of sec. 1, T. 22 N., R. 4 E.; in Whiteside County, Illinois; USGS Fair Haven topographic quadrangle; lat. 41 degrees 55 minutes 17 seconds N. and long. 89 degrees 59 minutes 24 seconds W., NAD 27:

Ap—0 to 7 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure parting to weak medium granular; friable; few yellowish brown (10YR 5/4) fragments of subsoil material; common faint dark brown (10YR 3/3) organic coatings on faces of peds; neutral; abrupt smooth boundary.

Bt1—7 to 13 inches; yellowish brown (10YR 5/4) silt loam; moderate medium and fine subangular blocky structure; friable; few faint brown (10YR 4/3) organic coatings on faces of peds and few distinct dark brown (10YR 3/3) organic coatings in root channels; moderately acid; clear smooth boundary.

Bt2—13 to 19 inches; yellowish brown (10YR 5/6) silt loam; moderate fine subangular blocky structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.

2Bt3—19 to 23 inches; strong brown (7.5YR 5/6) loam; moderate medium and fine subangular blocky structure; friable; common distinct brown (7.5YR 4/4) clay films on faces of peds; strongly acid; clear smooth boundary.

2Bt4—23 to 29 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm; fine prominent reddish brown (5YR 4/4) clay films on faces of peds; few chert and igneous pebbles; moderately acid; clear smooth boundary.

2Bt5—29 to 44 inches; yellowish red (5YR 4/6) clay loam; moderate coarse subangular blocky structure; firm; few distinct reddish brown (5YR 4/4) clay films on faces of peds; few chert and igneous pebbles; moderately acid; clear smooth boundary.

2Bt6—44 to 60 inches; yellowish red (5YR 4/6) clay loam; weak coarse subangular blocky structure; firm; few distinct reddish brown (5YR 4/4) clay films on faces of peds; few chert and igneous pebbles; strata of gravelly sandy loam at a depth of 56 inches; moderately acid.

Range in Characteristics

Thickness of the loess: 15 to 25 inches
Thickness of the solum: More than 60 inches

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

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam

2Bt or 2BC horizon:
Hue—5YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam, loam, or sandy clay loam

2C horizon:
Hue—5YR
Value—4 to 6
Chroma—4 to 6
Texture—loam, clay loam, or sandy clay loam or the gravelly analogs of these textures

21C2—Pecatonica silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have either less than 15 inches or more than 30 inches of loess over the underlying till
- Soils that have thin sandy strata in the middle or lower part of the subsoil

Dissimilar soils:
- The well drained Woodbine soils on backslopes and footslopes

Properties and Qualities of the Pecatonica Soil

Parent material: Loess over 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 11 inches
Content of organic matter in the surface layer: 1 to 3 percent

Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

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

21D2—Pecatonica silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have either less than 15 inches or more than 30 inches of loess over the underlying till
- Soils that have thin sandy strata in the middle or lower part of the subsoil

Dissimilar soils:
- The well drained Woodbine soils on backslopes and footslopes

Properties and Qualities of the Pecatonica Soil

Parent material: Loess over 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 11 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

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

865—Pits, gravel

- This map unit consists of open excavations from which gravel and sand have been removed. Small areas of open water, areas of loamy Orthents, and undisturbed areas of natural soils are included in mapping. Onsite investigation is needed to determine the properties in specific areas.

Interpretive Groups

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

868—Pits, organic

- This map unit consists of open excavations from which organic material has been removed. Small areas of disturbed soils and of undisturbed natural soils are included in mapping. Onsite investigation is needed to determine the properties in specific areas.

Interpretive Groups

Land capability classification: Not assigned
Prime farmland status: Not prime farmland
Hydric soil status: Hydric

869—Pits, quarries-Orthents complex

General Definition

- This map unit consists of open excavations from which limestone bedrock has been removed and the disturbed soil areas adjacent to the pits. Small areas of open water and undisturbed natural soils are included in mapping.

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
Potential for frost action: Not rated
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Medium

Interpretive Groups

Land capability classification: Pits—not assigned; Orthents—2e
Prime farmland status: Not prime farmland
Hydric soil status: Pits—not hydric; Orthents—not hydric

Plainfield Series

Taxonomic classification: Mixed, mesic Typic Udipsamments

Typical Pedon

Plainfield sand, 6 to 12 percent slopes; 40 feet north and 2,010 feet west of the southeast corner of sec. 34, T. 22 N., R. 3 E.; in Whiteside County, Illinois; USGS Clinton, Iowa, topographic quadrangle; lat. 41 degrees 50 minutes 38 seconds N. and long. 90 degrees 08 minutes 17 seconds W., NAD 27:

A—0 to 4 inches; very dark grayish brown (10YR 3/2) sand, grayish brown (10YR 5/2) dry; weak fine granular structure; very friable; slightly acid; abrupt smooth boundary.
Bw—4 to 14 inches; dark yellowish brown (10YR 4/4) sand; single grain; loose; slightly acid; gradual smooth boundary.
BC—14 to 26 inches; mixed dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/4) sand; single grain; loose; slightly acid; gradual smooth boundary.
C—26 to 60 inches; strong brown (7.5YR 5/6) sand; single grain; loose; slightly acid.

Range in Characteristics

Thickness of the surface horizon: 4 to 10 inches
Thickness of the solum: 20 to 40 inches

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—loamy sand, fine sand, or sand

Bw or BC horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—sand

C horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 6
Texture—sand

54C—Plainfield sand, 6 to 12 percent slopes

Setting

Landform: Dunes
Position on the landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface layer
- Soils that contain more clay

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

Properties and Qualities of the Plainfield 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 or very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 3.6 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

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

54E—Plainfield sand, 12 to 20 percent slopes

Setting

Landform: Dunes
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface layer
- Soils that contain more clay

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

Properties and Qualities of the Plainfield 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 or very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 3.6 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 7s
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Port Byron Series

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

Typical Pedon

Port Byron silt loam, 2 to 5 percent slopes; 2,620 feet south and 400 feet east of the northwest corner of sec. 9, T. 20 N., R. 3 E.; in Whiteside County, Illinois; USGS Erie Northwest topographic quadrangle; lat. 41 degrees 44 minutes 13 seconds N. and long. 90 degrees 10 minutes 08 seconds W., NAD 27:

Ap—0 to 8 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; weak medium granular structure; friable; many very fine and fine roots throughout; moderately acid; abrupt smooth boundary.

A—8 to 13 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium and fine subangular blocky structure; friable; common very fine and fine roots throughout; many faint very dark gray (10YR 3/1) organic coatings on faces of peds; slightly acid; clear smooth boundary.

BA—13 to 20 inches; brown (10YR 4/3) silt loam; moderate medium and fine subangular blocky structure; friable; common fine roots between peds; many faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; few faint very dark grayish brown (10YR 3/2) wormcasts; slightly acid; clear smooth boundary.

Bt1—20 to 31 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium and fine subangular blocky structure; friable; common fine and medium roots between peds; common faint brown (10YR 4/3) clay films on faces of peds; few faint dark brown (10YR 3/3) wormcasts; moderately acid; clear smooth boundary.

Bt2—31 to 40 inches; yellowish brown (10YR 5/4) silt loam; moderate coarse and medium subangular blocky structure; friable; few fine roots between peds; common faint brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; moderately acid; clear smooth boundary.

Bt3—40 to 52 inches; yellowish brown (10YR 5/4) silt loam; weak coarse subangular blocky structure; friable; few fine roots between peds; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; few fine faint pale brown (10YR 6/3) masses of iron oxide

accumulation in the matrix; slightly acid; clear smooth boundary.

BC—52 to 60 inches; yellowish brown (10YR 5/4) silt loam; weak medium and coarse prismatic structure; firm; few fine roots between peds; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; few fine dark brown (7.5YR 3/2) coatings of iron-manganese on faces of peds; slightly acid; clear smooth boundary.

C1—60 to 66 inches; yellowish brown (10YR 5/4) silt; massive; friable; common fine distinct yellowish brown (10YR 5/6 and 5/8) masses of iron oxide accumulation in the matrix; few fine and medium irregular brown (7.5YR 4/4) and few fine rounded black (N 2/0) concretions of iron-manganese throughout the matrix; common medium black (5Y 2.5/1) irregular masses of iron-manganese in root channels and pores in the lower 2 inches; neutral; gradual smooth boundary.

C2—66 to 77 inches; 50 percent yellowish brown (10YR 5/4) and 50 percent pale brown (10YR 6/3) silt loam; massive; friable; common fine and medium distinct yellowish brown (10YR 5/6) and few medium prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; light brownish gray (10YR 6/2) iron depletions; few fine and medium irregular black (N 2/0) concretions of iron-manganese throughout the matrix; neutral; gradual smooth boundary.

C3—77 to 89 inches; 70 percent yellowish brown (10YR 5/4) and 30 percent pale brown (10YR 6/3) silt; massive; friable; common fine distinct yellowish brown (10YR 5/6 and 5/8) masses of iron oxide accumulation in the matrix; few fine faint light brownish gray (10YR 6/2) and gray (10YR 6/1) iron depletions; few fine rounded black (N 2/0) concretions of iron-manganese throughout the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the solum: 42 to more than 60 inches

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

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

C horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 4
Texture—silt loam or silt

277B—Port Byron silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Map Unit Composition

Port Byron and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a dark surface soil less than 10 inches thick
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have a dark surface soil more than 24 inches thick
- Soils that have more sand in the lower part of the subsoil

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

Properties and Qualities of the Port Byron 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: 2 to 4 percent
Shrink-swell potential: Low
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: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

277C—Port Byron silt loam, 5 to 10 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Map Unit Composition

Port Byron and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

Similar soils:
- Soils that have a dark surface soil less than 10 inches thick
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have more sand in the lower part of the subsoil

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

Properties and Qualities of the Port Byron Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Not rated
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
Flooding: None
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

Prophetstown Series

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

Typical Pedon

Prophetstown silt loam, 0 to 2 percent slopes, at an elevation of 632 feet; 520 feet south and 1,820 feet east of the northwest corner of sec. 33, T. 19 N., R. 6 E.; in Whiteside County, Illinois; USGS Yorktown topographic quadrangle; lat. 41 degrees 35 minutes 15 seconds N. and long. 89 degrees 48 minutes 52 seconds W., NAD 27:

Apk—0 to 9 inches; black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; weak fine granular structure; friable; few fine roots throughout; violently effervescent; slightly alkaline; abrupt smooth boundary.

Ak—9 to 16 inches; very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to weak fine granular; friable; few fine roots throughout; common faint black (10YR 2/1) organic films on faces of peds; violently effervescent; slightly alkaline; clear smooth boundary.

Bkg1—16 to 23 inches; dark grayish brown (2.5Y 4/2) silt loam; weak fine and medium subangular blocky structure; friable; few fine roots between peds; many distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; many fine distinct light olive brown (2.5Y 5/4) masses of iron oxide accumulation in the matrix; common fine accumulations of iron and manganese; strongly effervescent; slightly alkaline; clear smooth boundary.

Bkg2—23 to 33 inches; light brownish gray (2.5Y 6/2) silt loam; weak coarse subangular blocky structure; friable; few very fine roots between peds; dark gray (10YR 4/1) krotovina; common fine rounded calcium carbonate concretions; common prominent very dark grayish brown (10YR 3/2) organic coatings on faces of peds; many medium prominent yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; strongly effervescent; slightly alkaline; gradual smooth boundary.

BCg—33 to 40 inches; light brownish gray (2.5Y 6/2) silt loam; weak coarse prismatic structure; friable; dark gray (10YR 4/1) krotovina; common fine rounded calcium carbonate concretions; common fine accumulations of iron and manganese; many medium prominent yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; strongly effervescent; slightly alkaline; gradual smooth boundary.

Cg1—40 to 52 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; common fine accumulations of iron and manganese; common fine rounded calcium carbonate concretions; many medium prominent yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; strongly effervescent; slightly alkaline; abrupt smooth boundary.

Cg2—52 to 60 inches; gray (10YR 6/1), stratified loam, sandy loam, and silt loam; massive; friable; common fine accumulations of iron and manganese; common fine rounded calcium carbonate concretions; few prominent dark gray (10YR 4/1) linings in root channels; many fine prominent yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 23 inches
Depth to free carbonates: Less than 16 inches
Thickness of the solum: 22 to 48 inches

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

Bg or Bkg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 7
Chroma—0 to 2
Texture—silty clay loam, silt loam, loam, or clay loam

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 or 2
Texture—stratified silt loam, loam, sandy loam, loamy sand, or sand

767A—Prophetstown silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface soil less than 10 inches thick
- Soils that have more sand in the surface soil and in the subsoil

Dissimilar soils:
- The poorly drained Drummer soils in positions similar to those of the Prophetstown soil

Properties and Qualities of the Prophetstown Soil

Parent material: Loess over outwash
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 12.2 inches
Content of organic matter in the surface layer: 4 to 6 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Ponding depth: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: 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 (N 2/0) 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 (N 2/0) 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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the surface layer is more than 24 inches thick
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have more sand throughout
- Soils that have a light-colored surface deposit of silt loam overwash
- Soils that have more clay in the subsoil

Dissimilar soils:
- Soils that are subject to flooding; near stream channels

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

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: Backslopes or shoulders

Map Unit Composition

Raddle and similar soils: 89 percent
Dissimilar soils: 11 percent

Minor Components

Similar soils:
- Soils in which the surface layer is more than 24 inches thick
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have more sand throughout
- Soils that have a light-colored surface deposit of silt loam overwash
- Soils that have more clay in the subsoil

Dissimilar soils:
- Soils that are subject to flooding; near stream channels

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

Interpretive Groups

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

Richwood Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Richwood soil in map unit 485C2 has a thinner dark surface layer than is defined as the range for the series. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Richwood silt loam, 0 to 2 percent slopes; 930 feet south and 20 feet east of the northwest corner of sec. 4, T. 18 N., R. 4 E.; in Henry County, Illinois; USGS Spring Hill topographic quadrangle; lat. 41 degrees 34 seconds 53 minutes N. and long. 90 degrees 03 minutes 04 seconds W., NAD 27:

Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine and medium subangular blocky structure parting to moderate medium granular; friable; few very fine roots throughout; neutral; abrupt smooth boundary.

A—9 to 14 inches; very dark grayish brown (10YR 3/2) and dark brown (10YR 3/3) silt loam, brown (10YR 4/3) dry; weak medium subangular blocky structure; friable; many very fine roots throughout; slightly acid; clear smooth boundary.

BA—14 to 22 inches; mixed brown (10YR 4/3) and dark brown (10YR 3/3) silt loam; weak fine subangular blocky structure; friable; common very fine roots between peds; neutral; clear smooth boundary.

Bt1—22 to 34 inches; dark yellowish brown (10YR 4/4)

silt loam; weak fine and medium subangular blocky structure; very friable; common very fine roots between peds; many faint dark brown (10YR 3/3) clay films on faces of peds; neutral; clear smooth boundary.

Bt2—34 to 48 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; very friable; many faint brown (10YR 4/3) clay films on faces of peds; neutral; abrupt smooth boundary.

2BC—48 to 57 inches; mixed dark yellowish brown (10YR 4/4), yellowish brown (10YR 5/4), and brown (7.5YR 4/2) silt loam; thin strata of very fine sandy loam; weak medium subangular blocky structure; friable; few fine prominent yellowish red (5YR 4/6), few fine distinct brownish yellow (10YR 6/6), and few fine faint brown (10YR 5/3) masses of iron oxide accumulation in the matrix; neutral; abrupt smooth boundary.

2C—57 to 60 inches; mixed brown (10YR 5/3) and pale brown (10YR 6/3) sand; single grain; loose; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 17 inches
Thickness of the loess: 40 to 60 inches
Thickness of the solum: 40 to 60 inches

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

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

2B horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 or 4
Texture—loam, silt loam, or sandy loam; thin strata of sandy material in some pedons

2C horizon:
Hue—7.5YR or 10YR
Value—4 to 8
Chroma—2 to 6
Texture—sand or fine sand

485B—Richwood silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are underlain by loamy material within a depth of 40 inches
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have more than 60 inches of loess over the underlying loamy material
- Soils that are underlain by loamy till within a depth of 60 inches
- Soils in which the surface soil is less than 10 inches thick

Dissimilar soils:
- The poorly drained Drummer soils on outwash plains
- The somewhat poorly drained Elburn soils on footslopes

Properties and Qualities of the Richwood 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: Moderate to rapid
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: 2 to 5 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland status: Prime farmland
Hydric soil status: Not hydric

485C2—Richwood silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are underlain by loamy material within a depth of 40 inches
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have more than 60 inches of loess over the underlying loamy material
- Soils that are underlain by loamy till within a depth of 60 inches

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

Properties and Qualities of the Richwood 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: Moderate to 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 5 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: High
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

2485B—Richwood-Urban land complex, 2 to 5 percent slopes

Setting

Landform: Outwash plains

Map Unit Composition

Richwood and similar soils: 60 percent
Urban land: 40 percent

Minor Components

Soils that are similar to the Richwood soil:
- Soils that have been altered by leveling, cutting, or filling
- Soils in which the surface layer and the subsoil contain more sand
- Soils that have a thinner surface layer
- Soils that have a seasonal high water table at a depth of 3 to 6 feet
- Soils in which the surface layer and the subsoil contain more clay
- Soils that have slopes of less than 2 percent

Properties and Qualities of the Richwood 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: Moderate to rapid
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 5 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

General Definition of Urban Land

- Urban land consists of areas covered by streets, parking lots, buildings, and other structures.

Interpretive Groups

Land capability classification: Richwood—2e; Urban land—not assigned

Prime farmland status: Not prime farmland
Hydric soil status: Richwood—not hydric

Riley Series

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

Typical Pedon

Riley loam, 0 to 2 percent slopes, frequently flooded; 2,540 feet north and 120 feet east of the southwest corner of sec. 34, T. 20 N., R. 4 E.; in Whiteside County, Illinois; USGS Erie topographic quadrangle; lat. 41 degrees 40 minutes 39 seconds N. and long. 90 degrees 02 minutes 07 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure parting to moderate fine granular; friable; common fine roots throughout; slightly acid; abrupt smooth boundary.

A—8 to 17 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; weak medium and fine subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; few fine rounded black (N 2/0) soft masses of iron-manganese throughout the matrix; slightly acid; clear smooth boundary.

Bw1—17 to 27 inches; brown (10YR 4/3) clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few faint dark grayish brown (10YR 4/2) iron depletions; few fine black (N 2/0) soft masses of iron-manganese throughout the matrix; neutral; clear smooth boundary.

Bw2—27 to 34 inches; brown (10YR 4/3) sandy clay loam; moderate medium subangular blocky structure; friable; common fine faint dark grayish brown (10YR 4/2) iron depletions and common fine faint dark yellowish brown (10YR 4/4) masses of iron oxide accumulation in the matrix; few fine black (N 2/0) soft masses of iron-manganese throughout the matrix; neutral; abrupt smooth boundary.

2C1—34 to 39 inches; stratified dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4) loamy sand; massive; very friable; neutral; abrupt smooth boundary.

2C2—39 to 60 inches; yellowish brown (10YR 5/4) sand; single grain; loose; few fine and medium prominent strong brown (7.5YR 5/6 and 5/8) masses of iron oxide in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches

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

Bw horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam, sandy clay loam, or clay loam

2C horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loamy fine sand, loamy sand, or sand

3452A—Riley loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the underlying sandy material is at a depth of more than 40 inches
- Soils that have a dark surface soil less than 10 inches thick
- Soils that are calcareous in the lower part of the subsoil and in the substratum
- Soils that have more sand in the surface soil and in the subsoil
- Soils that are better drained

Dissimilar soils:
- Soils that are subject to less frequent flooding; in the slightly higher positions
- The poorly drained Ambraw soils on flood plains

Properties and Qualities of the Riley 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: Rapid

Depth to restrictive feature: More than 80 inches
Available water capacity to a depth of 60 inches: About 8.4 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: 1 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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

7452A—Riley loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the underlying sandy material is at a depth of more than 40 inches
- Soils that have a dark surface soil less than 10 inches thick
- Soils that are calcareous in the lower part of the subsoil and in the substratum
- Soils that have more sand in the surface soil and in the subsoil
- Soils that are better drained

Dissimilar soils:
- Soils that are subject to more frequent flooding; in the slightly lower positions
- The poorly drained Ambraw soils on flood plains

Properties and Qualities of the Riley Soil

Parent material: Alluvium over sandy sediments
Drainage class: Somewhat poorly 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 7.8 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: 1 foot, January through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

8452A—Riley loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the underlying sandy material is at a depth of more than 40 inches
- Soils that have a dark surface soil less than 10 inches thick
- Soils that are calcareous in the lower part of the subsoil and in the substratum
- Soils that have more sand in the surface soil and in the subsoil
- Soils that are better drained

Dissimilar soils:
- The poorly drained Ambraw soils on flood plains

Properties and Qualities of the Riley Soil

Parent material: Alluvium over sandy sediments
Drainage class: Somewhat poorly 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 7.8 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: 1 foot, January through May
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Ross Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Ross silt loam, frequently flooded; 232 feet north and 1,490 feet west of the southeast corner of sec. 28, T. 23 N., R. 3 W.; in Tazewell County, Illinois; USGS Hopedale topographic quadrangle; lat. 40 degrees 24 minutes 40 seconds N. and long. 89 degrees 26 minutes 27 seconds W., NAD 27:

Ap—0 to 8 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; friable; common very fine roots throughout; neutral; clear smooth boundary.

A—8 to 13 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; common very fine and fine roots throughout; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.

Bw1—13 to 27 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure; friable; few very fine roots between peds; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; gradual smooth boundary.

Bw2—27 to 34 inches; dark brown (10YR 3/3) loam, brown (10YR 4/3) dry; weak fine subangular blocky structure; friable; few very fine and coarse roots between peds; few faint very dark grayish brown (10YR 3/2) clay films and common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; gradual smooth boundary.

Bw3—34 to 43 inches; brown (10YR 4/3) loam; weak medium subangular blocky structure; very friable; few very fine roots between peds; many faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; gradual smooth boundary.

C1—43 to 54 inches; brown (10YR 4/3) sandy loam; massive; very friable; few fine and very fine roots throughout; neutral; gradual smooth boundary.

C2—54 to 60 inches; brown (10YR 4/3) sandy loam; massive; very friable; few fine faint grayish brown (10YR 5/2) iron depletions; about 5 percent fine and medium gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 40 inches
Thickness of the solum: 24 to 45 inches

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

Bw horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—silt loam, sandy loam, or loam

C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—sandy loam or loam; strata of sandy material

7073A—Ross silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have subhorizons of reddish brown silty clay or clay
- Soils that contain more sand and less clay

Dissimilar soils:
- Soils that are subject to more frequent flooding; near drainageways
- The poorly drained Ambraw soils in the slightly lower positions on flood plains

Properties and Qualities of the Ross Soil

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
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 10.3 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: 5 feet, February through April
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Rozetta Series

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

Typical Pedon

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 distinct light yellowish brown (10YR 6/4) and faint brown (10YR 4/3) masses of iron oxide accumulation 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 oxide accumulation 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

279B—Rozetta silt loam, 2 to 5 percent slopes

Setting

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

Map Unit 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 a seasonal high water table at a depth of more than 6 feet all year
- Soils that are silt loam throughout
- Soils that have a seasonal high water table within a depth of 4 feet

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

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 through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Medium
Susceptibility to wind erosion: Low

Interpretive Groups

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

279C2—Rozetta silt loam, 5 to 10 percent slopes, eroded

Setting

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

Map Unit Composition

Rozetta 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 at a depth of more than 6 feet all year
- Soils that are silt loam throughout
- Soils that have a seasonal high water table within a depth of 4 feet

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

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 through April
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

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

Sable Series

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

Typical Pedon

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 very 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 oxide accumulation 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 oxide accumulation 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 oxide accumulation 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 oxide accumulation 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

Map Unit 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 silt loam throughout
- Soils that have more sand in the lower part of the subsoil and in the substratum

• Soils that have a dark surface soil more than 24 inches thick

Dissimilar soils:
• Soils that have a seasonal high water table at a depth of 2.0 to 3.5 feet
• 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 through May
Ponding depth: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Sawmill Series

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

Typical Pedon

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 mm 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 mm in diameter; few fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation 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 oxide accumulation 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 oxide accumulation 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 oxide accumulation 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 oxide accumulation 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 oxide accumulation 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 oxide accumulation 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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less clay in the subsoil
- Soils that have mucky or sandy textures in the subsoil
- Soils in which the surface soil is less than 24 inches thick

Dissimilar soils:
- The poorly drained Titus soils on flood plains

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 through June
Ponding depth: 0.5 foot, November through June
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very low

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less clay in the subsoil
- Soils that have mucky or sandy textures in the subsoil
- Soils in which the surface soil is less than 24 inches thick
- Soils that contain more clay

Dissimilar soils:
- The poorly drained Titus soils on flood plains

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 through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very low

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less clay in the subsoil
- Soils that have mucky or sandy textures in the subsoil
- Soils in which the surface soil is less than 24 inches thick
- Soils that contain more clay

Dissimilar soils:
- Soils that are subject to more frequent flooding; near drainageways

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 through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very low

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a darker, more clayey surface layer
- Soils that are covered with sandy overwash material
- Soils that have more sand in the buried soil
- Soils that are calcareous

Dissimilar soils:
- Soils that are subject to less frequent flooding
- The well drained Huntsville soils in the slightly higher positions

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 through May
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

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 Henderson 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 distinct dark brown (10YR 3/3) clay films and few distinct 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 distinct 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 distinct 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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that have a darker surface layer
- Soils that have more sand in the substratum
- Soils that have a seasonal high water table within a depth of 60 inches

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

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

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: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that have a darker surface layer
- Soils that have more sand in the substratum
- 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 well drained Tell soils on shoulders and 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: Some mixing of the surface layer and the subsoil
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: Low

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that have a darker surface layer
- Soils that have more sand in the substratum
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that are calcareous throughout

Dissimilar soils:
- The somewhat poorly drained Orion soils in drainageways

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: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

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

943D3—Seaton-Timula silt loams, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Seaton and similar soils: 45 percent
Timula and similar soils: 40 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that have more sand in the substratum
- Soils that are calcareous throughout

Dissimilar soils:
- The somewhat poorly drained Orion soils in drainageways

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 1.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
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: Low

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: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
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: Low

Interpretive Groups

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

943E3—Seaton-Timula silt loams, 18 to 25 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Seaton and similar soils: 45 percent
Timula and similar soils: 40 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that have more sand in the substratum
- Soils that are calcareous throughout

Dissimilar soils:
- The somewhat poorly drained Orion soils in drainageways

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 is mostly subsoil material.
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: Low

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 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
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: Low

Interpretive Groups

Land capability classification: Seaton—7e; Timula—6e
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: Backslopes

Map Unit Composition

Seaton and similar soils: 45 percent
Timula and similar soils: 40 percent
Dissimilar soils: 15 percent

Minor Components

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

- Soils that have more sand in the substratum
- Soils that are calcareous throughout

Dissimilar soils:
- The somewhat poorly drained Orion soils in drainageways

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: Some mixing of the surface layer and the subsoil
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: Low

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: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

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

Selmass Series

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

Typical Pedon

Selmass silt loam, 0 to 2 percent slopes; 560 feet north and 400 feet east of the southwest corner of sec. 7, T. 22 N., R. 5 E.; in Whiteside County, Illinois; USGS Fair Haven topographic quadrangle; lat. 41 degrees 54 minutes 42 seconds N. and long. 89 degrees 58 minutes 29 seconds W., NAD 27:

Ap—0 to 9 inches; black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; moderate fine granular structure; friable; few fine roots; neutral; abrupt smooth boundary.

AB—9 to 13 inches; very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; moderate medium angular blocky structure parting to moderate fine granular; firm; few fine roots; neutral; clear smooth boundary.

Bg1—13 to 21 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; many faint very dark gray (10YR 3/1) and common black (10YR 2/1) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bg2—21 to 27 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate fine and medium subangular blocky structure; friable; few fine roots; few thin distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few thin distinct brown (10YR 4/3) clay films on faces of peds; few fine distinct gray (10YR 6/1) iron depletions; few fine prominent light brownish gray (10YR 6/2) masses of iron oxide accumulation in the matrix; few fine prominent black (N 2.5/0) accumulations of iron-manganese; few fine prominent brown (7.5YR 4/4) concretions of iron and manganese throughout the matrix; slightly acid; clear smooth boundary.

2Bg3—27 to 35 inches; light brownish gray (2.5Y 5/2) loam and sandy loam; weak medium subangular blocky structure; very friable; few fine roots; few fine distinct light brownish gray (10YR 6/2) iron depletions; few fine prominent dark yellowish brown (10YR 4/6) masses of iron oxide accumulation in the matrix; many fine and medium prominent black (N 2.5/0) accumulations of iron-manganese; few fine prominent dark brown (7.5YR 3/4) concretions of iron and manganese throughout the matrix; slightly acid; clear smooth boundary.

2Bg4—35 to 43 inches; light brownish gray (2.5Y 6/2) and pale brown (10YR 6/3) loamy sand; weak

medium subangular blocky structure; very friable; few fine roots; many medium prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; few fine and medium prominent black (N 2.5/0) accumulations of iron-manganese; slightly acid; gradual smooth boundary.

2C—43 to 60 inches; brown (7.5YR 4/4) loamy sand and sand; massive; thin strata of loam and sandy loam; very friable; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the solum: 35 to 55 inches

Ap and AB horizons:
Hue—10YR or N
Value—2 or 3
Chroma—0 to 2
Texture—silt loam, loam, or clay loam

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

2C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—1 to 6
Texture—stratified sand or loamy sand

529A—Selmass silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Map Unit Composition

Selmass 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 lighter colored surface layer

Dissimilar soils:
- Somewhat poorly drained soils on footslopes

Properties and Qualities of the Selmass Soil

Parent material: Outwash
Drainage class: Poorly 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 7.9 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 through May
Ponding depth: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland status: Prime farmland where drained
Hydric soil status: 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 between 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 or outwash plains
Position on the landform: Summits

Map Unit 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 a dark surface layer more than 24 inches thick
- Soils that have more gravel in the substratum
- Soils that have limestone bedrock within a depth of 60 inches
- Soils that have more clay in the surface layer and the subsoil
- Soils that have a dark surface layer less than 10 inches thick

Dissimilar soils:
- The somewhat poorly drained Watseka 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
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

88C—Sparta loamy sand, 6 to 12 percent slopes

Setting

Landform: Dunes
Position on the landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have a dark surface layer more than 24 inches thick
- Soils that have more gravel in the substratum
- Soils that have limestone bedrock within a depth of 60 inches
- Soils that have more clay in the surface layer and the subsoil

• Soils that have a dark surface layer less than 10 inches thick

Dissimilar soils:
• The somewhat poorly drained Watseka soils on footslopes

Properties and Qualities of the Sparta Soil

Parent material: Sandy outwash and/or eolian sands
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
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

88E—Sparta loamy sand, 12 to 20 percent slopes

Setting

Landform: Dunes
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
• Soils that have a lighter colored surface layer
• Soils that have a dark surface layer more than 24 inches thick
• Soils that have more gravel in the substratum
• Soils that have more clay in the surface layer and the subsoil
• Soils that have a dark surface layer less than 10 inches thick

Dissimilar soils:
• The somewhat poorly drained Watseka soils on footslopes

Properties and Qualities of the Sparta Soil

Parent material: Sandy outwash and/or eolian sands
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 4.7 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: Low
Flooding: None
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: High

Interpretive Groups

Land capability classification: 7s
Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Tell Series

Taxonomic classification: Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludalfs

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

565B—Tell silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less than 20 inches of loess at the surface
- Soils that contain more sand throughout
- Soils that have more clay in the subsoil
- Soils that have more than 40 inches of loess over the underlying material

Dissimilar soils:
- The somewhat poorly drained Joyce soils on footslopes
- The somewhat poorly drained Lawler soils
- The excessively drained Oakville soils on shoulders and summits
- The poorly drained Orio soils

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 8.4 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
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: Low

Interpretive Groups

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

565C2—Tell silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less than 20 inches of loess at the surface
- Soils that contain more sand throughout
- Soils that have more clay in the subsoil
- Soils that have more than 40 inches of loess over the underlying material

Dissimilar soils:
- The somewhat poorly drained Joyce soils on footslopes
- The well drained Oakville soils on shoulders and summits
- The poorly drained Thorp soils in depressions

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 8.2 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

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

565D2—Tell silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less than 20 inches of loess at the surface
- Soils that contain more sand throughout
- Soils that have more clay in the subsoil
- Soils that have more than 40 inches of loess over the underlying material

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

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 7.2 inches
Content of organic matter in the surface layer: 1 to 3 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
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: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland status: Not prime farmland
Hydric soil status: Not hydric

Thorp Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Argiaquic Argialbolls

Typical Pedon

Thorp silt loam, 0 to 2 percent slopes; 990 feet north and 2,240 feet west of the southeast corner of sec. 27, T. 36 N., R. 5 E.; in La Salle County, Illinois; USGS Sheridan topographic quadrangle; lat. 41 degrees 33 minutes 20 seconds N. and long. 88 degrees 38 minutes 10 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate very fine granular structure; friable; common very fine roots throughout; neutral; abrupt smooth boundary.

A—7 to 14 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; common very fine roots throughout; slightly acid; abrupt smooth boundary.

Eg—14 to 19 inches; dark gray (10YR 4/1) silt loam, gray (10YR 6/1) dry; weak fine granular structure; friable; common very fine roots throughout; few fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

Btg1—19 to 21 inches; mixed dark gray (10YR 4/1) and dark grayish brown (2.5Y 4/2) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; firm; common very fine roots between peds; many distinct very dark gray (10YR 3/1) clay films on faces of peds; few fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

Btg2—21 to 33 inches; mixed gray (5Y 5/1) and olive gray (5Y 4/2) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; firm; many prominent very dark gray (10YR 3/1) clay films on faces of peds; many fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

Btg3—33 to 43 inches; grayish brown (2.5Y 5/2) silty clay loam; weak fine prismatic structure parting to moderate fine angular and subangular blocky; firm; many distinct very dark gray (10YR 3/1) and dark gray (N 4/0) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) and common fine distinct light yellowish brown (2.5Y 6/4) masses of iron oxide accumulation in the matrix; slightly acid; clear smooth boundary.

2Btg4—43 to 50 inches; mixed grayish brown (10YR 5/2) and yellowish brown (10YR 5/6) sandy clay loam; weak coarse subangular blocky structure; friable; few distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; neutral; clear smooth boundary.

2Cg—50 to 65 inches; mixed grayish brown (10YR 5/2) and yellowish brown (10YR 5/8) sandy loam; massive; friable in the sandy loam part; thin strata of sand; single grain; loose in the sand part; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 14 inches
Thickness of the loess or silty material: 35 to 54 inches
Depth to free carbonates: More than 40 inches
Thickness of the solum: 40 to 65 inches

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

2Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 8
Texture—sandy clay loam, loam, clay loam, silt loam, or sandy loam; strata in some pedons

2Cg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 8
Texture—stratified sandy loam, sandy clay loam, clay loam, loam, silt loam, silty clay loam, sand, or loamy sand

206A—Thorp silt loam, 0 to 2 percent slopes

Setting

Landform: Depressions
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the substratum
- Soils that have a dark surface layer less than 10 inches thick
- Soils that have a seasonal high water table at a depth of more than 2 feet all year

Dissimilar soils:
- A few areas of soils that are subject to flooding; along drainage ditches

Properties and Qualities of the Thorp Soil

Parent material: Loess over outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: 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 11 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 through May
Ponding depth: 0.5 foot, January through May
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: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Timula Series

Taxonomic classification: Coarse-silty, mixed, superactive, mesic Typic Eutrudepts
Map units in which this series occurs: 943D3, 943E3, 943F2

Typical Pedon

Timula silt loam, in an area of Seaton-Timula silt loams, 18 to 35 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) masses of iron oxide accumulation 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) masses of iron oxide accumulation 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 Whiteside 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 oxide accumulation 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) masses of iron oxide 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) masses of iron oxide 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) masses of iron oxide 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) masses of iron oxide accumulation 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) masses of iron oxide accumulation in the matrix; few concretions 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 loamy or sandy strata in some pedons

3404A—Titus silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less clay in the surface layer and the subsoil
- Soils that have a dark surface soil more than 24 inches thick
- Soils that are covered with a deposit of silt loam overwash

Dissimilar soils:
- Soils that are subject to less frequent flooding; in the slightly higher positions or farther from the stream channels

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 9.9 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 through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 4w
Prime farmland status: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

7404A—Titus silty clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain less clay throughout
- Soils that have a dark surface layer more than 24 inches thick

Dissimilar soils:
- Soils that are subject to more frequent flooding; near drainageways

Properties and Qualities of the Titus Soil

Parent material: Alluvium
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 10.7 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 through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Rare, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

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

8404A—Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
• Soils that have less clay in the surface layer and the subsoil
• Soils that have a dark surface soil more than 24 inches thick
• Soils that are covered with a deposit of silt loam overwash

Dissimilar soils:
• Soils that are subject to less frequent flooding; in the slightly higher positions or farther from the stream channels

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 through May
Ponding depth: 0.5 foot, January through May
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

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

Udolpho Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Endoaqualfs

Typical Pedon

Udolpho loam, sandy substratum, 0 to 2 percent slopes; 2,320 feet east and 1,660 feet north of the southwest corner of sec. 25, T. 20 N., R. 6 E.; in Whiteside County, Illinois; USGS Tampico topographic quadrangle; lat. 41 degrees 41 minutes 24 seconds N. and long. 89 degrees 45 minutes 31 seconds W., NAD 27:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; few fine roots throughout; neutral; abrupt smooth boundary.
Eg—8 to 13 inches; grayish brown (10YR 5/2) loam; weak medium and thin platy structure; friable; few fine roots throughout; few faint very dark grayish brown (10YR 3/2) organic coatings in root channels; few fine prominent reddish brown (2.5YR 4/4) masses of iron oxide accumulation in the matrix; slightly acid; clear smooth boundary.
Btg1—13 to 21 inches; dark grayish brown (2.5Y 4/2) clay loam; moderate medium and fine subangular blocky structure; friable; few fine roots between peds; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine dark brown (7.5YR 3/2) coatings of iron-manganese on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; about 1 percent pebbles; slightly acid; clear smooth boundary.

Btg2—21 to 30 inches; grayish brown (2.5Y 5/2) sandy clay loam; moderate medium subangular blocky structure; friable; few faint grayish brown (10YR 5/2) clay films on faces of peds; few fine dark brown (7.5YR 3/2) coatings of iron-manganese on faces of peds; few prominent black (N 2/0) concretions of iron-manganese throughout the matrix; common fine prominent strong brown (7.5YR 5/8) masses of iron oxide accumulation in the matrix; about 5 percent gravel; slightly acid; abrupt smooth boundary.

2Cg1—30 to 45 inches; grayish brown (2.5Y 5/2) coarse sand; single grain; loose; about 5 percent gravel; neutral; clear smooth boundary.

2Cg2—45 to 60 inches; grayish brown (2.5Y 5/2) sand; single grain; loose; about 5 percent gravel; neutral.

Range in Characteristics

Thickness of the dark surface layer: 6 to 10 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

Eg horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—1 or 2
Texture—loam or silt loam

Btg horizon:
Hue—2.5Y
Value—4 or 5
Chroma—1 or 2
Texture—clay loam, loam, or sandy clay loam

2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—coarse sand, sand, loamy coarse sand, loamy sand, gravelly sand, or gravelly coarse sand

759A—Udolpho loam, sandy substratum, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface soil more than 24 inches thick
- Soils that have a light-colored surface layer
- Soils that contain less clay in the subsoil
- Soils that contain less sand in the underlying material

Dissimilar soils:
- The well drained Dickinson soils on summits and shoulders

Properties and Qualities of the Udolpho Soil

Parent material: Outwash
Drainage class: Poorly 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
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

533—Urban land

General Definition

- Urban land consists of areas covered by parking lots, streets, buildings, and other structures.

Map Unit Composition

Urban land: 85 percent
Dissimilar components: 15 percent

Minor Components

Dissimilar components:
- The well drained, loamy Orthents in open areas

Virgil Series

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

Typical Pedon

Virgil silt loam, 0 to 2 percent slopes; 300 feet south and 1,346 feet east of the northwest corner of sec. 8, T. 26 N., R. 8 E.; in Stephenson County, Illinois; USGS Freeport East topographic quadrangle; lat. 42 degrees 16 minutes 30 seconds N. and long. 89 degrees 36 minutes 38 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silt loam, grayish brown (10YR 5/2) dry; weak medium granular structure; friable; common fine roots throughout; neutral; abrupt smooth boundary.

E—7 to 13 inches; mixed dark grayish brown (10YR 4/2) and grayish brown (10YR 5/2) silt loam; weak thin platy structure parting to moderate fine granular; friable; many fine roots throughout; few distinct black (10YR 2/1) organic coatings on faces of peds and in root channels; few fine prominent brown (7.5YR 4/4) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.

Bt1—13 to 17 inches; mixed grayish brown (10YR 5/2) and brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; common fine roots between peds; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; common faint light brownish gray (10YR 6/2) (dry) and light gray (10YR 7/2) (dry) clay depletions on faces of peds; few fine black (10YR 2/1) soft masses of iron and manganese; few fine prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron oxide in the matrix; strongly acid; clear smooth boundary.

Bt2—17 to 25 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; common fine roots between peds; common faint dark grayish brown (10YR 4/2) and grayish brown (10YR 5/2) clay films on faces of peds; common faint light brownish gray (10YR 6/2) (dry) and light gray (10YR 7/2) (dry) clay depletions on faces of peds; few fine black (10YR 2/1) iron and manganese concretions; few fine distinct brown (7.5YR 4/4) and few fine prominent strong brown (7.5YR 5/6) masses of iron oxide in the matrix; strongly acid; gradual smooth boundary.

Btg1—25 to 35 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate fine and medium subangular blocky structure; firm; few fine roots between peds; many faint grayish brown (2.5Y 5/2) clay films on faces of peds; few distinct light brownish gray (10YR 6/2) (dry) and light gray (10YR 7/2) (dry) clay depletions on faces of peds; many fine black (10YR 2/1) iron and manganese concretions; common fine prominent strong brown (7.5YR 5/6 and 5/8) masses of iron oxide in the matrix; strongly acid; clear smooth boundary.

Btg2—35 to 44 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate medium and coarse subangular and angular blocky structure; firm; few fine roots between peds; common faint grayish brown (2.5Y 5/2) clay films on faces of peds; few distinct light brownish gray (10YR 6/2) (dry) and light gray (10YR 7/2) (dry) clay depletions on faces of peds; many fine black (10YR 2/1) iron and manganese concretions; many medium prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

Btg3—44 to 49 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium and coarse angular blocky structure; firm; few fine roots between peds; few distinct gray (N 5/0) clay films on faces of peds; many fine black (10YR 2/1) iron and manganese concretions; many medium prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

2Btg4—49 to 58 inches; mixed grayish brown (2.5Y 5/2) and light brownish gray (2.5Y 6/2) loam; weak coarse angular blocky structure; firm; few distinct dark gray (N 4/0) clay films on faces of peds; few fine black (10YR 2/1) iron and manganese concretions; many medium prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; neutral; gradual smooth boundary.

2C—58 to 60 inches; mixed brown (10YR 4/3) and dark yellowish brown (10YR 4/4) sandy loam; massive; friable; common fine distinct dark gray (10YR 4/1) and gray (10YR 5/1) redoximorphic depletions; slightly alkaline.

Range in Characteristics

Thickness of the loess: 40 to 60 inches

Depth to free carbonates: 45 to 70 inches
Thickness of the solum: 42 to 70 inches

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

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

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

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

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

104A—Virgil silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces or outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface layer more than 10 inches thick
- Soils that have more than 60 inches of loess over the underlying loamy material
- Soils that have a seasonal high water table at a depth of more than 3 feet all year
- Soils that have a lighter colored surface layer
- Soils that contain less clay in the subsoil
- Soils in which the substratum has sandy or gravelly textures

Dissimilar soils:
- The poorly drained Thorp soils in depressions

Properties and Qualities of the Virgil Soil

Parent material: Loess over outwash and/or till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
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 13.4 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: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

W—Water

- This map unit consists of natural bodies of water, such as ponds, lakes, and rivers.

Watseka Series

Taxonomic classification: Sandy, mixed, mesic Aquic Hapludolls

Typical Pedon

Watseka loamy fine sand, 0 to 2 percent slopes; 2,520 feet west and 2,280 feet north of the southeast corner of sec. 33, T. 19 N., R. 5 E.; in Whiteside County, Illinois; USGS Hooppole topographic quadrangle; lat. 41 degrees 35 minutes 24 seconds N. and long. 89 degrees 55 minutes 46 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) loamy fine sand, very dark gray (10YR 3/1) dry; weak fine subangular blocky structure parting to weak fine

granular; very friable; few fine roots throughout; neutral; abrupt smooth boundary.

AB—10 to 18 inches; very dark grayish brown (10YR 3/2) loamy sand, grayish brown (10YR 5/2) dry; weak medium and fine subangular blocky structure; very friable; few fine roots throughout; common faint very dark brown (10YR 2/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bw—18 to 24 inches; dark grayish brown (10YR 4/2) loamy sand; weak medium and fine subangular blocky structure; very friable; few fine roots throughout; neutral; gradual smooth boundary.

C1—24 to 47 inches; grayish brown (10YR 5/2) sand; single grain; loose; few medium faint dark grayish brown (10YR 4/2) iron depletions; common fine distinct yellowish brown (10YR 5/6) and brownish yellow (10YR 6/6) masses of iron oxide accumulation in the matrix; neutral; gradual smooth boundary.

C2—47 to 60 inches; light brownish gray (10YR 6/2) sand; single grain; loose; few fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; few fine pebbles; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the solum: 24 to 36 inches

Ap horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—loamy fine sand, loamy sand, or sand

Bw horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—2 to 4
Texture—loamy fine sand, loamy sand, fine sand, or sand

C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 to 4
Texture—loamy fine sand, loamy sand, fine sand, or sand

49A—Watseka loamy fine sand, 0 to 2 percent slopes

Setting

Landform: Outwash plains or stream terraces
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

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

Dissimilar soils:
- The poorly drained Gilford soils in depressions
- The excessively drained Oakville and Sparta soils on shoulders and summits

Properties and Qualities of the Watseka Soil

Parent material: Outwash and/or eolian sands
Drainage class: Somewhat poorly 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 5.3 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 through May
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 3s
Prime farmland status: Not prime farmland
Hydric soil status: Not 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.

AB—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

Thickness of the mollic epipedon: 12 to 18 inches
Thickness of the solum: 32 to 45 inches
Depth to sand and gravel: 25 to 40 inches

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

Bw horizon:
Hue—10YR
Value—3 to 5
Chroma—3 to 6
Texture—loam or sandy clay loam; loam that has thin strata of sandy loam and coarse sandy loam in some pedons

2BC or 2C horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 8
Texture—loamy coarse sand, coarse sand, gravelly loamy coarse sand, or gravelly coarse sand; thin strata with 20 to 50 percent gravel in some pedons

727A—Waukee loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the surface soil and the subsoil
- Soils that do not contain gravel in the lower part of the subsoil or in the underlying substratum
- Soils that have a thicker clayey subsoil

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

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

Interpretive Groups

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

Waukegan Series

Taxonomic classification: Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
Taxadjunct features: The Waukegan soil in map unit 564C2 has a thinner dark surface layer than is defined as the range for the series. This soil is classified as a fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Dystric Eutrudept.

Typical Pedon

Waukegan silt loam, 0 to 2 percent slopes; 1,744 feet north and 450 feet east of the southwest corner of sec. 31, T. 18 N., R. 7 E.; in Bureau County, Illinois; USGS New Bedford topographic quadrangle; lat. 41 degrees 30 minutes 04 seconds N. and long. 89 degrees 44 minutes 29 seconds W., NAD 27:

Ap—0 to 9 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; friable; common very fine roots throughout; moderately acid; abrupt smooth boundary.

A—9 to 17 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure parting to moderate medium granular; friable; common very fine roots throughout; slightly acid; clear smooth boundary.

Bt1—17 to 22 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; common very fine roots between peds; few faint very dark brown (10YR 2/2) and dark brown (10YR 3/3) clay films on faces of peds; slightly acid; clear smooth boundary.

Bt2—22 to 30 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; few very fine roots between peds; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; slightly acid; abrupt smooth boundary.

2BC—30 to 34 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; friable; few very fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; abrupt smooth boundary.

2C—34 to 60 inches; yellowish brown (10YR 5/4) sand; single grain; loose; about 32 percent pebbles and cobblestones; strong brown (7.5YR 5/6) bands of iron between depths of 45 and 47 inches; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the loess: 20 to 40 inches
Depth to sand and gravel: 20 to 40 inches
Depth to free carbonates: 40 to more than 60 inches
Thickness of the solum: 30 to 60 inches

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

Bt horizon:
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—3 to 5
Texture—silt loam

2B horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture—coarse sand, sand, loamy coarse sand, loamy sand, or sandy loam

2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—sand or coarse sand

564A—Waukegan silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a dark surface soil more than 24 inches thick
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have a thinner dark surface layer

• Soils that have more than 40 inches of loess over the underlying sandy material
• Soils that have more sand in the surface layer and the subsoil

Dissimilar soils:
• The somewhat poorly drained Joyce soils on footslopes

Properties and Qualities of the Waukegan 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 8.7 inches
Content of organic matter in the surface layer: 2 to 5 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

564B—Waukegan silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders or summits

Map Unit Composition

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

Minor Components

Similar soils:
• Soils that have a thinner dark surface layer
• Soils that have more than 40 inches of loess over the underlying sandy material
• Soils that have more sand in the surface layer and the subsoil

Dissimilar soils:
• The somewhat poorly drained Joyce soils on footslopes

Properties and Qualities of the Waukegan 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 9.4 inches
Content of organic matter in the surface layer: 2 to 5 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

564C2—Waukegan silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
• Soils that have a thinner dark surface layer
• Soils that have more than 40 inches of loess over the underlying sandy material
• Soils that have more sand in the surface layer and the subsoil
• Soils that have a lighter colored surface layer

Dissimilar soils:
• The somewhat poorly drained Joyce soils on footslopes

Properties and Qualities of the Waukegan 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 7.9 inches
Content of organic matter in the surface layer: 2 to 5 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Whalan Series

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

Typical Pedon

Whalan loam, 2 to 5 percent slopes; 840 feet west and 60 feet north of the southeast corner of sec. 6, T. 21 N., R. 4 E.; in Whiteside County, Illinois; USGS Union Grove topographic quadrangle; lat. 41 degrees 49 minutes 54 seconds N. and long. 90 degrees 04 minutes 40 seconds W., NAD 27:

Ap—0 to 5 inches; dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure parting to weak fine granular; very friable; few fine roots throughout; slightly acid; abrupt smooth boundary.

E—5 to 11 inches; brown (10YR 5/3) loam; weak thick platy structure parting to weak fine angular blocky; very friable; few fine roots throughout; few faint dark brown (10YR 3/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bt1—11 to 18 inches; yellowish brown (10YR 5/4) loam; moderate medium subangular blocky structure; friable; few fine roots between peds; brown (10YR 4/3) clay films on faces of peds; few faint dark brown (10YR 3/3) organic coatings on faces of peds; few fine dark reddish brown (5YR 2.5/2) coatings of iron-manganese on faces of peds; moderately acid; clear smooth boundary.

Bt2—18 to 24 inches; yellowish brown (10YR 5/4) clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; many distinct brown (10YR 4/3) clay films on faces of peds; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; many medium dark reddish brown (5YR 2.5/2) coatings of iron-manganese on faces of peds; slightly acid; clear smooth boundary.

2Bt3—24 to 29 inches; brown (10YR 5/3) and yellowish brown (10YR 5/6) clay loam; moderate coarse subangular blocky structure; friable; few fine roots between peds; common distinct brown (10YR 4/3) clay films on faces of peds; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; many medium dark reddish brown (5YR 2.5/2) coatings of iron-manganese on faces of peds; neutral; abrupt irregular boundary.

2R—29 inches; hard, fractured limestone bedrock; yellow (10YR 7/6), soft, calcareous, weathered limestone in the upper 1 inch.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to limestone bedrock: 20 to 40 inches

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

E horizon:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam or loam

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

2Bt horizon:
Hue—10YR, 7.5YR, or 5YR
Value—4 to 6
Chroma—3 to 6
Texture—clay, silty clay, or clay loam

509B—Whalan loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders or summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the surface layer and the subsoil
- Soils that have a dark surface layer
- Soils in which the underlying limestone bedrock is at a depth of more than 40 inches
- Soils that have slopes of more than 5 percent

Dissimilar soils:
- The poorly drained Faxon soils on flood plains

Properties and Qualities of the Whalan Soil

Parent material: Till over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity to a depth of 60 inches: About 5.8 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: High
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Woodbine Series

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

Typical Pedon

Woodbine silt loam, 2 to 5 percent slopes; 1,940 feet east and 31 feet south of the northwest corner of sec. 24, T. 27 N., R. 7 E.; in Stephenson County, Illinois; USGS Freeport West topographic quadrangle; lat. 42 degrees 19 minutes 52 seconds N. and long. 89 degrees 38 minutes 39 seconds W., NAD 27:

A—0 to 4 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; few fine roots throughout; slightly acid; clear smooth boundary.

E—4 to 9 inches; mixed brown (10YR 5/3) and very dark gray (10YR 3/1) silt loam; moderate thin platy structure; friable; few fine roots throughout; slightly acid; gradual smooth boundary.

BA—9 to 12 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; few fine roots between peds; moderately acid; clear smooth boundary.

2Bt1—12 to 16 inches; brown (7.5YR 4/4) silty clay loam that has about 10 percent sand; moderate fine subangular blocky structure; common distinct dark brown (7.5YR 3/2) clay films on faces of peds; firm; slightly acid; abrupt smooth boundary.

2Bt2—16 to 21 inches; brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots between peds; many distinct dark brown (7.5YR 3/2) clay films on faces of peds; strongly acid; clear smooth boundary.

2Bt3—21 to 30 inches; brown (7.5YR 4/4) sandy clay loam; moderate medium angular blocky structure; firm; many distinct dark reddish brown (5YR 3/4) clay films on faces of peds; common chert and igneous pebbles; strongly acid; clear smooth boundary.

2Bt4—30 to 37 inches; dark reddish brown (5YR 3/4) sandy loam; weak coarse subangular blocky structure; firm; few faint dark reddish brown (5YR 3/2 and 3/3) clay films on faces of peds; moderately acid; abrupt wavy boundary.

3Bt5—37 to 41 inches; dark reddish brown (5YR 3/4) gravelly clay; weak coarse angular blocky structure; firm; about 20 percent chert fragments; moderately acid; abrupt wavy boundary.

3R—41 inches; level bedded dolomitic limestone.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Depth to limestone bedrock: 40 to 60 inches

Ap horizon:
Hue—10YR
Value—2 to 5

Chroma—1 to 3
Texture—silt loam or loam

E horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam or loam

BA horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4
Texture—silt loam or silty clay loam

2Bt horizon:
Hue—2.5YR, 7.5YR, or 5YR
Value—3 to 5
Chroma—3 to 5
Texture—silty clay loam or clay loam in the upper part; grading to loam, sandy clay loam, clay loam, and sandy loam in the lower part of some pedons

3Bt horizon:
Hue—5YR
Value—3 or 4
Chroma—3 to 6
Texture—silty clay or clay
Content of chert—0 to 25 percent

410D2—Woodbine silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker dark surface layer
- Soils that have 10 to 20 percent chert fragments in the surface layer and in the upper part of the subsoil
- Soils that have more sand in the surface layer and the subsoil
- Soils that are silt loam throughout the middle part of the subsoil
- Soils that have limestone bedrock within a depth of 40 inches

Dissimilar soils:
- The well drained Pecatonica soils on summits and shoulders
- The well drained Ross soils in drainageways

Properties and Qualities of the Woodbine Soil

Parent material: Loess over till over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity to a depth of 60 inches: About 8 inches
Content of organic matter in the surface layer: 1 to 2 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: Some mixing of the surface layer and the subsoil
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

Zumbro Series

Taxonomic classification: Sandy, mixed, mesic Entic Hapludolls

Typical Pedon

Zumbro sandy loam, 1 to 4 percent slopes, rarely flooded; 2,200 feet north and 2,380 feet east of the southwest corner of sec. 34, T. 22 N., R. 3 E.; in Whiteside County, Illinois; USGS Clinton, Iowa, topographic quadrangle; lat. 41 degrees 51 minutes 00 seconds N. and long. 90 degrees 08 minutes 28 seconds W., NAD 27:

Ap—0 to 6 inches; very dark brown (10YR 2/2) sandy loam, dark brown (10YR 3/3) dry; weak medium granular structure; friable; few fine roots throughout; neutral; abrupt smooth boundary.

A—6 to 16 inches; very dark brown (10YR 2/2) sandy loam, dark brown (10YR 3/3) dry; weak medium subangular blocky structure parting to weak medium granular; friable; few fine roots throughout; neutral; clear smooth boundary.

AB—16 to 25 inches; dark brown (10YR 3/3) loamy sand, dark yellowish brown (10YR 4/4) dry; weak medium subangular blocky structure; very friable; few fine roots throughout; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.

Bw—25 to 34 inches; brown (10YR 4/3) loamy sand; weak medium subangular blocky structure; very friable; few fine roots throughout; common faint dark brown (10YR 3/3) organic coatings on faces of peds; neutral; clear smooth boundary.

C1—34 to 53 inches; yellowish brown (10YR 5/6) sand; single grain; loose; neutral; clear smooth boundary.

C2—53 to 60 inches; yellowish brown (10YR 5/6) sand; single grain; loose; common coarse distinct pale brown (10YR 6/3) and strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the solum: 0 to 45 inches

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

Bw horizon:
Hue—10YR
Value—3 or 4
Chroma—3 or 4
Texture—loamy sand, loamy fine sand, or sand

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

7349B—Zumbro sandy loam, 1 to 4 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more clay
- Soils that have subhorizons of loam in the surface layer, subsoil, or substratum
- Soils that have a dark surface layer less than 10 inches thick
- Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The moderately well drained Medway soils on flood plains
- The somewhat poorly drained Riley soils on flood plains

Properties and Qualities of the Zumbro Soil

Parent material: Sandy 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 5.7 inches
Content of organic matter in the surface layer: 2 to 4 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and low for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3s
Prime farmland status: Not 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 and gravel, 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 384,912 acres in the survey area, or roughly 86 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 (fig. 9). Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Figure 9.—A typical area of Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded, long duration. These soils provide good habitat for wetland wildlife.

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 Whiteside 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 earthfill and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

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

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

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 14a and 14b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very

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

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

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a 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

Tables 16a and 16b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 16a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

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

In table 16b, the soils are rated *good, fair,* or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the table. The

numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, or topsoil. The lower the number, the greater the limitation.

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

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

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

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

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

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

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.

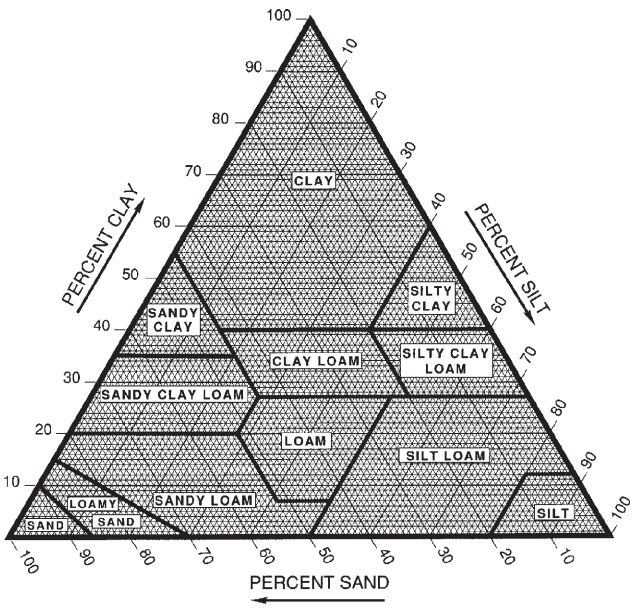


Figure 10.—Percentages of clay, silt, and sand in the basic USDA soil textural classes.

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 (fig. 10). “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.

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

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In table 19, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

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

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

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

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.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 19, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

Erosion factors are shown in 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.

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.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

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

Ablation till. Loose, permeable till deposited during the final downwasting of glacial ice. Lenses of crudely sorted sand and gravel are common.

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

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

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

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

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

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

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

Aspect. The direction in which a slope faces.

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

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

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

Basal till. Compact till deposited beneath the ice.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Beach deposits. Material, such as sand and gravel, that is generally laid down parallel to an active or relict shoreline of a postglacial or glacial lake.

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, and occurring singly or as one of a series of approximately parallel deposits. 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.

Blowout. A shallow depression from which all or most of the soil material has been removed by the wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts the water table is exposed.

Bog. Waterlogged, spongy ground, consisting primarily of mosses, containing acidic, decaying vegetation (such as sphagnum, sedges, and heaths) that develops into peat.

Bottom land. The normal flood plain of a stream, subject to flooding.

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

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

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

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

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

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

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

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

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

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

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

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

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

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

Coarse textured soil. Sand or loamy sand.

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

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

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

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

Complex slope. Irregular or variable slope. Planning

or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

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

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

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

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

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

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

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

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.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

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

Depression. Any relatively sunken part of the earth’s surface; especially a low-lying area surrounded by higher ground. A closed depression has no natural outlet for surface drainage. An open depression has a natural outlet for surface drainage.

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

Disintegration moraine. A drift topography characterized by chaotic mounds and pits, generally randomly oriented, developed in supraglacial drift by collapse and flow as the underlying stagnant ice melted. Slopes may be steep and unstable. Abrupt changes between materials of differing lithology are common.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

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

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

Drainageway. A relatively small, linear depression that, at some time, moves concentrated water and either does not have a defined channel or has only a small defined channel.

Drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Drumlin. A low, smooth, elongated oval hill, mound, or ridge of compact till. The longer axis is parallel to the path of the glacier and commonly has a blunt nose pointing in the direction from which the ice approached.

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

Dune. A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

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

End moraine. A ridgelike accumulation that is being or was produced at the outer margin of an actively flowing glacier at any given time.

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

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

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

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

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

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

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

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

Esker. A narrow, winding ridge of stratified gravelly and sandy drift deposited by a stream flowing in a tunnel beneath a glacier.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

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

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry

weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

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

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

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

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

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

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

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

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

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

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Geomorphology. The science that treats the general configuration of the earth's surface; specifically the study of the classification, description, nature, origin, and development of landforms and their relationships to underlying structures, and the history of geologic changes as recorded by these surface features. The term is especially applied to the genetic interpretation of landforms.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur as kames, eskers, deltas, and outwash plains.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are interbedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

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

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

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

Hard to reclaim (in tables). Reclamation is difficult

after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

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

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

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

Herbaceous peat. An accumulation of organic material, decomposed to some degree, that is predominantly the remains of sedges, reeds, cattails, and other herbaceous plants.

High-chroma zones. Zones having chroma of 3 or more. Typical color in areas of iron concentrations.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

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

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

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

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

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

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

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

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

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

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

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Ice-walled lake plain. A relict surface marking the floor of an extinct lake basin that was formed on solid ground and surrounded by stagnant ice in a stable or unstable superglacial environment on stagnation moraines. As the ice melted, the lake plain became perched above the adjacent landscape. The lake plain is well sorted, generally fine textured, stratified deposits.

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

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

Impervious soil. A soil through which water, air, or

roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

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. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame. An irregular, short ridge or hill of stratified drift.

Kame moraine. An end moraine that contains numerous kames. A group of kames along the front of a stagnant glacier, commonly comprising the slumped remnants of a formerly continuous outwash plain built up over the foot of rapidly wasting or stagnant ice.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

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

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

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

Lake bed. The bottom of a lake; a lake basin.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Lakeshore. A narrow strip of land in contact with or bordering a lake; especially the beach of a lake.

Lamella. A thin (commonly less than 1 cm thick), discontinuous or continuous, generally horizontal layer of fine material (especially clay and iron oxides) that has been pedogenically concentrated (illuviated within a coarser textured eluviated layer several centimeters to several decimeters thick).

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or

saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

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

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

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

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

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

Low strength. The soil is not strong enough to support loads.

Low-chroma zones. Zones having chroma of 2 or less. Typical color in areas of iron depletions.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

MAP. Mean annual precipitation, expressed in inches.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

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

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

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

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

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

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 drift in a topographic landform resulting chiefly from the direct action of glacial ice. Some types are laterial, recessional, and terminal.

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

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

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mucky peat. Unconsolidated soil material consisting primarily of organic matter that is in an intermediate stage of decomposition such that a significant part of the material can be recognized and a significant part of the material cannot be recognized.

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

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

a color with hue of 10YR, value of 6, and chroma of 4.

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

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

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

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

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

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

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

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

Parts per million (ppm). The concentration of a substance in the soil, such as phosphorus or potassium, in one million parts of air-dried soil on a weight per weight basis.

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 native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

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

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

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

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

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

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

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

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

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

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

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

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

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

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

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

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in

diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

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

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

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

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

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

Seepage (in tables). The movement of water through the soil. 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.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

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

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

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

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site 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.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

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

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Sloughed till. Water-saturated till that has flowed slowly downhill from its original place of deposit by glacial ice. It may rest on other till, on outwash, or on a glaciolacustrine deposit.

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

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from

saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

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

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

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

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

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

Stagnation moraine. A body of drift released by the melting of a glacier that ceased flowing. Commonly, but not always, occurs near ice margins; composed of till, ice-contact stratified drift, and small areas of glacial lake sediment. Typical landforms are knob-and-kettle topography, locally including ice-walled lake plains.

Stone line. A concentration of rock fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

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

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

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

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

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsidence. The potential decrease in surface elevation as a result of the drainage of wet soils that have organic layers or semifluid, mineral layers. Subsidence, as a result of drainage, is attributed to (1) shrinkage from drying, (2) consolidation because of the loss of ground-water buoyancy, (3) compaction from tillage or manipulation, (4) wind erosion, (5) burning, and (6) biochemical oxidation.

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

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

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

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

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

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

Swale. A slight depression in the midst of generally level land. A shallow depression in an undulating ground moraine resulting from uneven glacial deposition.

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 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. Unsorted, nonstratified drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Till plain. An extensive area of nearly level to undulating soils underlain by till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

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

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

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

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

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.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

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

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

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

Windthrow. The uprooting and tipping over of trees by the wind.

Woody peat. An accumulation of organic material that is predominantly composed of trees, shrubs, and other woody plants.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1971-2000 at Morrison, 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----	29.0	10.3	19.6	55	-20	0	1.53	0.75	2.30	3	10.9
February---	34.7	15.7	25.2	62	-17	0	1.51	.56	2.44	4	7.0
March------	47.0	27.3	37.1	79	1	21	2.76	1.24	4.10	6	4.3
April------	60.4	37.4	48.9	86	18	100	3.72	2.18	5.06	6	1.3
May--------	72.5	48.9	60.7	91	31	341	4.48	2.31	6.26	7	.0
June-------	81.9	58.1	70.0	97	42	593	4.40	2.33	6.21	6	.0
July-------	85.2	62.3	73.7	98	48	736	3.70	2.03	5.31	6	.0
August-----	83.0	59.7	71.4	97	46	663	4.69	2.08	6.79	7	.0
September--	76.0	50.8	63.4	94	32	408	2.87	1.38	4.27	5	.0
October----	64.2	39.2	51.7	87	21	143	2.82	1.14	4.29	5	.1
November---	47.5	28.6	38.0	73	5	19	2.93	1.32	4.36	5	2.2
December---	34.0	16.5	25.3	60	-13	2	2.19	1.07	3.32	4	9.0
Yearly:											
Average---	59.6	37.9	48.8	---	---	---	---	---	---	---	---
Extreme---	105	-28	---	99	-22	---	---	---	---	---	---
Total-----	---	---	---	---	---	3,026	37.60	30.84	42.94	64	34.7

* 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 Morrison, 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. 25	May 12
2 years in 10 later than--	Apr. 10	Apr. 20	May 7
5 years in 10 later than--	Apr. 3	Apr. 12	Apr. 26
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 15	Sept. 30	Sept. 23
2 years in 10 earlier than--	Oct. 20	Oct. 6	Sept. 27
5 years in 10 earlier than--	Oct. 31	Oct. 17	Oct. 6

Table 3.--Growing Season

(Recorded in the period 1971-2000 at Morrison, 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	190	162	141
8 years in 10	197	171	148
5 years in 10	210	187	161
2 years in 10	223	203	175
1 year in 10	229	211	182

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
Ade	Coarse-loamy, mixed, superactive, mesic Lamellic Argiudolls
Adrian	Sandy or sandy-skeletal, mixed, euic, mesic Terric Haplosaprists
Ambraw	Fine-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls
Ashdale	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Atterberry	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
Beaucoup	Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls
Bertrand	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Birkbeck	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Blackoar	Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls
Calco	Fine-silty, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Coffeen	Coarse-silty, mixed, superactive, mesic Fluvaquentic Hapludolls
Cohoctah	Coarse-loamy, mixed, active, mesic Fluvaquentic Endoaquolls
Coloma	Mixed, mesic Lamellic Udipsamments
Denrock	Fine, mixed, superactive, mesic Aquic Argiudolls
Dickinson	Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
*Dickinson	Coarse-loamy, mixed, superactive, mesic Dystric Eutrudepts
Drummer	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Du Page	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
Elburn	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Elvers	Coarse-silty, mixed, superactive, nonacid, mesic Thapto-Histic Fluvaquents
*Faxon	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Fayette	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Fella	Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls
Gilford	Coarse-loamy, mixed, superactive, mesic Typic Endoaquolls
Greenbush	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Hickory	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Hononegah	Sandy, mixed, mesic Entic Hapludolls
Hoopeston	Coarse-loamy, mixed, superactive, mesic Aquic Hapludolls
Hooppole	Fine-loamy, mixed, superactive, calcareous, mesic Typic Endoaquolls
Houghton	Euic, mesic Typic Haplosaprists
Huntsville	Fine-silty, mixed, superactive, mesic Cumulic Hapludolls
Joslin	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Joy	Fine-silty, mixed, superactive, mesic Aquic Hapludolls
Joyce	Fine-silty, mixed, superactive, mesic Aquic Hapludolls
Lacrescent	Loamy-skeletal, mixed, superactive, mesic Typic Hapludolls
Lamont	Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs
Lawler	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Aquic Hapludolls
Lawson	Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls
Lena	Euic, mesic Typic Haplosaprists
Littleton	Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls
Marshan	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Endoaquolls
Medway	Fine-loamy, mixed, superactive, mesic Fluvaquentic Hapludolls
Milford	Fine, mixed, superactive, mesic Typic Endoaquolls
Millington	Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Mt. Carroll	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Muscatune	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Muskego	Coprogenous, euic, mesic Limnic Haplosaprists
Niota	Fine, mixed, superactive, mesic Vertic Albaqualfs
Oakville	Mixed, mesic Typic Udipsamments
Ogle	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Orio	Fine-loamy, mixed, active, mesic Mollic Endoaqualfs
Orion	Coarse-silty, mixed, superactive, nonacid, mesic Aquic Udifluvents
Osco	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Osco	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Otter	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls

Table 4.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Palms	Loamy, mixed, euic, mesic Terric Haplosaprists
Parkway	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Parkway	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Pecatonica	Fine-loamy, mixed, superactive, mesic Typic Hapludalfs
Plainfield	Mixed, mesic Typic Udipsamments
Port Byron	Fine-silty, mixed, superactive, mesic Typic Hapludolls
Prophetstown	Fine-silty, mixed, superactive, mesic Typic Calciaquolls
Raddle	Fine-silty, mixed, superactive, mesic Typic Hapludolls
Richwood	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Richwood	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Riley	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Fluvaquentic Hapludolls
Ross	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
Rozetta	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Sable	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Sawmill	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls
Seaton	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Selmass	Fine-loamy, mixed, superactive, mesic Typic Endoaquolls
Sparta	Sandy, mixed, mesic Entic Hapludolls
Tell	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludalfs
Thorp	Fine-silty, mixed, superactive, mesic Argiaquic Argialbolls
Timula	Coarse-silty, mixed, superactive, mesic Typic Eutrudepts
Titus	Fine, smectitic, mesic Vertic Endoaquolls
Udolpho	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Endoaqualfs
Virgil	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
Watseka	Sandy, mixed, mesic Aquic Hapludolls
Waukee	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
Waukegan	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
*Waukegan	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Dystric Eutrudepts
Whalan	Fine-loamy, mixed, superactive, mesic Typic Hapludalfs
Woodbine	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Zumbro	Sandy, mixed, mesic Entic Hapludolls

Table 5.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
8D3	Hickory clay loam, 10 to 18 percent slopes, severely eroded	601	0.1
8F2	Hickory silt loam, 18 to 35 percent slopes, eroded	601	0.1
21C2	Pecatonica silt loam, 5 to 10 percent slopes, eroded	931	0.2
21D2	Pecatonica silt loam, 10 to 18 percent slopes, eroded	65	*
49A	Watseka loamy fine sand, 0 to 2 percent slopes	370	*
51A	Muscatune silt loam, 0 to 2 percent slopes	1,035	0.2
54C	Plainfield sand, 6 to 12 percent slopes	811	0.2
54E	Plainfield sand, 12 to 20 percent slopes	1,689	0.4
61A	Atterberry silt loam, 0 to 2 percent slopes	381	*
68A	Sable silty clay loam, 0 to 2 percent slopes	661	0.1
69A	Milford silty clay loam, 0 to 2 percent slopes	954	0.2
81A	Littleton silt loam, 0 to 2 percent slopes	774	0.2
86B	Osco silt loam, 2 to 5 percent slopes	9,330	2.1
86C2	Osco silt loam, 5 to 10 percent slopes, eroded	1,336	0.3
87A	Dickinson sandy loam, 0 to 2 percent slopes	20,113	4.5
87B2	Dickinson sandy loam, 2 to 7 percent slopes, eroded	7,447	1.7
88A	Sparta loamy sand, 0 to 2 percent slopes	6,063	1.4
88C	Sparta loamy sand, 6 to 12 percent slopes	4,942	1.1
88E	Sparta loamy sand, 12 to 20 percent slopes	1,630	0.4
98B	Ade loamy fine sand, 2 to 7 percent slopes	676	0.2
104A	Virgil silt loam, 0 to 2 percent slopes	1,928	0.4
152A	Drummer silty clay loam, 0 to 2 percent slopes	12,820	2.9
172A	Hoopeston sandy loam, 0 to 2 percent slopes	899	0.2
175B2	Lamont fine sandy loam, 2 to 5 percent slopes, eroded	1,863	0.4
175D2	Lamont fine sandy loam, 10 to 18 percent slopes, eroded	2,851	0.6
175F	Lamont fine sandy loam, 18 to 35 percent slopes	2,982	0.7
198A	Elburn silt loam, 0 to 2 percent slopes	8,872	2.0
200A	Orio loam, 0 to 2 percent slopes	3,364	0.8
201A	Gilford fine sandy loam, 0 to 2 percent slopes	876	0.2
206A	Thorp silt loam, 0 to 2 percent slopes	2,219	0.5
233C2	Birkbeck silt loam, 5 to 10 percent slopes, eroded	1,072	0.2
261A	Niota silt loam, 0 to 2 percent slopes	969	0.2
262A	Denrock silt loam, 0 to 2 percent slopes	973	0.2
268B	Mt. Carroll silt loam, 2 to 5 percent slopes	5,986	1.3
268C2	Mt. Carroll silt loam, 5 to 10 percent slopes, eroded	3,620	0.8
274B	Seaton silt loam, 2 to 5 percent slopes	3,742	0.8
274C2	Seaton silt loam, 5 to 10 percent slopes, eroded	10,870	2.4
274D2	Seaton silt loam, 10 to 18 percent slopes, eroded	7,773	1.7
275A	Joy silt loam, 0 to 2 percent slopes	3,166	0.7
277B	Port Byron silt loam, 2 to 5 percent slopes	8,262	1.9
277C	Port Byron silt loam, 5 to 10 percent slopes	318	*
279B	Rozetta silt loam, 2 to 5 percent slopes	1,061	0.2
279C2	Rozetta silt loam, 5 to 10 percent slopes, eroded	4,041	0.9
280B	Fayette silt loam, 2 to 5 percent slopes	3,308	0.7
280C2	Fayette silt loam, 5 to 10 percent slopes, eroded	8,044	1.8
354A	Hononegah loamy sand, 0 to 3 percent slopes	743	0.2
410D2	Woodbine silt loam, 10 to 18 percent slopes, eroded	905	0.2
411B	Ashdale silt loam, 2 to 5 percent slopes	178	*
412B	Ogle silt loam, 2 to 5 percent slopes	1,289	0.3
412C	Ogle silt loam, 5 to 10 percent slopes	313	*
430A	Raddle silt loam, 0 to 2 percent slopes	4,558	1.0
430B	Raddle silt loam, 2 to 5 percent slopes	1,809	0.4
485B	Richwood silt loam, 2 to 5 percent slopes	17,073	3.8
485C2	Richwood silt loam, 5 to 10 percent slopes, eroded	1,434	0.3
486B	Bertrand silt loam, 2 to 5 percent slopes	2,341	0.5
486C2	Bertrand silt loam, 5 to 10 percent slopes, eroded	1,746	0.4
487A	Joyce silt loam, 0 to 2 percent slopes	5,043	1.1
488A	Hooppole loam, 0 to 2 percent slopes	4,515	1.0
509B	Whalan loam, 2 to 5 percent slopes	592	0.1
529A	Selmass silt loam, 0 to 2 percent slopes	2,473	0.6
533	Urban land	556	0.1
564A	Waukegan silt loam, 0 to 2 percent slopes	5,138	1.2
564B	Waukegan silt loam, 2 to 5 percent slopes	5,163	1.2

See footnote at end of table.

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

Map symbol	Soil name	Acres	Percent
564C2	Waukegan silt loam, 5 to 10 percent slopes, eroded	1,651	0.4
565B	Tell silt loam, 2 to 5 percent slopes	840	0.2
565C2	Tell silt loam, 5 to 10 percent slopes, eroded	3,079	0.7
565D2	Tell silt loam, 10 to 18 percent slopes, eroded	2,038	0.5
638A	Muskego muck, 0 to 2 percent slopes	197	*
647A	Lawler loam, 0 to 2 percent slopes	8,229	1.8
675B	Greenbush silt loam, 2 to 5 percent slopes	13,518	3.0
675C2	Greenbush silt loam, 5 to 10 percent slopes, eroded	4,699	1.1
686B	Parkway silt loam, 2 to 5 percent slopes	3,818	0.9
686C2	Parkway silt loam, 5 to 10 percent slopes, eroded	653	0.1
689B	Coloma sand, 1 to 7 percent slopes	2,302	0.5
689D	Coloma sand, 7 to 15 percent slopes	713	0.2
727A	Waukee loam, 0 to 2 percent slopes	4,989	1.1
759A	Udolpho loam, sandy substratum, 0 to 2 percent slopes	5,411	1.2
760A	Marshan loam, sandy substratum, 0 to 2 percent slopes	17,391	3.9
763A	Joslin silt loam, 0 to 2 percent slopes	1,117	0.3
767A	Prophetstown silt loam, 0 to 2 percent slopes	8,658	1.9
777A	Adrian muck, 0 to 2 percent slopes	391	*
785G	Lacrescent cobbly loam, 25 to 60 percent slopes	672	0.2
802B	Orthents, loamy, undulating	1,798	0.4
865	Pits, gravel	221	*
868	Pits, organic	538	0.1
869	Pits, quarries-Orthents complex	194	*
917C2	Oakville-Tell complex, 5 to 10 percent slopes, eroded	2,591	0.6
917D2	Oakville-Tell complex, 10 to 18 percent slopes, eroded	1,502	0.3
943D3	Seaton-Timula silt loams, 10 to 18 percent slopes, severely eroded	12,086	2.7
943E3	Seaton-Timula silt loams, 18 to 25 percent slopes, severely eroded	7,457	1.7
943F2	Seaton-Timula silt loams, 18 to 35 percent slopes, eroded	10,085	2.3
1082A	Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded	390	*
1107A	Sawmill silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	831	0.2
1400A	Calco silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	1,976	0.4
2087B	Dickinson-Urban land complex, 1 to 7 percent slopes	1,395	0.3
2198A	Elburn-Urban land complex, 0 to 2 percent slopes	699	0.2
2408A	Aquents-Urban land complex, 0 to 2 percent slopes	180	*
2485B	Richwood-Urban land complex, 2 to 5 percent slopes	2,072	0.5
3076A	Otter silt loam, 0 to 2 percent slopes, frequently flooded	1,064	0.2
3077A	Huntsville silt loam, 0 to 2 percent slopes, frequently flooded	1,063	0.2
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded	503	0.1
3302A	Ambraw silty clay loam, 0 to 2 percent slopes, frequently flooded	1,172	0.3
3321A	Du Page silt loam, 0 to 2 percent slopes, frequently flooded	5,548	1.2
3400A	Calco silty clay loam, 0 to 2 percent slopes, frequently flooded	2,860	0.6
3404A	Titus silty clay loam, 0 to 2 percent slopes, frequently flooded	173	*
3415A	Orion silt loam, 0 to 2 percent slopes, frequently flooded	7,715	1.7
3428A	Coffeen silt loam, 0 to 2 percent slopes, frequently flooded	992	0.2
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded	4,813	1.1
3452A	Riley loam, 0 to 2 percent slopes, frequently flooded	436	*
3646L	Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded, long duration	1,795	0.4
7070A	Beaucoup silty clay loam, 0 to 2 percent slopes, rarely flooded	4,601	1.0
7073A	Ross silt loam, 0 to 2 percent slopes, rarely flooded	3,346	0.7
7076A	Otter silt loam, 0 to 2 percent slopes, rarely flooded	737	0.2
7082A	Millington clay loam, 0 to 2 percent slopes, rarely flooded	1,378	0.3
7100A	Palms muck, 0 to 2 percent slopes, rarely flooded	758	0.2
7103A	Houghton muck, 0 to 2 percent slopes, rarely flooded	1,457	0.3
7107A	Sawmill silty clay loam, 0 to 2 percent slopes, rarely flooded	985	0.2
7210A	Lena muck, 0 to 2 percent slopes, rarely flooded	235	*
7302A	Ambraw clay loam, 0 to 2 percent slopes, rarely flooded	7,547	1.7
7345A	Elvers silt loam, 0 to 2 percent slopes, rarely flooded	754	0.2
7349B	Zumbro sandy loam, 1 to 4 percent slopes, rarely flooded	8,930	2.0
7404A	Titus silty clay loam, 0 to 2 percent slopes, rarely flooded	3,887	0.9
7428A	Coffeen silt loam, 0 to 2 percent slopes, rarely flooded	1,227	0.3
7452A	Riley loam, 0 to 2 percent slopes, rarely flooded	2,965	0.7
7516A	Faxon silty clay loam, 0 to 2 percent slopes, rarely flooded	612	0.1
7603A	Blackoar silt loam, 0 to 2 percent slopes, rarely flooded	2,114	0.5

See footnote at end of table.

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

Map symbol	Soil name	Acres	Percent
7682A	Medway loam, 0 to 2 percent slopes, rarely flooded	5,064	1.1
7777A	Adrian muck, 0 to 2 percent slopes, rarely flooded	406	*
8107+	Sawmill silt loam, 0 to 2 percent slopes, occasionally flooded, overwash	2,400	0.5
8166A	Cohoctah loam, 0 to 2 percent slopes, occasionally flooded	3,023	0.7
8302A	Ambraw loam, 0 to 2 percent slopes, occasionally flooded	8,695	1.9
8321A	Du Page silt loam, 0 to 2 percent slopes, occasionally flooded	2,102	0.5
8400A	Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded	290	*
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	578	0.1
8415A	Orion silt loam, 0 to 2 percent slopes, occasionally flooded	846	0.2
8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded	449	0.1
8452A	Riley loam, 0 to 2 percent slopes, occasionally flooded	673	0.2
8499A	Fella silty clay loam, 0 to 2 percent slopes, occasionally flooded	661	0.1
M-W	Miscellaneous water	44	*
W	Water	8,733	2.0
	Total	446,170	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*
8D3:							
Hickory	4e	65	21	45	23	2.4	4.0
8F2:							
Hickory	6e	---	---	---	---	2.3	3.9
21C2:							
Pecatonica	3e	111	33	61	46	4.4	7.4
21D2:							
Pecatonica	3e	108	33	59	46	4.2	7.0
49A:							
Watseka	3s	92	31	62	43	3.7	6.2
51A:							
Muscatune	1	167	51	95	64	6.2	10.3
54C:							
Plainfield	6s	55	19	39	27	2.3	3.9
54E:							
Plainfield	7s	---	---	---	---	---	---
61A:							
Atterberry	1	149	44	85	60	5.6	9.3
68A:							
Sable	2w	156	51	85	61	5.6	9.3
69A:							
Milford	2w	131	48	81	56	5.2	8.7
81A:							
Littleton	1	159	50	90	63	6.1	10.1
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
87B2:							
Dickinson	2e	95	36	74	43	3.9	6.2
88A:							
Sparta	4s	85	29	53	37	3.3	5.5
88C:							
Sparta	6s	---	---	---	---	3.2	5.3

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*
88E:							
Sparta	7s	---	---	---	---	---	---
98B:							
Ade	3s	90	30	56	40	3.7	6.1
104A:							
Virgil	1	148	45	84	60	5.6	9.3
152A:							
Drummer	2w	154	51	83	61	5.5	9.2
172A:							
Hoopeston	2s	105	33	70	47	4.1	6.8
175B2:							
Lamont	3e	93	35	74	43	3.6	5.9
175D2:							
Lamont	6e	87	32	69	41	3.3	5.6
175F:							
Lamont	7e	---	---	---	---	---	---
198A:							
Elburn	1	161	50	94	63	6.1	10.2
200A:							
Orio	2w	112	37	64	47	4.1	6.8
201A:							
Gilford	2w	110	39	68	46	4.1	6.8
206A:							
Thorp	2w	126	42	69	51	4.6	7.7
233C2:							
Birkbeck	3e	116	39	66	52	4.7	7.8
261A:							
Niota	2w	86	30	53	39	3.3	5.5
262A:							
Denrock	2w	108	37	63	46	4.1	6.8
268B:							
Mt. Carroll	2e	136	43	83	56	5.3	8.9
268C2:							
Mt. Carroll	3e	129	40	79	54	5.1	8.5
274B:							
Seaton	2e	117	35	68	49	4.7	7.9
274C2:							
Seaton	3e	111	33	65	46	4.5	7.5
274D2:							
Seaton	4e	106	32	62	44	4.3	7.2

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*
275A:							
Joy	1	161	48	92	63	6.1	10.2
277B:							
Port Byron	2e	149	45	87	60	5.5	9.2
277C:							
Port Byron	3e	146	44	85	59	5.4	9.1
279B:							
Rozetta	2e	130	40	72	53	5.1	8.5
279C2:							
Rozetta	3e	123	38	69	51	4.9	8.1
280B:							
Fayette	2e	128	39	72	52	5.1	8.5
280C2:							
Fayette	3e	121	37	69	50	4.9	8.2
354A:							
Hononegah	4s	78	25	51	34	3.1	5.2
410D2:							
Woodbine	3e	92	32	54	41	3.5	5.9
411B:							
Ashdale	2e	115	39	73	52	5.0	8.3
412B:							
Ogle	2e	139	44	78	57	5.2	8.7
412C:							
Ogle	2e	136	43	77	56	5.1	8.6
430A:							
Raddle	1	149	45	83	59	5.8	9.7
430B:							
Raddle	2e	148	45	82	58	5.7	9.6
485B:							
Richwood	2e	147	44	86	56	5.6	9.2
485C2:							
Richwood	3e	139	41	82	54	5.3	8.8
486B:							
Bertrand	2e	109	37	65	50	4.5	7.4
486C2:							
Bertrand	3e	103	35	62	47	4.2	7.1
487A:							
Joyce	1	155	46	89	61	5.8	9.6
488A:							
Hooppole	2w	132	44	77	53	5.3	8.8

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*
509B:							
Whalan	2e	97	28	71	40	4.2	6.9
529A:							
Selmass	2w	126	41	71	49	5.0	8.2
533.							
Urban land							
564A:							
Waukegan	2s	108	38	65	47	4.2	7.0
564B:							
Waukegan	2e	107	38	64	47	4.2	6.9
564C2:							
Waukegan	3e	102	36	61	---	3.9	6.6
565B:							
Tell	2e	101	35	59	44	4.0	6.6
565C2:							
Tell	3e	96	33	56	42	3.8	6.3
565D2:							
Tell	4e	92	32	54	41	3.6	6.0
638A:							
Muskego	4w	122	40	---	---	---	6.7
647A:							
Lawler	2s	115	39	61	44	5.0	8.3
675B:							
Greenbush	2e	147	42	82	57	5.5	9.2
675C2:							
Greenbush	3e	139	40	78	55	5.3	8.8
686B:							
Parkway	2e	149	46	86	60	5.7	9.6
686C2:							
Parkway	2e	144	44	82	59	5.6	9.3
689B:							
Coloma	4s	57	40	20	28	2.4	4.0
689D:							
Coloma	6s	---	---	---	---	---	---
727A:							
Waukee	2s	103	35	66	46	4.2	7.0
759A:							
Udolpho	2w	80	27	70	36	3.5	5.0
760A:							
Marshan	2w	109	---	63	41	3.9	7.3

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*
763A:							
Joslin	1	135	43	80	55	5.1	8.5
767A:							
Prophetstown	2w	142	45	67	52	4.9	8.1
777A:							
Adrian	4w	98	33	---	---	---	---
785G:							
Lacrescent	7e	---	---	---	---	---	---
802B:							
Orthents	2e	---	---	---	---	---	---
865, 868.							
Pits							
869:							
Pits.							
Orthents	2e	---	---	---	---	---	---
917C2		---	---	---	---	3.2	5.3
Oakville	6s						
Tell	3e						
917D2		---	---	---	---	3.1	5.1
Oakville	6s						
Tell	4e						
943D3	6e	---	---	---	---	3.7	6.1
Seaton-Timula							
943E3		---	---	---	---	---	---
Seaton	7e						
Timula	6e						
943F2	6e	---	---	---	---	3.6	6.0
Seaton-Timula							
1082A:							
Millington	5w	---	---	---	---	---	---
1107A:							
Sawmill	5w	---	---	---	---	---	---
1400A:							
Calco	5w	---	---	---	---	---	---
2087B:							
Dickinson	3e	---	---	---	---	---	---
Urban land.							
2198A:							
Elburn	1	---	---	---	---	---	---
Urban land.							

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*
2408A:							
Aquents	5w	---	---	---	---	---	---
Urban land.							
2485B:							
Richwood	2e	---	---	---	---	---	---
Urban land.							
3076A:							
Otter	3w	129	41	---	---	4.2	7.1
3077A:							
Huntsville	2w	137	43	---	---	5.2	8.7
3107A:							
Sawmill	3w	132	42	---	---	5.0	8.3
3302A:							
Ambraw	3w	119	39	---	---	4.1	6.9
3321A:							
Du Page	2w	119	36	---	---	5.0	8.0
3400A:							
Calco	2w	119	40	---	---	4.2	7.0
3404A:							
Titus	4w	113	38	---	---	3.9	6.5
3415A:							
Orion	3w	122	39	---	---	4.2	7.0
3428A:							
Coffeen	2w	137	42	---	---	5.2	8.7
3451A:							
Lawson	3w	145	43	---	---	5.1	8.6
3452A:							
Riley	3w	110	37	---	---	4.0	7.0
3646L:							
Fluvaquents	5w	---	---	---	---	---	---
7070A:							
Beaucoup	2w	138	46	75	55	5.1	8.5
7073A:							
Ross	1	145	46	80	60	5.5	9.2
7076A:							
Otter	2w	143	46	69	49	4.7	7.8
7082A:							
Millington	2w	133	41	68	52	4.6	7.7
7100A:							
Palms	3w	115	36	---	---	---	---

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*
7103A:							
Houghton	3w	129	44	---	---	---	7.3
7107A:							
Sawmill	2w	147	47	76	54	5.5	9.2
7210A:							
Lena	3w	125	41	---	---	---	6.7
7302A:							
Ambraw	2w	132	43	70	52	4.6	7.7
7345A:							
Elvers	2w	115	37	70	35	3.5	5.8
7349B:							
Zumbro	3s	85	28	53	37	3.5	5.8
7404A:							
Titus	3w	125	42	68	52	4.3	7.2
7428A:							
Coffeen	1	152	47	79	57	5.8	9.7
7452A:							
Riley	1	122	41	75	55	4.7	7.8
7516A:							
Faxon	3w	112	37	69	40	3.8	6.3
7603A:							
Blackoar	2w	144	47	68	55	5.0	8.3
7682A:							
Medway	1	132	42	72	53	5.3	8.8
7777A:							
Adrian	4w	98	33	---	---	---	---
8107+:							
Sawmill	2w	147	47	76	54	5.5	9.2
8166A:							
Cohoctah	2w	122	43	78	57	4.1	6.8
8302A:							
Ambraw	2w	132	43	70	52	4.6	7.7
8321A:							
Du Page	2w	132	53	40	70	5.0	8.3
8400A:							
Calco	2w	132	44	72	52	4.7	7.8
8404A:							
Titus	3w	125	42	68	52	4.3	7.2
8415A:							
Orion	2w	135	43	72	52	4.7	7.8

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*
8451A:							
Lawson	2w	161	48	86	62	5.7	9.5
8452A:							
Riley	2w	122	41	75	55	4.7	7.8
8499A:							
Fella	2w	140	48	78	56	5.2	8.7
M-W.							
Miscellaneous water							
W.							
Water							

* 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
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)
69A	Milford silty clay loam, 0 to 2 percent slopes (where drained)
81A	Littleton silt loam, 0 to 2 percent slopes
86B	Osco silt loam, 2 to 5 percent slopes
87A	Dickinson sandy loam, 0 to 2 percent slopes
87B2	Dickinson sandy loam, 2 to 7 percent slopes, eroded
104A	Virgil silt loam, 0 to 2 percent slopes (where drained)
152A	Drummer silty clay loam, 0 to 2 percent slopes (where drained)
172A	Hoopeston sandy loam, 0 to 2 percent slopes
175B2	Lamont fine sandy loam, 2 to 5 percent slopes, eroded
198A	Elburn silt loam, 0 to 2 percent slopes
200A	Orio loam, 0 to 2 percent slopes (where drained)
201A	Gilford fine sandy loam, 0 to 2 percent slopes (where drained)
206A	Thorp silt loam, 0 to 2 percent slopes (where drained)
261A	Niota silt loam, 0 to 2 percent slopes (where drained)
262A	Denrock silt loam, 0 to 2 percent slopes
268B	Mt. Carroll silt loam, 2 to 5 percent slopes
274B	Seaton silt loam, 2 to 5 percent slopes
275A	Joy silt loam, 0 to 2 percent slopes
277B	Port Byron silt loam, 2 to 5 percent slopes
279B	Rozetta silt loam, 2 to 5 percent slopes
280B	Fayette silt loam, 2 to 5 percent slopes
411B	Ashdale silt loam, 2 to 5 percent slopes
412B	Ogle silt loam, 2 to 5 percent slopes
430A	Raddle silt loam, 0 to 2 percent slopes
430B	Raddle silt loam, 2 to 5 percent slopes
485B	Richwood silt loam, 2 to 5 percent slopes
486B	Bertrand silt loam, 2 to 5 percent slopes
487A	Joyce silt loam, 0 to 2 percent slopes
488A	Hooppole loam, 0 to 2 percent slopes (where drained)
509B	Whalan loam, 2 to 5 percent slopes
529A	Selmass silt loam, 0 to 2 percent slopes (where drained)
564A	Waukegan silt loam, 0 to 2 percent slopes
564B	Waukegan silt loam, 2 to 5 percent slopes
565B	Tell silt loam, 2 to 5 percent slopes
647A	Lawler loam, 0 to 2 percent slopes
675B	Greenbush silt loam, 2 to 5 percent slopes
686B	Parkway silt loam, 2 to 5 percent slopes
727A	Waukee loam, 0 to 2 percent slopes
759A	Udolpho loam, sandy substratum, 0 to 2 percent slopes (where drained)
760A	Marshan loam, sandy substratum, 0 to 2 percent slopes (where drained)
763A	Joslin silt loam, 0 to 2 percent slopes
767A	Prophetstown silt loam, 0 to 2 percent slopes (where drained)
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)
3077A	Huntsville silt loam, 0 to 2 percent slopes, frequently flooded (where 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)
3302A	Ambraw 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)

Table 7.--Prime Farmland--Continued

Map symbol	Soil name
3321A	Du Page silt loam, 0 to 2 percent slopes, frequently flooded (where 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)
3404A	Titus 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)
3452A	Riley loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
7070A	Beaucoup silty clay loam, 0 to 2 percent slopes, rarely flooded (where drained)
7073A	Ross silt loam, 0 to 2 percent slopes, rarely flooded
7076A	Otter silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7082A	Millington clay loam, 0 to 2 percent slopes, rarely flooded (where drained)
7107A	Sawmill silty clay loam, 0 to 2 percent slopes, rarely flooded (where drained)
7302A	Ambraw clay loam, 0 to 2 percent slopes, rarely flooded (where drained)
7345A	Elvers silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7404A	Titus silty clay loam, 0 to 2 percent slopes, rarely flooded (where drained)
7428A	Coffeen silt loam, 0 to 2 percent slopes, rarely flooded
7452A	Riley loam, 0 to 2 percent slopes, rarely flooded
7516A	Faxon silty clay loam, 0 to 2 percent slopes, rarely flooded (where drained)
7603A	Blackoar silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7682A	Medway loam, 0 to 2 percent slopes, rarely flooded
8107+	Sawmill silt loam, 0 to 2 percent slopes, occasionally flooded, overwash (where drained)
8166A	Cohoctah loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8302A	Ambraw loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8321A	Du Page silt loam, 0 to 2 percent slopes, occasionally flooded
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)
8415A	Orion silt loam, 0 to 2 percent slopes, occasionally flooded
8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded
8452A	Riley loam, 0 to 2 percent slopes, occasionally flooded
8499A	Fella silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)

Table 8.--Forestland Productivity

(Only the soils that are commonly used as forestland are listed)

Map symbol and soil name	Potential productivity: Common trees	Site Index	Volume Of wood fiber (cu ft/ac)	Trees to manage
8D3, 8F2:				
Hickory	Bitternut hickory	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pin oak, tuliptree, white oak
	Black oak	---	---	
	Green ash	---	---	
	Northern red oak	85	72	
	Tuliptree	95	100	
	White oak	85	72	
21C2, 21D2:				
Pecatonica	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	White oak	80	57	
54C, 54E:				
Plainfield	Black cherry	---	---	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple
	Black oak	70	57	
	Northern red oak	---	---	
	White oak	55	43	
61A:				
Atterberry	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	
88A, 88C, 88E:				
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	---	---	
104A:				
Virgil	Black walnut	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pin oak, swamp white oak
	Northern red oak	80	57	
	White oak	80	57	
175B2, 175D2, 175F:				
Lamont	Northern red oak	55	43	Black walnut, bur oak, eastern white pine, pin oak, tuliptree
	White oak	55	43	

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	
233C2:				
Birkbeck	White oak	86	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pin oak, tuliptree, white oak
	Green ash	---	---	
	Northern red oak	---	---	
261A:				
Niota	Green ash	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Pin oak	80	57	
	Tuliptree	80	72	
	White oak	65	43	
268B, 268C2:				
Mt. Carroll	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
274B, 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	
279B, 279C2:				
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, 280C2:				
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	

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	
410D2:				
Woodbine	Bur oak	---	---	Black walnut,
	Green ash	---	---	eastern
	Northern red oak	70	57	cottonwood,
	White oak	70	57	eastern white
				pine, green ash,
				northern red oak,
				pecan, pin oak,
				tuliptree, white
				oak
486B, 486C2:				
Bertrand	Black walnut	---	---	Black walnut,
	Bur oak	---	---	eastern
	Northern red oak	70	57	cottonwood,
	White ash	---	---	eastern white
	White oak	---	---	pine, green ash,
				northern red oak,
				pecan, pin oak,
				tuliptree, white
				oak
565B, 565C2:				
Tell	Northern red oak	75	57	Black oak, common
	White oak	75	57	hackberry, eastern
				white pine, green
				ash, red pine
675B, 675C2:				
Greenbush	White oak	80	57	Black walnut,
	Northern red oak	80	57	eastern
	Black walnut	---	---	cottonwood,
	Tuliptree	90	86	eastern white
				pine, green ash,
				northern red oak,
				pecan, pin oak,
				tuliptree, white
				oak
689B, 689D:				
Coloma	Eastern white pine	85	200	Common hackberry,
	Jack pine	68	100	eastern redcedar,
	Red pine	78	143	eastern white
	White oak	70	72	pine, green ash,
				red maple, red
				pine, shortleaf
				pine
759A:				
Udolpho	Eastern cottonwood	90	100	Common hackberry,
	Green ash	50	29	eastern
				cottonwood, green
				ash, pin oak,
				river birch, swamp
				white oak,
				tamarack
785G:				
Lacrescent	American basswood	62	57	Bur oak, chinkapin
	Northern red oak	59	43	oak, eastern
	White oak	55	43	redcedar, green
				ash, honeylocust

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	
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	
943D3, 943E3, 943F2:				
Seaton	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, 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	
1082A:				
Millington	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Common hackberry	---	---	
	Eastern cottonwood	90	100	
	Silver maple	80	29	
1107A:				
Sawmill	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Cherrybark oak	---	---	
	Eastern cottonwood	---	---	
	Pin oak	90	72	
	Sweetgum	---	---	
1400A:				
Calco	Black willow	---	---	Bur oak, common hackberry, eastern cottonwood, eastern redcedar, green ash, tamarack
	Common hackberry	---	---	
	Eastern cottonwood	---	---	
	Green ash	---	---	
	Silver maple	94	43	

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	
3076A:				
Otter	Silver maple	94	43	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
3077A:				
Huntsville	American sycamore	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Cherrybark oak	---	---	
	Eastern cottonwood	110	157	
	Green ash	---	---	
	Sweetgum	---	---	
	Tuliptree	98	100	
3107A:				
Sawmill	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum, tamarack, water hickory
	Cherrybark oak	---	---	
	Eastern cottonwood	---	---	
	Pin oak	90	72	
	Sweetgum	---	---	
3302A:				
Ambraw	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
3321A:				
Du Page	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
3400A:				
Calco	Black willow	---	---	Bur oak, common hackberry, eastern cottonwood, eastern redcedar, green ash, tamarack
	Common hackberry	---	---	
	Eastern cottonwood	---	---	
	Green ash	---	---	
	Silver maple	94	43	
3404A:				
Titus	Eastern cottonwood	99	129	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Silver maple	80	29	
	White ash	51	29	

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	
3415A:				
Orion	Red maple	---	---	Common hackberry,
	Silver maple	80	29	common persimmon,
	White ash	---	---	eastern
				cottonwood, green
				ash, pecan, pin
				oak, swamp white
				oak
3428A:				
Coffeen	Eastern cottonwood	100	---	Common hackberry,
	Pin oak	90	72	common persimmon,
	Tuliptree	90	86	eastern
				cottonwood, green
				ash, pecan, pin
				oak, swamp white
				oak
3451A:				
Lawson	Silver maple	70	29	Common hackberry,
	White ash	---	---	common persimmon,
				eastern
				cottonwood, green
				ash, pecan, pin
				oak, swamp white
				oak
3452A:				
Riley	---	---	---	Common hackberry,
				common persimmon,
				eastern
				cottonwood, green
				ash, pecan, pin
				oak, swamp white
				oak
3646L:				
Fluvaquents	Pin oak	76	57	Common hackberry,
				eastern
				cottonwood, green
				ash, pin oak,
				river birch, swamp
				white oak,
				sweetgum
7070A:				
Beaucoup	American sycamore	---	---	Common hackberry,
	Cherrybark oak	---	---	eastern
	Eastern cottonwood	100	129	cottonwood, green
	Pin oak	90	72	ash, pin oak,
	Sweetgum	---	---	river birch, swamp
				white oak,
				sweetgum, tamarack
7073A:				
Ross	Black cherry	---	---	Common hackberry,
	Black walnut	---	---	common persimmon,
	Northern red oak	86	72	eastern
	Sugar maple	85	57	cottonwood, green
	Tuliptree	96	100	ash, pecan, pin
	White ash	---	---	oak, swamp white
	White oak	---	---	oak

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	
7076A:				
Otter	Silver maple	94	43	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
7082A:				
Millington	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Common hackberry	---	---	
	Eastern cottonwood	90	100	
	Silver maple	80	29	
7100A:				
Palms	Black willow	---	---	Common persimmon, eastern cottonwood, green ash, pin oak, swamp white oak, sweetgum, tamarack
	Quaking aspen	56	57	
	Red maple	51	29	
	Silver maple	76	29	
	White ash	51	29	
7103A:				
Houghton	Black willow	---	---	Common persimmon, eastern cottonwood, green ash, pin oak, swamp white oak, sweetgum, tamarack
	Quaking aspen	56	57	
	Red maple	51	29	
	Silver maple	76	29	
	White ash	51	29	
7107A:				
Sawmill	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum, tamarack
	Cherrybark oak	---	---	
	Eastern cottonwood	---	---	
	Pin oak	90	72	
	Sweetgum	---	---	
7210A:				
Lena	---	---	---	Common persimmon, eastern cottonwood, green ash, pin oak, swamp white oak, sweetgum, tamarack
7302A:				
Ambraw	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum, tamarack

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	
7345A:				
Elvers	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
7349B:				
Zumbro	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
7404A:				
Titus	Eastern cottonwood	99	129	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum, tamarack
	Silver maple	80	29	
	White ash	51	29	
7428A:				
Coffeen	Eastern cottonwood	100	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Pin oak	90	72	
	Tuliptree	90	86	
7452A:				
Riley	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
7516A:				
Faxon	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
7603A:				
Blackoar	Eastern cottonwood	94	114	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Green ash	78	86	
	Pin oak	87	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
7682A:				
Medway	Black cherry	---	---	Black walnut, eastern white pine, northern red oak, red pine, tuliptree, white ash, white oak
	Black walnut	---	---	
	Northern red oak	86	72	
	Sugar maple	---	---	
	Tuliptree	96	100	
	White ash	---	---	
	White oak	---	---	
7777A:				
Adrian	Black willow	---	---	Common persimmon, eastern cottonwood, green ash, pin oak, swamp white oak, sweetgum, tamarack
	Quaking aspen	56	57	
	Red maple	51	29	
	Silver maple	76	29	
	White ash	51	29	
8107+:				
Sawmill	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Cherrybark oak	---	---	
	Eastern cottonwood	---	---	
	Pin oak	90	72	
	Sweetgum	---	---	
8166A:				
Cohoctah	Black cherry	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Eastern cottonwood	---	---	
	Green ash	70	72	
	Pin oak	---	---	
	Red maple	72	43	
	Silver maple	95	43	
	Swamp white oak	---	---	
8302A:				
Ambraw	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
8400A:				
Calco	Black willow	---	---	Bur oak, common hackberry, eastern cottonwood, eastern redcedar, green ash, tamarack
	Common hackberry	---	---	
	Eastern cottonwood	---	---	
	Green ash	---	---	
	Silver maple	94	43	
8404A:				
Titus	Eastern cottonwood	99	129	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Silver maple	80	29	
	White ash	51	29	

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	
8415A:				
Orion	Red maple	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Silver maple	80	29	
	White ash	---	---	
8451A:				
Lawson	Silver maple	70	29	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	White ash	---	---	
8452A:				
Riley	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pin oak, swamp white oak
8499A:				
Fella	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum

Table 9a.--Forestland Management

(Only the soils that are commonly used as forestland 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
8D3:						
Hickory---------	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
8F2:						
Hickory---------	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
21C2:						
Pecatonica------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
21D2:						
Pecatonica------	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
54C:						
Plainfield------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Slope	0.50	Low strength	0.50
			Sandiness	0.50		
54E:						
Plainfield------	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50	Sandiness	0.50		
61A:						
Atterberry------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
88A:						
Sparta----------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
88C:						
Sparta----------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Slope	0.50	Low strength	0.50
			Sandiness	0.50		
88E:						
Sparta----------	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50	Sandiness	0.50		
104A:						
Virgil----------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			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
175B2:						
Lamont	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
175D2, 175F:						
Lamont	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
198A:						
Elburn	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
200A:						
Orio	Moderate		Poorly suited		Severe	
	Low strength	0.50	Ponding	1.00	Low strength	1.00
			Wetness	1.00		
			Low strength	0.50		
233C2:						
Birkbeck	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
261A:						
Niota	Moderate		Poorly suited		Severe	
	Low strength	0.50	Ponding	1.00	Low strength	1.00
			Wetness	1.00		
			Low strength	0.50		
268B:						
Mt. Carroll	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
268C2:						
Mt. Carroll	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
274B:						
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		
279B:						
Rozetta	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00

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
279C2:						
Rozetta---------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
280B:						
Fayette---------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
280C2:						
Fayette---------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
410D2:						
Woodbine--------	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
486B:						
Bertrand--------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
486C2:						
Bertrand--------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
565B:						
Tell----------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
565C2:						
Tell----------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
565D2:						
Tell----------	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
675B:						
Greenbush-------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
675C2:						
Greenbush-------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	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		

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
759A:						
Udolpho	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Low strength	0.50		
785G:						
Lacrescent	Severe		Poorly suited		Moderate	
	Slope	1.00	Slope	1.00	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		
943D3:						
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		
943E3, 943F2:						
Seaton	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Timula	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
1082A:						
Millington	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
1107A:						
Sawmill	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			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
1400A:						
Calco	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
3076A:						
Otter	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
3077A:						
Huntsville	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
3107A:						
Sawmill	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	0.50		
			Low strength	0.50		
3302A:						
Ambraw	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Ponding	0.50		
			Low strength	0.50		
3321A:						
Du Page	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
3400A:						
Calco	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Ponding	0.50		
			Low strength	0.50		
3404A:						
Titus	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
3415A:						
Orion	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			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
3428A:						
Coffeen	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
3451A:						
Lawson	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
3452A:						
Riley	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
3646L:						
Fluvaquents	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Wetness	1.00	Flooding	1.00	Wetness	0.50
	Low strength	0.50	Wetness	1.00		
			Low strength	0.50		
7070A:						
Beaucoup	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Ponding	0.50		
			Low strength	0.50		
7073A:						
Ross	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
7076A:						
Otter	Moderate		Poorly suited		Severe	
	Low strength	0.50	Ponding	1.00	Low strength	1.00
			Wetness	1.00		
			Low strength	0.50		
7082A:						
Millington	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Ponding	0.50		
			Low strength	0.50		
7100A:						
Palms	Moderate		Poorly suited		Severe	
	Low strength	0.50	Ponding	1.00	Low strength	1.00
			Low strength	0.50		
7103A:						
Houghton	Slight		Poorly suited		Slight	
			Ponding	1.00		
7107A:						
Sawmill	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Ponding	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
7210A:						
Lena	Slight		Poorly suited		Slight	
			Ponding	1.00		
7302A:						
Ambraw	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Ponding	0.50		
			Low strength	0.50		
7345A:						
Elvers	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Ponding	0.50		
			Low strength	0.50		
7349B:						
Zumbro	Slight		Well suited		Moderate	
					Low strength	0.50
7404A:						
Titus	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Ponding	0.50		
			Low strength	0.50		
7428A:						
Coffeen	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
7452A:						
Riley	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
7516A:						
Faxon	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
	Restrictive layer	0.50	Ponding	0.50		
			Low strength	0.50		
7603A:						
Blackoar	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Ponding	0.50		
			Low strength	0.50		
7682A:						
Medway	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
7777A:						
Adrian	Moderate		Poorly suited		Moderate	
	Sandiness	0.50	Ponding	1.00	Low strength	0.50
			Sandiness	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
8107+:						
Sawmill	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	0.50		
			Low strength	0.50		
8166A:						
Cohoctah	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Ponding	0.50		
			Low strength	0.50		
8302A:						
Ambraw	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Ponding	0.50		
			Low strength	0.50		
8321A:						
Du Page	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
8400A:						
Calco	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Ponding	0.50		
			Low strength	0.50		
8404A:						
Titus	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
8415A:						
Orion	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
8451A:						
Lawson	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
8452A:						
Riley	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			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
8499A:						
Fella	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Ponding	0.50		
			Low strength	0.50		

Table 9b.--Forestland Management

(Only the soils that are commonly used as forestland 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. "Not rated" indicates that data are not available or that no rating is applicable. 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
8D3:						
Hickory----------	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
8F2:						
Hickory----------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
21C2:						
Pecatonica-------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
21D2:						
Pecatonica-------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
54C:						
Plainfield-------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
					Sandiness	0.50
54E:						
Plainfield-------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Sandiness	0.50
61A:						
Atterberry-------	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
88A:						
Sparta----------	Slight		Slight		Moderately suited	
					Sandiness	0.50
88C:						
Sparta----------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
					Sandiness	0.50
88E:						
Sparta----------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Sandiness	0.50
104A:						
Virgil----------	Slight		Slight		Moderately suited	
					Wetness	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
175B2:						
Lamont	Slight		Slight		Moderately suited	
					Low strength	0.50
175D2:						
Lamont	Slight		Moderate		Poorly suited	
			Slope/erodibility	0.50	Slope	1.00
					Low strength	0.50
175F:						
Lamont	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
233C2:						
Birkbeck	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
261A:						
Niota	Slight		Slight		Poorly suited	
					Ponding	1.00
					Wetness	1.00
					Low strength	0.50
268B:						
Mt. Carroll	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
268C2:						
Mt. Carroll	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
274B:						
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
279B:						
Rozetta	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
279C2:						
Rozetta	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
280B:						
Fayette	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
280C2:						
Fayette	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
410D2:						
Woodbine	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
486B:						
Bertrand	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
486C2:						
Bertrand	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
565B:						
Tell	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
565C2:						
Tell	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
565D2:						
Tell	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
675B:						
Greenbush	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
675C2:						
Greenbush	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	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
759A:						
Udolpho	Slight		Slight		Poorly suited	
					Wetness	1.00
					Low strength	0.50
785G:						
Lacrescent	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00

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
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
943D3, 943E3:						
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
1082A:						
Millington	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
1107A:						
Sawmill	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
1400A:						
Calco	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
3076A:						
Otter	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	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
3077A:						
Huntsville	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
3107A:						
Sawmill	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	0.50
					Low strength	0.50
3302A:						
Ambraw	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
3321A:						
Du Page	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
3400A:						
Calco	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
3404A:						
Titus	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
3415A:						
Orion	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
3428A:						
Coffeen	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
3451A:						
Lawson	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
3452A:						
Riley	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	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
3646L:						
Fluvaquents	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
7070A:						
Beaucoup	Slight		Slight		Poorly suited	
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
7073A:						
Ross	Slight		Slight		Moderately suited	
					Low strength	0.50
7076A:						
Otter	Slight		Slight		Poorly suited	
					Ponding	1.00
					Wetness	1.00
					Low strength	0.50
7082A:						
Millington	Slight		Slight		Poorly suited	
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
7100A:						
Palms	Not rated		Not rated		Poorly suited	
					Ponding	1.00
					Low strength	0.50
7103A:						
Houghton	Not rated		Not rated		Poorly suited	
					Ponding	1.00
7107A:						
Sawmill	Slight		Slight		Moderately suited	
					Wetness	0.50
					Ponding	0.50
					Low strength	0.50
7210A:						
Lena	Not rated		Not rated		Poorly suited	
					Ponding	1.00
7302A:						
Ambraw	Slight		Slight		Poorly suited	
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
7345A:						
Elvers	Slight		Slight		Poorly suited	
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
7349B:						
Zumbro	Slight		Slight		Well suited	

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
7404A:						
Titus	Slight		Slight		Poorly suited	
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
7428A:						
Coffeen	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
7452A:						
Riley	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
7516A:						
Faxon	Slight		Slight		Poorly suited	
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
7603A:						
Blackoar	Slight		Slight		Poorly suited	
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
7682A:						
Medway	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
7777A:						
Adrian	Not rated		Not rated		Poorly suited	
					Ponding	1.00
					Sandiness	0.50
8107+:						
Sawmill	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	0.50
					Low strength	0.50
8166A:						
Cohoctah	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
8302A:						
Ambraw	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Ponding	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
8400A:						
Calco	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
8404A:						
Titus	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
8415A:						
Orion	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8451A:						
Lawson	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8452A:						
Riley	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8499A:						
Fella	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50

Table 9c.--Forestland Management

(Only the soils that are commonly used as forestland 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
8D3:						
Hickory----------	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
8F2:						
Hickory----------	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
21C2, 21D2:						
Pecatonica-------	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
54C:						
Plainfield-------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50	Sandiness	0.50
			Sandiness	0.50		
54E:						
Plainfield-------	Moderately suited		Poorly suited		Moderately suited	
	Sandiness	0.50	Slope	0.75	Sandiness	0.50
			Sandiness	0.50		
61A:						
Atterberry-------	Well suited		Well suited		Moderately suited	
					Low strength	0.50
88A:						
Sparta----------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
88C:						
Sparta----------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50	Sandiness	0.50
			Sandiness	0.50		
88E:						
Sparta----------	Moderately suited		Poorly suited		Moderately suited	
	Sandiness	0.50	Slope	0.75	Sandiness	0.50
			Sandiness	0.50		
104A:						
Virgil----------	Well suited		Well suited		Moderately suited	
					Low strength	0.50
175B2:						
Lamont----------	Well suited		Well suited		Moderately suited	
					Low strength	0.50
175D2:						
Lamont----------	Well suited		Moderately suited		Moderately suited	
			Slope	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
175F:						
Lamont	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50
233C2:						
Birkbeck	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
261A:						
Niota	Well suited		Well suited		Moderately suited	
					Low strength	0.50
268B:						
Mt. Carroll	Well suited		Well suited		Moderately suited	
					Low strength	0.50
268C2:						
Mt. Carroll	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
274B:						
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
279B:						
Rozetta	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
279C2:						
Rozetta	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
280B:						
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
280C2:						
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
410D2:						
Woodbine	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
486B:						
Bertrand	Well suited		Well suited		Moderately suited	
					Low strength	0.50
486C2:						
Bertrand	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
565B:						
Tell	Well suited		Well suited		Moderately suited	
					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
565C2, 565D2:						
Tell	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
675B:						
Greenbush	Well suited		Well suited		Moderately suited	
					Low strength	0.50
675C2:						
Greenbush	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		
759A:						
Udolpho	Well suited		Well suited		Moderately suited	
					Low strength	0.50
785G:						
Lacrescent	Moderately suited		Unsuited		Poorly suited	
	Rock fragments	0.50	Slope	1.00	Slope	1.00
	Slope	0.50	Rock fragments	0.75		
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
943D3:						
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
943E3:						
Seaton	Well suited		Poorly suited		Moderately suited	
			Slope	0.75	Low strength	0.50
					Slope	0.50
Timula	Well suited		Poorly suited		Moderately suited	
			Slope	0.75	Low strength	0.50
					Slope	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

Table 9c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
1082A:						
Millington	Well suited		Well suited		Moderately suited	
					Low strength	0.50
1107A:						
Sawmill	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
1400A:						
Calco	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
3076A:						
Otter	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3077A:						
Huntsville	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3107A:						
Sawmill	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
3302A:						
Ambraw	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
3321A:						
Du Page	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3400A:						
Calco	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
3404A:						
Titus	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
3415A:						
Orion	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3428A:						
Coffeen	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3451A:						
Lawson	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3452A:						
Riley	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3646L:						
Fluvaquents	Poorly suited		Poorly suited		Poorly suited	
	Wetness	0.75	Wetness	0.75	Wetness	1.00
					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
7070A:						
Beaucoup	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7073A:						
Ross	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7076A:						
Otter	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7082A:						
Millington	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7100A:						
Palms	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7103A:						
Houghton	Well suited		Well suited		Well suited	
7107A:						
Sawmill	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
7210A:						
Lena	Well suited		Well suited		Well suited	
7302A:						
Ambraw	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7345A:						
Elvers	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7349B:						
Zumbro	Well suited		Well suited		Well suited	
7404A:						
Titus	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
7428A:						
Coffeen	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7452A:						
Riley	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
7516A:						
Faxon	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7603A:						
Blackoar	Well suited		Well suited		Moderately suited	
					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
7682A:						
Medway	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7777A:						
Adrian	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
8107+:						
Sawmill	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
8166A:						
Cohoctah	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8302A:						
Ambraw	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
8400A:						
Calco	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
8404A:						
Titus	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
8415A:						
Orion	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8451A:						
Lawson	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8452A:						
Riley	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
8499A:						
Fella	Well suited		Well suited		Moderately suited	
					Low strength	0.50

Table 9d.--Forestland Management

(Only the soils that are commonly used as forestland 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
8D3:				
Hickory	Well suited		Well suited	
8F2:				
Hickory	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
21C2, 21D2:				
Pecatonica	Well suited		Well suited	
54C:				
Plainfield	Well suited		Well suited	
54E:				
Plainfield	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
61A:				
Atterberry	Well suited		Well suited	
88A, 88C:				
Sparta	Well suited		Well suited	
88E:				
Sparta	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
104A:				
Virgil	Well suited		Well suited	
175B2, 175D2:				
Lamont	Well suited		Well suited	
175F:				
Lamont	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
233C2:				
Birkbeck	Well suited		Well suited	
261A:				
Niota	Well suited		Well suited	
268B, 268C2:				
Mt. Carroll	Well suited		Well suited	
274B, 274C2, 274D2:				
Seaton	Well suited		Well suited	
279B, 279C2:				
Rozetta	Well suited		Well suited	
280B, 280C2:				
Fayette	Well suited		Well suited	

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
410D2:				
Woodbine	Well suited		Well suited	
486B, 486C2:				
Bertrand	Well suited		Well suited	
565B, 565C2, 565D2:				
Tell	Well suited		Well suited	
675B, 675C2:				
Greenbush	Well suited		Well suited	
689B, 689D:				
Coloma	Well suited		Well suited	
759A:				
Udolpho	Well suited		Well suited	
785G:				
Lacrescent	Unsuited		Unsuited	
	Slope	1.00	Slope	1.00
	Rock fragments	0.50		
917C2, 917D2:				
Oakville	Well suited		Well suited	
Tell	Well suited		Well suited	
943D3:				
Seaton	Well suited		Well suited	
Timula	Well suited		Well suited	
943E3, 943F2:				
Seaton	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
Timula	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
1082A:				
Millington	Well suited		Well suited	
1107A:				
Sawmill	Well suited		Well suited	
1400A:				
Calco	Well suited		Well suited	
3076A:				
Otter	Well suited		Well suited	
3077A:				
Huntsville	Well suited		Well suited	
3107A:				
Sawmill	Well suited		Well suited	
3302A:				
Ambraw	Well suited		Well suited	

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
3321A:				
Du Page	Well suited		Well suited	
3400A:				
Calco	Well suited		Well suited	
3404A:				
Titus	Well suited		Well suited	
3415A:				
Orion	Well suited		Well suited	
3428A:				
Coffeen	Well suited		Well suited	
3451A:				
Lawson	Well suited		Well suited	
3452A:				
Riley	Well suited		Well suited	
3646L:				
Fluvaquents	Unsuited		Unsuited	
	Wetness	0.75	Wetness	1.00
7070A:				
Beaucoup	Well suited		Well suited	
7073A:				
Ross	Well suited		Well suited	
7076A:				
Otter	Well suited		Well suited	
7082A:				
Millington	Well suited		Well suited	
7100A:				
Palms	Well suited		Well suited	
7103A:				
Houghton	Well suited		Well suited	
7107A:				
Sawmill	Well suited		Well suited	
7210A:				
Lena	Well suited		Well suited	
7302A:				
Ambraw	Well suited		Well suited	
7345A:				
Elvers	Well suited		Well suited	
7349B:				
Zumbro	Well suited		Well suited	
7404A:				
Titus	Well suited		Well suited	

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
7428A:				
Coffeen	Well suited		Well suited	
7452A:				
Riley	Well suited		Well suited	
7516A:				
Faxon	Well suited		Well suited	
7603A:				
Blackoar	Well suited		Well suited	
7682A:				
Medway	Well suited		Well suited	
7777A:				
Adrian	Well suited		Well suited	
8107+:				
Sawmill	Well suited		Well suited	
8166A:				
Cohoctah	Well suited		Well suited	
8302A:				
Ambraw	Well suited		Well suited	
8400A:				
Calco	Well suited		Well suited	
8404A:				
Titus	Well suited		Well suited	
8415A:				
Orion	Well suited		Well suited	
8451A:				
Lawson	Well suited		Well suited	
8452A:				
Riley	Well suited		Well suited	
8499A:				
Fella	Well suited		Well suited	

Table 9e.--Forestland Management

(Only the soils that are commonly used as forestland 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
8D3:		
Hickory	Low	
8F2:		
Hickory	Low	
21C2, 21D2:		
Pecatonica	Low	
54C, 54E:		
Plainfield	Low	
61A:		
Atterberry	High	
	Wetness	1.00
88A, 88C, 88E:		
Sparta	Low	
104A:		
Virgil	High	
	Wetness	1.00
175B2, 175D2:		
Lamont	Low	
175F:		
Lamont	Low	
233C2:		
Birkbeck	Low	
261A:		
Niota	High	
	Wetness	1.00
268B, 268C2:		
Mt. Carroll	Low	
274B:		
Seaton	Low	
274C2, 274D2:		
Seaton	Low	
279B, 279C2:		
Rozetta	Low	
280B:		
Fayette	Low	

Table 9e.--Forestland Management--Continued

Map symbol and soil name	Potential for seedling mortality: Rating class and limiting features	Value
280C2:		
Fayette	Low	
410D2:		
Woodbine	Low	
486B, 486C2:		
Bertrand	Low	
565B, 565C2, 565D2:		
Tell	Low	
675B, 675C2:		
Greenbush	Low	
689B, 689D:		
Coloma	Low	
759A:		
Udolpho	High	
	Wetness	1.00
785G:		
Lacrescent	Low	
917C2, 917D2:		
Oakville	Low	
Tell	Low	
943D3, 943E3, 943F2:		
Seaton	Low	
Timula	Low	
1082A:		
Millington	High	
	Wetness	1.00
	Soil reaction	0.50
1107A:		
Sawmill	High	
	Wetness	1.00
1400A:		
Calco	High	
	Wetness	1.00
	Lime	0.50
	Soil reaction	0.50
3076A:		
Otter	High	
	Wetness	1.00

Table 9e.--Forestland Management--Continued

Map symbol and soil name	Potential for seedling mortality: Rating class and limiting features	Value
3077A:		
Huntsville	Low	
3107A:		
Sawmill	High	
	Wetness	1.00
3302A:		
Ambraw	High	
	Wetness	1.00
3321A:		
Du Page	Low	
3400A:		
Calco	High	
	Wetness	1.00
	Lime	0.50
	Soil reaction	0.50
3404A:		
Titus	High	
	Wetness	1.00
3415A:		
Orion	Low	
3428A:		
Coffeen	Low	
3451A:		
Lawson	Low	
3452A:		
Riley	High	
	Wetness	1.00
3646L:		
Fluvaquents	High	
	Wetness	1.00
7070A:		
Beaucoup	High	
	Wetness	1.00
7073A:		
Ross	Low	
7076A:		
Otter	High	
	Wetness	1.00
7082A:		
Millington	High	
	Wetness	1.00
	Lime	0.50
	Soil reaction	0.50

Table 9e.--Forestland Management--Continued

Map symbol and soil name	Potential for seedling mortality: Rating class and limiting features	Value
7100A:		
Palms	High	
	Wetness	1.00
	Soil reaction	1.00
7103A:		
Houghton	High	
	Wetness	1.00
	Soil reaction	1.00
7107A:		
Sawmill	High	
	Wetness	1.00
7210A:		
Lena	High	
	Wetness	1.00
	Soil reaction	1.00
7302A:		
Ambraw	High	
	Wetness	1.00
7345A:		
Elvers	High	
	Wetness	1.00
7349B:		
Zumbro	Low	
7404A:		
Titus	High	
	Wetness	1.00
7428A:		
Coffeen	Low	
7452A:		
Riley	High	
	Wetness	1.00
7516A:		
Faxon	High	
	Wetness	1.00
7603A:		
Blackoar	High	
	Wetness	1.00
7682A:		
Medway	Low	
7777A:		
Adrian	High	
	Wetness	1.00
	Soil reaction	1.00
	Lime	0.50
8107+:		
Sawmill	High	
	Wetness	1.00

Table 9e.--Forestland Management--Continued

Map symbol and soil name	Potential for seedling mortality: Rating class and limiting features	Value
8166A:		
Cohoctah	High	
	Wetness	1.00
8302A:		
Ambraw	High	
	Wetness	1.00
8400A:		
Calco	High	
	Wetness	1.00
	Lime	0.50
	Soil reaction	0.50
8404A:		
Titus	High	
	Wetness	1.00
8415A:		
Orion	Low	
8451A:		
Lawson	Low	
8452A:		
Riley	High	
	Wetness	1.00
8499A:		
Fella	High	
	Wetness	1.00

Table 10.--Windbreaks and Environmental Plantings

(Only the soils that are 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
8D3, 8F2:					
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
21C2, 21D2:					
Pecatonica	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
49A:					
Watseka	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
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 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
54C, 54E:					
Plainfield	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
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 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
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
69A: Milford	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
81A: Littleton	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
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, 87B2:					
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, 88C, 88E:					
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
98B:					
Ade	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

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
104A: Virgil	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
152A: Drummer	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
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

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
175B2, 175D2, 175F:					
Lamont	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	---
198A:					
Elburn	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
200A:					
Orio	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
201A: Gilford	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
206A: Thorp	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
233C2: Birkbeck	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
262A:					
Denrock	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
268B, 268C2:					
Mt. Carroll	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
274B, 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
277B, 277C:					
Port Byron	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
279B, 279C2:					
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

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
280B, 280C2:					
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
354A:					
Hononegah	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
410D2:					
Woodbine	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
411B:					
Ashdale	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
412B, 412C:					
Ogle	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
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
485B, 485C2:					
Richwood	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
486B, 486C2:					
Bertrand	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
487A:					
Joyce	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
488A:					
Hooppole	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	---
509B:					
Whalan	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
529A:					
Selmass	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
564A, 564B, 564C2:					
Waukegan	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	---
565B, 565C2, 565D2:					
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	---

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
638A:					
Muskego	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, common persimmon	Green ash, pin oak, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood
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
675B, 675C2:					
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
686B, 686C2:					
Parkway	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
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
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
759A:					
Udolpho	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
760A:					
Marshan	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	---
763A:					
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
767A:					
Prophetstown	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
777A:					
Adrian	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, common persimmon	Green ash, pin oak, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood
785G:					
Lacrescent	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
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

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:					
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	---
943D3, 943E3, 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
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

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
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
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	---
2087B:					
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	---
Urban land.					
2198A:					
Elburn	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
Urban land.					

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
2485B:					
Richwood	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
Urban land.					
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
3077A:					
Huntsville	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
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
3302A: 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
3321A: Du Page	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
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	---

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
3404A:					
Titus	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
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	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
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
3452A: Riley	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
7070A: Beaucoup	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
7073A: Ross	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
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
7082A: 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

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
7100A: Palms	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, common persimmon	Green ash, pin oak, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood
7103A: Houghton	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, common persimmon	Green ash, pin oak, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood
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
7210A:					
Lena	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, common persimmon	Green ash, pin oak, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood
7302A:					
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
7345A:					
Elvers	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
7349B: Zumbro	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
7404A: Titus	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
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
7452A:					
Riley	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
7516A:					
Faxon	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
7603A:					
Blackoar	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
7682A: Medway	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
7777A: Adrian	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, common persimmon	Green ash, pin oak, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood
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
8166A:					
Cohoctah	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
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
8321A:					
Du Page	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
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	---

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
8404A: Titus	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
8415A: 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
8451A: 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
8452A:					
Riley	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
8499A:					
Fella	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 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. "Not rated" indicates that data are not available or that no rating is applicable. 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
8D3:						
Hickory--------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
8F2:						
Hickory--------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
21C2:						
Pecatonica-----	Not limited		Not limited		Very limited	
					Slope	1.00
21D2:						
Pecatonica-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
49A:						
Watseka--------	Very limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.99	Too sandy	0.88	Depth to saturated zone	0.99
	Too sandy	0.88	Depth to saturated zone	0.78	Too sandy	0.88
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
54C:						
Plainfield-----	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.04	Slope	0.04	Too sandy	1.00
54E:						
Plainfield-----	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	1.00	Slope	1.00	Too sandy	1.00
61A:						
Atterberry-----	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
68A:						
Sable----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
69A:						
Milford--------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21

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
81A:						
Littleton------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
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	
87B2:						
Dickinson------	Not limited		Not limited		Somewhat limited	
					Slope	0.28
88A:						
Sparta---------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
88C:						
Sparta---------	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.95	Too sandy	0.95	Slope	1.00
	Slope	0.04	Slope	0.04	Too sandy	0.95
88E:						
Sparta---------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
98B:						
Ade----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Slope	0.50
					Too sandy	0.50
104A:						
Virgil---------	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
152A:						
Drummer--------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
172A:						
Hoopeston------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
175B2:						
Lamont---------	Not limited		Not limited		Somewhat limited	
					Slope	0.28
175D2:						
Lamont---------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	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
175F:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
198A:						
Elburn	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
200A:						
Orio	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
201A:						
Gilford	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
206A:						
Thorp	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
233C2:						
Birkbeck	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.28	Depth to saturated zone	0.14	Slope	1.00
					Depth to saturated zone	0.28
261A:						
Niota	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	Restricted permeability	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
262A:						
Denrock	Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
268B:						
Mt. Carroll	Not limited		Not limited		Somewhat limited	
					Slope	0.50
268C2:						
Mt. Carroll	Not limited		Not limited		Very limited	
					Slope	1.00
274B:						
Seaton	Not limited		Not limited		Somewhat limited	
					Slope	0.28

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
274C2:						
Seaton	Not limited		Not limited		Very limited	
					Slope	1.00
274D2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
275A:						
Joy	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
277B:						
Port Byron	Not limited		Not limited		Somewhat limited	
					Slope	0.50
277C:						
Port Byron	Not limited		Not limited		Very limited	
					Slope	1.00
279B:						
Rozetta	Not limited		Not limited		Somewhat limited	
					Slope	0.28
279C2:						
Rozetta	Not limited		Not limited		Very limited	
					Slope	1.00
280B:						
Fayette	Not limited		Not limited		Somewhat limited	
					Slope	0.28
280C2:						
Fayette	Not limited		Not limited		Very limited	
					Slope	1.00
354A:						
Hononegah	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
410D2:						
Woodbine	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
411B:						
Ashdale	Not limited		Not limited		Somewhat limited	
					Slope	0.28
412B:						
Ogle	Not limited		Not limited		Somewhat limited	
					Slope	0.28
412C:						
Ogle	Not limited		Not limited		Very limited	
					Slope	1.00
430A:						
Raddle	Not limited		Not limited		Not limited	
430B:						
Raddle	Not limited		Not limited		Somewhat limited	
					Slope	0.28

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
485B:						
Richwood	Not limited		Not limited		Somewhat limited	
					Slope	0.28
485C2:						
Richwood	Not limited		Not limited		Very limited	
					Slope	1.00
486B:						
Bertrand	Not limited		Not limited		Somewhat limited	
					Slope	0.28
486C2:						
Bertrand	Not limited		Not limited		Very limited	
					Slope	1.00
487A:						
Joyce	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
509B:						
Whalan	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.42
					Slope	0.28
529A:						
Selmass	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
533:						
Urban land	Not rated		Not rated		Not rated	
564A:						
Waukegan	Not limited		Not limited		Not limited	
564B:						
Waukegan	Not limited		Not limited		Somewhat limited	
					Slope	0.28
564C2:						
Waukegan	Not limited		Not limited		Very limited	
					Slope	1.00
565B:						
Tell	Not limited		Not limited		Somewhat limited	
					Slope	0.28
565C2:						
Tell	Not limited		Not limited		Very limited	
					Slope	1.00
565D2:						
Tell	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	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
638A:						
Muskego	Not rated		Not rated		Not rated	
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
675B:						
Greenbush	Not limited		Not limited		Somewhat limited	
					Slope	0.28
675C2:						
Greenbush	Not limited		Not limited		Very limited	
					Slope	1.00
686B:						
Parkway	Not limited		Not limited		Somewhat limited	
					Slope	0.28
686C2:						
Parkway	Not limited		Not limited		Very limited	
					Slope	1.00
689B:						
Coloma	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.50
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
727A:						
Waukee	Not limited		Not limited		Not limited	
759A:						
Udolpho	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
760A:						
Marshan	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
763A:						
Joslin	Not limited		Not limited		Not limited	
767A:						
Prophetstown	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
777A:						
Adrian	Not rated		Not rated		Not rated	

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
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Content of large stones	0.88
					Content of gravel	0.82
802B:						
Orthents	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.50
					Restricted permeability	0.21
865, 868:						
Pits	Not rated		Not rated		Not rated	
869:						
Pits	Not rated		Not rated		Not rated	
Orthents	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
					Slope	0.03
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
943D3:						
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
943E3:						
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
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

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
1082A:						
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	Ponding	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
2087B:						
Dickinson------	Not limited		Not limited		Somewhat limited	
					Slope	0.50
Urban land-----	Not rated		Not rated		Not rated	
2198A:						
Elburn---------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
Urban land-----	Not rated		Not rated		Not rated	
2408A:						
Aquents--------	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
Urban land-----	Not rated		Not rated		Not rated	
2485B:						
Richwood-------	Not limited		Not limited		Somewhat limited	
					Slope	0.28
Urban land-----	Not rated		Not rated		Not rated	
3076A:						
Otter----------	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	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3077A:						
Huntsville-----	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.40	Flooding	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
3107A:						
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	1.00	Flooding	0.40	Flooding	1.00
3302A:						
Ambraw	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	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
3321A:						
Du Page	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	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3404A:						
Titus	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	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Restricted permeability	0.96	Ponding	1.00
	Restricted permeability	0.96	Flooding	0.40	Restricted permeability	0.96
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
3452A:						
Riley	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.78	Flooding	1.00
	Depth to saturated zone	0.99	Flooding	0.40	Depth to saturated zone	0.99

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
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
7070A:						
Beaucoup-------	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	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
7073A:						
Ross----------	Very limited		Not limited		Not limited	
	Flooding	1.00				
7076A:						
Otter----------	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	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
7082A:						
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	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
7100A:						
Palms----------	Not rated		Not rated		Not rated	
7103A:						
Houghton-------	Not rated		Not rated		Not rated	
7107A:						
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	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
7210A:						
Lena----------	Not rated		Not rated		Not rated	
7302A:						
Ambraw---------	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	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	0.21	Restricted permeability	0.21
	Restricted permeability	0.21				

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
7345A:						
Elvers	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	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
7349B:						
Zumbro	Not limited		Not limited		Somewhat limited	
					Slope	0.03
7404A:						
Titus	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	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	0.96	Restricted permeability	0.96
	Restricted permeability	0.96				
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				
7452A:						
Riley	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.78	Depth to saturated zone	0.99
	Depth to saturated zone	0.99				
7516A:						
Faxon	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	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
7603A:						
Blackoar	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	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
7682A:						
Medway	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.43	Depth to saturated zone	0.77
	Depth to saturated zone	0.77				
7777A:						
Adrian	Not rated		Not rated		Not rated	
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	1.00			Flooding	0.60

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
8166A:						
Cohoctah	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	Ponding	1.00	Ponding	1.00
	Ponding	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	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	0.21	Flooding	0.60
	Restricted permeability	0.21			Restricted permeability	0.21
8321A:						
Du Page	Very limited		Not limited		Somewhat limited	
	Flooding	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	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	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
8415A:						
Orion	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			Flooding	0.60
8451A:						
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			Flooding	0.60
8452A:						
Riley	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.78	Depth to saturated zone	0.99
	Depth to saturated zone	0.99			Flooding	0.60
8499A:						
Fella	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	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Flooding	0.60

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
M-W. Miscellaneous water						
W. Water						

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. "Not rated" indicates that data are not available or that no rating is applicable. 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
8D3:						
Hickory	Not limited		Not limited		Somewhat limited	
					Slope	0.96
8F2:						
Hickory	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.04	Slope	1.00
21C2:						
Pecatonica	Not limited		Not limited		Not limited	
21D2:						
Pecatonica	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
49A:						
Watseka	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.88	Too sandy	0.88	Depth to saturated zone	0.78
	Depth to saturated zone	0.50	Depth to saturated zone	0.50	Droughty	0.04
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
54C:						
Plainfield	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.91
					Too sandy	0.50
					Slope	0.04
54E:						
Plainfield	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.02			Droughty	0.91
					Too sandy	0.50
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	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
69A:						
Milford	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 11b.--Recreation--Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
81A:						
Littleton	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
86B, 86C2:						
Osco	Not limited		Not limited		Not limited	
87A, 87B2:						
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
88C:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	0.07
					Slope	0.04
88E:						
Sparta	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.95	Too sandy	0.95	Slope	1.00
	Slope	0.02			Droughty	0.11
98B:						
Ade	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Droughty	0.34
104A:						
Virgil	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
152A:						
Drummer	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
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
175B2:						
Lamont	Not limited		Not limited		Not limited	
175D2:						
Lamont	Not limited		Not limited		Somewhat limited	
					Slope	0.96
175F:						
Lamont	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.02	Slope	1.00
198A:						
Elburn	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
200A:						
Orio	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
201A:						
Gilford	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
206A:						
Thorp	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
233C2:						
Birkbeck	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.14
261A:						
Niota	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
262A:						
Denrock	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
268B, 268C2:						
Mt. Carroll	Not limited		Not limited		Not limited	
274B, 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
277B, 277C:						
Port Byron	Not limited		Not limited		Not limited	
279B, 279C2:						
Rozetta	Not limited		Not limited		Not limited	
280B, 280C2:						
Fayette	Not limited		Not limited		Not limited	
354A:						
Hononegah	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	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
410D2:						
Woodbine	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
411B:						
Ashdale	Not limited		Not limited		Not limited	
412B, 412C:						
Ogle	Not limited		Not limited		Not limited	
430A, 430B:						
Raddle	Not limited		Not limited		Not limited	
485B, 485C2:						
Richwood	Not limited		Not limited		Not limited	
486B, 486C2:						
Bertrand	Not limited		Not limited		Not limited	
487A:						
Joyce	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
509B:						
Whalan	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.42
529A:						
Selmass	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
533:						
Urban land	Not rated		Not rated		Not rated	
564A, 564B, 564C2:						
Waukegan	Not limited		Not limited		Not limited	
565B, 565C2:						
Tell	Not limited		Not limited		Not limited	
565D2:						
Tell	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
638A:						
Muskego	Not rated		Not rated		Not rated	
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
675B, 675C2:						
Greenbush	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
686B, 686C2:						
Parkway	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
727A:						
Waukee	Not limited		Not limited		Not limited	
759A:						
Udolpho	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
760A:						
Marshan	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
763A:						
Joslin	Not limited		Not limited		Not limited	
767A:						
Prophetstown	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
777A:						
Adrian	Not rated		Not rated		Not rated	
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Content of large stones	0.88
802B:						
Orthents	Not limited		Not limited		Not limited	
865, 868:						
Pits	Not rated		Not rated		Not rated	
869:						
Pits	Not rated		Not rated		Not rated	
Orthents	Not limited		Not limited		Not limited	
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	

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
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
943D3:						
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
943E3:						
Seaton	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	0.82				
Timula	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	0.98				
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		
1082A:						
Millington	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
1107A:						
Sawmill	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
1400A:						
Calco	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
2087B:						
Dickinson	Not limited		Not limited		Not limited	
Urban land	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
2198A:						
Elburn	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
Urban land	Not rated		Not rated		Not rated	
2408A:						
Aquents	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Urban land	Not rated		Not rated		Not rated	
2485B:						
Richwood	Not limited		Not limited		Not limited	
Urban land	Not rated		Not rated		Not rated	
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
3077A:						
Huntsville	Somewhat limited		Somewhat limited		Very limited	
	Flooding	0.40	Flooding	0.40	Flooding	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
3302A:						
Ambraw	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
3321A:						
Du Page	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	Flooding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Ponding	1.00
3404A:						
Titus	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

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
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
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
3452A:						
Riley	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.50	Depth to saturated zone	0.50	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.78
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
7070A:						
Beaucoup	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7073A:						
Ross	Not limited		Not limited		Not limited	
7076A:						
Otter	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7082A:						
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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7100A:						
Palms	Not rated		Not rated		Not rated	
7103A:						
Houghton	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
7107A:						
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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7210A:						
Lena	Not rated		Not rated		Not rated	
7302A:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7345A:						
Elvers	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7349B:						
Zumbro	Not limited		Not limited		Not limited	
7404A:						
Titus	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
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
7452A:						
Riley	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
7516A:						
Faxon	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
					Depth to bedrock	0.42
7603A:						
Blackoar	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7682A:						
Medway	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.08	Depth to saturated zone	0.08	Depth to saturated zone	0.43
7777A:						
Adrian	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
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
8166A:						
Cohoctah	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
					Flooding	0.60
8302A:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
					Flooding	0.60
8321A:						
Du Page	Not limited		Not limited		Somewhat limited	
					Flooding	0.60
8400A:						
Calco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
					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
8415A:						
Orion	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
					Flooding	0.60
8451A:						
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
					Flooding	0.60
8452A:						
Riley	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
					Flooding	0.60
8499A:						
Fella	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
					Flooding	0.60

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
M-W. Miscellaneous water						
W. Water						

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
8D3:										
Hickory	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
8F2:										
Hickory	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
21C2:										
Pecatonica	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
21D2:										
Pecatonica	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
49A:										
Watseka	Fair	Fair	Good	Good	Good	Fair	Poor	Fair	Good	Poor.
51A:										
Muscatune	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
54C, 54E:										
Plainfield	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
61A:										
Atterberry	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
68A:										
Sable	Fair	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good.
69A:										
Milford	Good	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
81A:										
Littleton	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
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, 87B2:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
88A, 88C:										
Sparta	Poor	Poor	Fair	Poor	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
88E:										
Sparta	Poor	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
98B:										
Ade	Poor	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
104A:										
Virgil	Good	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
152A:										
Drummer	Fair	Fair	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
172A:										
Hoopeston	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
175B2:										
Lamont	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
175D2:										
Lamont	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
175F:										
Lamont	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
198A:										
Elburn	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
200A:										
Orio	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
201A:										
Gilford	Fair	Poor	Poor	Poor	Poor	Good	Good	Fair	Poor	Good.
206A:										
Thorp	Poor	Fair	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
233C2:										
Birkbeck	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
261A:										
Niota	Poor	Fair	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
262A:										
Denrock	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
268B:										
Mt. Carroll	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
268C2:										
Mt. Carroll	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
274B:										
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.

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
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.
277B:										
Port Byron	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
277C:										
Port Byron	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
279B:										
Rozetta	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
279C2:										
Rozetta	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
280B:										
Fayette	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
280C2:										
Fayette	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
354A:										
Hononegah	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
410D2:										
Woodbine	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
411B:										
Ashdale	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
412B:										
Ogle	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
412C:										
Ogle	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
430A, 430B:										
Raddle	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
485B:										
Richwood	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
485C2:										
Richwood	Fair	Good	Good	Fair	Fair	Very poor.	Very poor.	Good	Fair	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
486B:										
Bertrand	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
486C2:										
Bertrand	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
487A:										
Joyce	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
488A:										
Hooppole	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
509B:										
Whalan	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
529A:										
Selmass	Fair	Fair	Fair	Fair	Fair	Good	Very poor.	Fair	Fair	Poor.
533.										
Urban land										
564A, 564B:										
Waukegan	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
564C2:										
Waukegan	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
565B:										
Tell	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
565C2:										
Tell	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
565D2:										
Tell	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
638A:										
Muskego	Good	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good.
647A:										
Lawler	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
675B:										
Greenbush	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
675C2:										
Greenbush	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
686B, 686C2:										
Parkway	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
689B, 689D:										
Coloma	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
727A:										
Waukee	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
759A:										
Udolpho	Good	Good	Good	Good	Fair	Good	Good	Good	Good	Good.
760A:										
Marshan	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good.
763A:										
Joslin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
767A:										
Prophetstown	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
777A:										
Adrian	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
785G:										
Lacrescent	Very poor.	Very poor.	Fair	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
802B.										
Orthents										
865, 868.										
Pits										
869.										
Pits-Orthents										
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.
943D3:										
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.
943E3:										
Seaton	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Timula	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
943F2:										
Seaton	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
943F2:										
Timula	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
1082A:										
Millington	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
1107A:										
Sawmill	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
1400A:										
Calco	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
2087B:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Urban land.										
2198A:										
Elburn	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
Urban land.										
2408A.										
Aquents-Urban land										
2485B:										
Richwood	Good	Good	Good	Fair	Fair	Poor	Very poor.	Good	Fair	Very poor.
Urban land.										
3076A:										
Otter	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3077A:										
Huntsville	Poor	Fair	Fair	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
3107A:										
Sawmill	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3302A:										
Ambraw	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3321A:										
Du Page	Poor	Fair	Fair	Good	Good	Poor	Very poor.	Fair	Good	Poor.
3400A:										
Calco	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3404A:										
Titus	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3415A:										
Orion	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3428A:										
Coffeen	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	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
3451A:										
Lawson	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3452A:										
Riley	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3646L:										
Fluvaquents	Very poor.	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
7070A:										
Beaucoup	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
7073A:										
Ross	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7076A:										
Otter	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7082A:										
Millington	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7100A:										
Palms	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
7103A:										
Houghton	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
7107A:										
Sawmill	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7210A:										
Lena	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
7302A:										
Ambraw	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7345A:										
Elvers	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7349B:										
Zumbro	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Poor.
7404A:										
Titus	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
7428A:										
Coffeen	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Fair.
7452A:										
Riley	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7516A:										
Faxon	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
7603A:										
Blackoar	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
7682A:										
Medway	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	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
7777A:										
Adrian	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
8107+:										
Sawmill	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8166A:										
Cohoctah	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8302A:										
Ambraw	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8321A:										
Du Page	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor.
8400A:										
Calco	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
8404A:										
Titus	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8415A:										
Orion	Good	Good	Good	Good	Good	Good	Fair	Good	Good	Good.
8451A:										
Lawson	Good	Good	Fair	Good	Good	Fair	Fair	Good	Good	Fair.
8452A:										
Riley	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
8499A:										
Fella	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
M-W. Miscellaneous water										
W. Water										

Table 13.--Hydric Soils

(Only the 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
49A:			
Watseka loamy fine sand, 0 to 2 percent slopes	Watseka	No	outwash plain, stream terrace
	Gilford	Yes	depression
51A:			
Muscatune silt loam, 0 to 2 percent slopes	Muscatune	No	ground moraine
	Sable	Yes	ground moraine
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
69A:			
Milford silty clay loam, 0 to 2 percent slopes	Milford	Yes	lake plain
86B:			
Osco silt loam, 2 to 5 percent slopes	Osco	No	ground moraine
	Sable	Yes	depression, drainageway
86C2:			
Osco silt loam, 5 to 10 percent slopes, eroded	Osco	No	ground moraine
	Sable	Yes	depression, drainageway
87A:			
Dickinson sandy loam, 0 to 2 percent slopes	Dickinson	No	outwash plain, stream terrace
	Gilford	Yes	outwash plain
87B2:			
Dickinson sandy loam, 2 to 7 percent slopes, eroded	Dickinson	No	stream terrace
	Gilford	Yes	outwash plain
104A:			
Virgil silt loam, 0 to 2 percent slopes	Virgil	No	outwash plain, stream terrace
	Thorp	Yes	depression
152A:			
Drummer silty clay loam, 0 to 2 percent slopes	Drummer	Yes	outwash plain
172A:			
Hoopeston sandy loam, 0 to 2 percent slopes	Hoopeston	No	outwash plain
	Gilford	Yes	depression
198A:			
Elburn silt loam, 0 to 2 percent slopes	Elburn	No	outwash plain
	Drummer	Yes	outwash plain
200A:			
Orio loam, 0 to 2 percent slopes	Orio	Yes	depression, outwash plain

Table 13.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform
201A:			
Gilford fine sandy loam, 0 to 2 percent slopes	Gilford	Yes	outwash plain
206A:			
Thorp silt loam, 0 to 2 percent slopes	Thorp	Yes	depression
261A:			
Niota silt loam, 0 to 2 percent slopes	Niota	Yes	depression
262A:			
Denrock silt loam, 0 to 2 percent slopes	Denrock	No	lake plain
	Niota	Yes	lake plain
275A:			
Joy silt loam, 0 to 2 percent slopes	Joy	No	ground moraine
	Sable	Yes	depression
485B:			
Richwood silt loam, 2 to 5 percent slopes	Richwood	No	outwash plain
	Drummer	Yes	outwash plain
487A:			
Joyce silt loam, 0 to 2 percent slopes	Joyce	No	outwash plain
	Sable	Yes	ground moraine
488A:			
Hooppole loam, 0 to 2 percent slopes	Hooppole	Yes	outwash plain
509B:			
Whalan loam, 2 to 5 percent slopes	Whalan	No	ground moraine
	Faxon	Yes	flood plain
529A:			
Selmass silt loam, 0 to 2 percent slopes	Selmass	Yes	outwash plain
638A:			
Muskego muck, 0 to 2 percent slopes	Muskego	Yes	lake plain
	Gilford	Yes	outwash plain
	Marshan	Yes	outwash plain
647A:			
Lawler loam, 0 to 2 percent slopes	Lawler	No	outwash plain
	Marshan	Yes	outwash plain
759A:			
Udolpho loam, sandy substratum, 0 to 2 percent slopes	Udolpho	Yes	outwash plain
760A:			
Marshan loam, sandy substratum, 0 to 2 percent slopes	Marshan	Yes	outwash plain
767A:			
Prophetstown silt loam, 0 to 2 percent slopes	Prophetstown	Yes	outwash plain
	Drummer	Yes	outwash plain

Table 13.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform
777A:			
Adrian muck, 0 to 2 percent slopes	Adrian	Yes	depression, outwash plain
	Gilford	Yes	outwash plain
	Marshan	Yes	outwash plain
868:			
Pits, organic	Pits	Yes	bog
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
1400A:			
Calco silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	Calco	Yes	flood plain
2408A:			
Aquents-Urban land complex, 0 to 2 percent slopes	Aquents	Yes	depression
	Urban land	---	---
3076A:			
Otter silt loam, 0 to 2 percent slopes, frequently flooded	Otter	Yes	flood plain
3077A:			
Huntsville silt loam, 0 to 2 percent slopes, frequently flooded	Huntsville	No	flood plain
	Sawmill	Yes	flood plain
3107A:			
Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded	Sawmill	Yes	flood plain
3302A:			
Ambraw silty clay loam, 0 to 2 percent slopes, frequently flooded	Ambraw	Yes	flood plain
3321A:			
Du Page silt loam, 0 to 2 percent slopes, frequently flooded	Du Page	No	flood plain
	Ambraw	Yes	flood plain
	Millington	Yes	flood plain
3400A:			
Calco silty clay loam, 0 to 2 percent slopes, frequently flooded	Calco	Yes	flood plain

Table 13.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform
3404A:			
Titus silty clay loam, 0 to 2 percent slopes, frequently flooded	Titus	Yes	flood plain
3415A:			
Orion silt loam, 0 to 2 percent slopes, frequently flooded	Orion	No	flood plain
	Beaucoup	Yes	depression
	Sawmill	Yes	flood plain
3428A:			
Coffeen silt loam, 0 to 2 percent slopes, frequently flooded	Coffeen	No	flood plain
	Beaucoup	Yes	depression
3451A:			
Lawson silt loam, 0 to 2 percent slopes, frequently flooded	Lawson	No	flood plain
	Otter	Yes	flood plain
3452A:			
Riley loam, 0 to 2 percent slopes, frequently flooded	Riley	No	flood plain
	Ambraw	Yes	flood plain
3646L:			
Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded, long duration	Fluvaquents	Yes	flood plain
7070A:			
Beaucoup silty clay loam, 0 to 2 percent slopes, rarely flooded	Beaucoup	Yes	flood plain
7073A:			
Ross silt loam, 0 to 2 percent slopes, rarely flooded	Ross	No	flood plain
	Ambraw	Yes	flood plain
7076A:			
Otter silt loam, 0 to 2 percent slopes, rarely flooded	Otter	Yes	flood plain
7082A:			
Millington clay loam, 0 to 2 percent slopes, rarely flooded	Millington	Yes	flood plain
7100A:			
Palms muck, 0 to 2 percent slopes, rarely flooded	Palms	Yes	backswamp
7103A:			
Houghton muck, 0 to 2 percent slopes, rarely flooded	Houghton	Yes	flood plain
7107A:			
Sawmill silty clay loam, 0 to 2 percent slopes, rarely flooded	Sawmill	Yes	flood plain

Table 13.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform
7210A:			
Lena muck, 0 to 2 percent slopes, rarely flooded	Lena	Yes	flood plain
7302A:			
Ambraw clay loam, 0 to 2 percent slopes, rarely flooded	Ambraw	Yes	flood plain
7345A:			
Elvers silt loam, 0 to 2 percent slopes, rarely flooded	Elvers	Yes	flood plain
7404A:			
Titus silty clay loam, 0 to 2 percent slopes, rarely flooded	Titus	Yes	flood plain
7428A:			
Coffeen silt loam, 0 to 2 percent slopes, rarely flooded	Coffeen	No	flood plain
	Beaucoup	Yes	flood plain
7452A:			
Riley loam, 0 to 2 percent slopes, rarely flooded	Riley	No	flood plain
	Ambraw	Yes	flood plain
7516A:			
Faxon silty clay loam, 0 to 2 percent slopes, rarely flooded	Faxon	Yes	flood plain
7603A:			
Blackoar silt loam, 0 to 2 percent slopes, rarely flooded	Blackoar	Yes	flood plain
7682A:			
Medway loam, 0 to 2 percent slopes, rarely flooded	Medway	No	flood plain
	Ambraw	Yes	flood plain
7777A:			
Adrian muck, 0 to 2 percent slopes, rarely flooded	Adrian	Yes	flood plain
8107+:			
Sawmill silt loam, 0 to 2 percent slopes, occasionally flooded, overwash	Sawmill	Yes	flood plain
8166A:			
Cohoctah loam, 0 to 2 percent slopes, occasionally flooded	Cohoctah	Yes	flood plain
8302A:			
Ambraw loam, 0 to 2 percent slopes, occasionally flooded	Ambraw	Yes	flood plain

Table 13.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform
8321A:			
Du Page silt loam, 0 to 2 percent slopes, occasionally flooded	Du Page	No	flood plain
	Ambraw	Yes	flood plain
	Millington	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
8415A:			
Orion silt loam, 0 to 2 percent slopes, occasionally flooded	Orion	No	flood plain
	Beaucoup	Yes	depression
	Sawmill	Yes	flood plain
8451A:			
Lawson silt loam, 0 to 2 percent slopes, occasionally flooded	Lawson	No	flood plain
	Otter	Yes	flood plain
8452A:			
Riley loam, 0 to 2 percent slopes, occasionally flooded	Riley	No	flood plain
	Ambraw	Yes	flood plain
8499A:			
Fella silty clay loam, 0 to 2 percent slopes, occasionally flooded	Fella	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 limitation. "Not rated" indicates that data are not available or that no rating is applicable. 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
8D3:						
Hickory---------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8F2:						
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
21C2:						
Pecatonica------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
21D2:						
Pecatonica------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
49A:						
Watseka---------	Somewhat limited		Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
51A:						
Muscatune-------	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
54C:						
Plainfield------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
54E:						
Plainfield------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
61A:						
Atterberry------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
68A:						
Sable----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	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: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
69A:						
Milford	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
81A:						
Littleton	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
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	0.97
			Depth to saturated zone	0.15	Shrink-swell	0.50
87A, 87B2:						
Dickinson	Not limited		Not limited		Not limited	
88A:						
Sparta	Not limited		Not limited		Not limited	
88C:						
Sparta	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
88E:						
Sparta	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
98B:						
Ade	Not limited		Not limited		Not limited	
104A:						
Virgil	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
152A:						
Drummer	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
172A:						
Hoopeston	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
175B2:						
Lamont	Not limited		Not limited		Not limited	

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
175D2:						
Lamont	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
175F:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
198A:						
Elburn	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
200A:						
Orio	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
201A:						
Gilford	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
206A:						
Thorp	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
233C2:						
Birkbeck	Somewhat limited		Very limited		Very limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
	Depth to saturated zone	0.28	Shrink-swell	0.50	Shrink-swell	0.50
					Depth to saturated zone	0.28
261A:						
Niota	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Ponding	1.00	Shrink-swell	1.00
	Ponding	1.00	Shrink-swell	0.50	Ponding	1.00
262A:						
Denrock	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
268B:						
Mt. Carroll	Not limited		Not limited		Not limited	
268C2:						
Mt. Carroll	Not limited		Not limited		Somewhat limited	
					Slope	0.97
274B:						
Seaton	Not limited		Not limited		Not limited	

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

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
274C2:						
Seaton	Not limited		Not limited		Somewhat limited	
					Slope	0.97
274D2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
275A:						
Joy	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
277B:						
Port Byron	Not limited		Not limited		Not limited	
277C:						
Port Byron	Not limited		Not limited		Somewhat limited	
					Slope	0.97
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		
279C2:						
Rozetta	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to saturated zone	0.15	Shrink-swell	0.50
280B:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
280C2:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
354A:						
Hononegah	Not limited		Not limited		Not limited	
410D2:						
Woodbine	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to hard bedrock	0.42		
411B:						
Ashdale	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to hard bedrock	0.42		
412B:						
Ogle	Somewhat limited		Somewhat limited		Somewhat limited	
	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: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
412C:						
Ogle	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
430A, 430B:						
Raddle	Not limited		Not limited		Not limited	
485B:						
Richwood	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
485C2:						
Richwood	Somewhat limited		Somewhat limited		Very limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
					Shrink-swell	0.50
486B:						
Bertrand	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
486C2:						
Bertrand	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
487A:						
Joyce	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
509B:						
Whalan	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
	Depth to hard bedrock	0.42	Shrink-swell	0.50	Depth to hard bedrock	0.42
529A:						
Selmass	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
533:						
Urban land	Not rated		Not rated		Not rated	
564A, 564B:						
Waukegan	Not limited		Not limited		Not limited	
564C2:						
Waukegan	Not limited		Not limited		Very limited	
					Slope	1.00
565B:						
Tell	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50

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

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
565C2:						
Tell	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
					Shrink-swell	0.50
565D2:						
Tell	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
638A:						
Muskego	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
647A:						
Lawler	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
675B:						
Greenbush	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
675C2:						
Greenbush	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to saturated zone	0.15	Shrink-swell	0.50
686B:						
Parkway	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
686C2:						
Parkway	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to saturated zone	0.15	Shrink-swell	0.50
689B:						
Coloma	Not limited		Not limited		Not limited	
689D:						
Coloma	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
727A:						
Waukee	Not limited		Not limited		Not limited	
759A:						
Udolpho	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.22			Shrink-swell	0.22

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

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
760A:						
Marshan	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
763A:						
Joslin	Not limited		Not limited		Not limited	
767A:						
Prophetstown	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
777A:						
Adrian	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Content of large stones	0.31	Content of large stones	0.31	Content of large stones	0.31
802B:						
Orthents	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
865, 868:						
Pits	Not rated		Not rated		Not rated	
869:						
Pits	Not rated		Not rated		Not rated	
Orthents	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
917C2:						
Oakville	Not limited		Not limited		Somewhat limited	
					Slope	0.97
Tell	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
					Shrink-swell	0.50
917D2:						
Oakville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
Tell	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
943D3:						
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

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
943E3, 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
1082A:						
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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
1107A:						
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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
1400A:						
Calco	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
2087B:						
Dickinson	Not limited		Not limited		Not limited	
Urban land	Not rated		Not rated		Not rated	
2198A:						
Elburn	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
Urban land	Not rated		Not rated		Not rated	
2408A:						
Aquents	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
Urban land	Not rated		Not rated		Not rated	
2485B:						
Richwood	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Urban land	Not rated		Not rated		Not rated	
3076A:						
Otter	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00

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

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
3077A:						
Huntsville------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
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
3302A:						
Ambraw----------	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3321A:						
Du Page---------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		
3400A:						
Calco----------	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3404A:						
Titus----------	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	1.00	Shrink-swell	1.00	Shrink-swell	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
3415A:						
Orion----------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
3428A:						
Coffeen---------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
3451A:						
Lawson----------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
			Shrink-swell	0.50		

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

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
3452A:						
Riley	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			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
7070A:						
Beaucoup	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
7073A:						
Ross	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		
7076A:						
Otter	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7082A:						
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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
7100A:						
Palms	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	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
	Content of organic matter	1.00	Ponding	1.00	Content of organic matter	1.00
	Ponding	1.00			Ponding	1.00
7103A:						
Houghton	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	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
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00

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
7107A:						
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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
7210A:						
Lena	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	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
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7302A:						
Ambraw	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
7345A:						
Elvers	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
	Ponding	1.00	Content of organic matter	1.00	Ponding	1.00
			Ponding	1.00		
7349B:						
Zumbro	Not limited		Not limited		Not limited	
7404A:						
Titus	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	1.00	Shrink-swell	1.00	Shrink-swell	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7428A:						
Coffeen	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
7452A:						
Riley	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			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
7516A:						
Faxon	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
	Ponding	1.00	Depth to hard bedrock	1.00	Ponding	1.00
	Shrink-swell	0.50	Ponding	1.00	Shrink-swell	0.50
	Depth to hard bedrock	0.42	Shrink-swell	0.50	Depth to hard bedrock	0.42
7603A:						
Blackoar	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
7682A:						
Medway	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.77	Depth to saturated zone	1.00	Depth to saturated zone	0.77
7777A:						
Adrian	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	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
	Content of organic matter	1.00	Ponding	1.00	Content of organic matter	1.00
	Ponding	1.00			Ponding	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
8166A:						
Cohoctah	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
8302A:						
Ambraw	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8321A:						
Du Page	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		

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
8400A:						
Calco	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
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
8415A:						
Orion	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
8451A:						
Lawson	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
			Shrink-swell	0.50		
8452A:						
Riley	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			Shrink-swell	0.50
8499A:						
Fella	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
M-W. Miscellaneous water						
W. Water						

Table 14b.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. 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
8D3:						
Hickory----------	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
8F2:						
Hickory----------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
21C2:						
Pecatonica-------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
21D2:						
Pecatonica-------	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
49A:						
Watseka----------	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.78	Depth to saturated zone	1.00	Depth to saturated zone	0.78
	Frost action	0.50	Cutbanks cave	1.00	Droughty	0.04
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	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
54C:						
Plainfield-------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.04	Cutbanks cave	1.00	Droughty	0.91
			Slope	0.04	Too sandy	0.50
					Slope	0.04
54E:						
Plainfield-------	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
			Slope	1.00	Droughty	0.91
					Too sandy	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	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.94				
	Shrink-swell	0.50				
68A:						
Sable	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
	Shrink-swell	0.50				
69A:						
Milford	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00	Too clayey	0.01		
	Shrink-swell	0.50				
81A:						
Littleton	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	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
86B, 86C2:						
Osco	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
87A, 87B2:						
Dickinson	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
88A:						
Sparta	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.08
88C:						
Sparta	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.04	Cutbanks cave	1.00	Droughty	0.07
			Slope	0.04	Slope	0.04
88E:						
Sparta	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
			Slope	1.00	Droughty	0.11
98B:						
Ade	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.34

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
104A:						
Virgil	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.94				
152A:						
Drummer	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Low strength	1.00	Ponding	1.00		
	Ponding	1.00				
	Shrink-swell	0.50				
172A:						
Hoopeston	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
	Depth to saturated zone	0.48	Cutbanks cave	1.00		
175B2:						
Lamont	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
175D2:						
Lamont	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.96	Cutbanks cave	1.00	Slope	0.96
	Frost action	0.50	Slope	0.96		
175F:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Cutbanks cave	1.00		
198A:						
Elburn	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	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
200A:						
Orio	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00		
	Shrink-swell	0.50				
201A:						
Gilford	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00		

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

Map symbol and soil name	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
206A:						
Thorp	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
	Shrink-swell	0.50				
233C2:						
Birkbeck	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.14
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Depth to saturated zone	0.14				
261A:						
Niota	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Too clayey	0.41		
	Shrink-swell	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
262A:						
Denrock	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	Cutbanks cave	1.00		
	Depth to saturated zone	0.75	Too clayey	0.18		
	Shrink-swell	0.50				
268B, 268C2:						
Mt. Carroll	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
274B, 274C2:						
Seaton	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.50		
	Low strength	1.00				
274D2:						
Seaton	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Low strength	1.00	Cutbanks cave	0.50		
	Slope	0.96				
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	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
277B, 277C:						
Port Byron	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				

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

Map symbol and soil name	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
279B, 279C2:						
Rozetta	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
280B, 280C2:						
Fayette	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
354A:						
Hononegah	Not limited		Very limited		Very limited	
			Cutbanks cave	1.00	Droughty	1.00
410D2:						
Woodbine	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Depth to hard bedrock	0.42		
	Shrink-swell	0.50	Too clayey	0.12		
	Frost action	0.50	Cutbanks cave	0.10		
411B:						
Ashdale	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Too clayey	0.50		
	Low strength	1.00	Depth to hard bedrock	0.42		
	Shrink-swell	0.50	Cutbanks cave	0.10		
412B, 412C:						
Ogle	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
430A, 430B:						
Raddle	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	0.78				
485B, 485C2:						
Richwood	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
486B, 486C2:						
Bertrand	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
487A:						
Joyce	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
	Low strength	1.00	Cutbanks cave	1.00		
	Depth to saturated zone	0.48	Depth to dense layer	0.50		

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

Map symbol and soil name	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
509B:						
Whalan	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.42
	Shrink-swell	0.50	Too clayey	0.32		
	Frost action	0.50	Cutbanks cave	0.10		
	Depth to hard bedrock	0.42				
529A:						
Selmass	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Low strength	1.00	Ponding	1.00		
	Ponding	1.00				
	Shrink-swell	0.50				
533:						
Urban land	Not rated		Not rated		Not rated	
564A, 564B, 564C2:						
Waukegan	Very limited		Very limited		Not limited	
	Low strength	1.00	Cutbanks cave	1.00		
565B, 565C2:						
Tell	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
565D2:						
Tell	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Cutbanks cave	1.00	Slope	0.96
	Slope	0.96	Slope	0.96		
638A:						
Muskego	Very limited		Very limited		Not rated	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Subsidence	1.00	Content of organic matter	1.00		
	Frost action	1.00				
	Ponding	1.00	Ponding	1.00		
	Low strength	0.78	Cutbanks cave	0.10		
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		
675B, 675C2:						
Greenbush	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	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
686B, 686C2:						
Parkway----------	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
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	0.37	Cutbanks cave	1.00	Droughty	0.58
			Slope	0.37	Too sandy	0.50
					Slope	0.37
727A:						
Waukee----------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
759A:						
Udolpho----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.22				
760A:						
Marshan----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
763A:						
Joslin----------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Frost action	0.50	Too clayey	0.04		
767A:						
Prophetstown-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Low strength	1.00	Ponding	1.00		
	Ponding	1.00				
777A:						
Adrian----------	Very limited		Very limited		Not rated	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Subsidence	1.00	Cutbanks cave	1.00		
	Frost action	1.00	Ponding	1.00		
	Ponding	1.00	Content of organic matter	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
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Content of large stones	0.31	Content of large stones	0.88
	Content of large stones	0.31	Cutbanks cave	0.10		
802B:						
Orthents	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
865, 868:						
Pits	Not rated		Not rated		Not rated	
869:						
Pits	Not rated		Not rated		Not rated	
Orthents	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
917C2:						
Oakville	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.34
Tell	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
917D2:						
Oakville	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.96	Cutbanks cave	1.00	Slope	0.96
			Slope	0.96	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	0.96		
	Slope	0.96				
	Shrink-swell	0.50				
943D3:						
Seaton	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Low strength	1.00	Cutbanks cave	0.50		
	Slope	0.96				
Timula	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Cutbanks cave	0.50		
	Low strength	0.22				
943E3, 943F2:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.50		
	Low strength	1.00				
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	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
1082A:						
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	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
1107A:						
Sawmill	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	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
1400A:						
Calco	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	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
2087B:						
Dickinson	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
Urban land	Not rated		Not rated		Not rated	
2198A:						
Elburn	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	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
Urban land	Not rated		Not rated		Not rated	
2408A:						
Aquents	Very limited		Very limited		Not rated	
	Ponding	1.00	Ponding	1.00		
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Low strength	1.00	Cutbanks cave	0.10		
Urban land	Not rated		Not rated		Not rated	
2485B:						
Richwood	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
Urban land	Not rated		Not rated		Not rated	

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
3076A:						
Otter	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	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
3077A:						
Huntsville	Very limited		Somewhat limited		Very limited	
	Frost action	1.00	Flooding	0.80	Flooding	1.00
	Flooding	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
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	Cutbanks cave	0.10		
	Depth to saturated zone	1.00				
	Shrink-swell	0.50				
3302A:						
Ambraw	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	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
3321A:						
Du Page	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.80	Flooding	1.00
	Frost action	0.50	Depth to saturated zone	0.15		
			Cutbanks cave	0.10		
3400A:						
Calco	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	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
3404A:						
Titus	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	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Shrink-swell	1.00	Cutbanks cave	0.10		
	Ponding	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
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	Cutbanks cave	0.10		
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	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
3452A:						
Riley	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	0.78
	Low strength	1.00	Flooding	0.80		
	Depth to saturated zone	0.78				
	Shrink-swell	0.50				
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	Cutbanks cave	0.10		
	Low strength	1.00				
7070A:						
Beaucoup	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
	Shrink-swell	0.50				
7073A:						
Ross	Very limited		Very limited		Not limited	
	Low strength	1.00	Cutbanks cave	1.00		
	Frost action	0.50	Depth to saturated zone	0.15		
	Flooding	0.40				

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
7076A:						
Otter	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
	Flooding	0.40				
7082A:						
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
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Flooding	0.40				
7100A:						
Palms	Very limited		Very limited		Not rated	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Subsidence	1.00	Ponding	1.00		
	Frost action	1.00	Content of organic matter	1.00		
	Ponding	1.00	Cutbanks cave	0.10		
	Flooding	0.40				
7103A:						
Houghton	Very limited		Very limited		Not rated	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Subsidence	1.00	Content of organic matter	1.00		
	Frost action	1.00	Ponding	1.00		
	Ponding	1.00	Cutbanks cave	0.10		
	Flooding	0.40				
7107A:						
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
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
	Shrink-swell	0.50				
7210A:						
Lena	Very limited		Very limited		Not rated	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Subsidence	1.00	Content of organic matter	1.00		
	Frost action	1.00	Ponding	1.00		
	Ponding	1.00	Cutbanks cave	0.10		
	Flooding	0.40				
7302A:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
	Shrink-swell	0.50				

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

Map symbol and soil name	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
7345A:						
Elvers	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Content of organic matter	1.00		
	Flooding	0.40	Cutbanks cave	0.10		
7349B:						
Zumbro	Not limited		Very limited		Not limited	
			Cutbanks cave	1.00		
7404A:						
Titus	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	1.00				
	Ponding	1.00				
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	Cutbanks cave	0.10		
	Flooding	0.40				
7452A:						
Riley	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
	Low strength	1.00	Cutbanks cave	1.00		
	Depth to saturated zone	0.78				
	Shrink-swell	0.50				
	Flooding	0.40				
7516A:						
Faxon	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to hard bedrock	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to bedrock	0.42
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Depth to hard bedrock	0.42				
7603A:						
Blackoar	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Cutbanks cave	0.10		
	Flooding	0.40				
7682A:						
Medway	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.43
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.43				
	Flooding	0.40				

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
7777A:						
Adrian	Very limited		Very limited		Not rated	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Subsidence	1.00	Cutbanks cave	1.00		
	Frost action	1.00	Ponding	1.00		
	Ponding	1.00	Content of organic matter	1.00		
	Flooding	0.40				
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	Cutbanks cave	0.10		
	Depth to saturated zone	1.00				
	Shrink-swell	0.50				
8166A:						
Cohoctah	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Flooding	1.00	Ponding	1.00	Flooding	0.60
	Ponding	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	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
8321A:						
Du Page	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Frost action	0.50	Depth to saturated zone	0.15		
			Cutbanks cave	0.10		
8400A:						
Calco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	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	Cutbanks cave	0.10		
	Shrink-swell	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
8415A:						
Orion	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
8451A:						
Lawson	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
8452A:						
Riley	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
	Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
	Low strength	1.00	Flooding	0.60		
	Depth to saturated zone	0.78				
	Shrink-swell	0.50				
8499A:						
Fella	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Flooding	1.00	Ponding	1.00	Flooding	0.60
	Low strength	1.00	Flooding	0.60		
	Ponding	1.00				
M-W.						
Miscellaneous water						
W.						
Water						

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. "Not rated" indicates that data are not available or that no rating is applicable. 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
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
8F2:										
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
21C2:										
Pecatonica	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						
21D2:										
Pecatonica	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
49A:										
Watseka	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
					Too sandy	1.00			Depth to saturated zone	1.00
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

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
54C:										
Plainfield	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	0.04	Slope	1.00	Too sandy	1.00	Slope	0.04	Seepage	1.00
					Slope	0.04			Slope	0.04
54E:										
Plainfield	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	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00			Slope	1.00
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	
	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	
	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	
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
69A:										
Milford	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	
	Restricted permeability	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Too clayey	0.50			Too clayey	0.50
81A:										
Littleton	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	
	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
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						
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
87B2:										
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	0.18	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
88C:										
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
			Slope	1.00	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04			Slope	0.04
88E:										
Sparta	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	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00			Slope	1.00
98B:										
Ade	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

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
104A:										
Virgil	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			Too clayey	0.50
					Too clayey	0.50				
152A:										
Drummer	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
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
175B2:										
Lamont	Very limited		Very limited		Very limited		Very limited		Somewhat limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Seepage	0.52
			Slope	0.18						
175D2:										
Lamont	Very limited		Very limited		Very limited		Very limited		Somewhat limited	
	Filtering capacity	1.00	Slope	1.00	Seepage	1.00	Seepage	1.00	Slope	0.96
			Seepage	1.00	Slope	0.96	Slope	0.96	Seepage	0.52
	Slope	0.96								
175F:										
Lamont	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	Seepage	0.52
	Slope	1.00								
198A:										
Elburn	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			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
200A:										
Orio	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	Depth to saturated zone	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Ponding	1.00	Too sandy	1.00
	Restricted permeability	1.00	Ponding	1.00	Too sandy	1.00			Seepage	1.00
	Ponding	1.00			Ponding	1.00			Ponding	1.00
201A:										
Gilford	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	Depth to saturated zone	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Ponding	1.00	Ponding	1.00	Too sandy	1.00	Ponding	1.00	Seepage	1.00
					Ponding	1.00			Ponding	1.00
206A:										
Thorp	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Seepage	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	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00			Too clayey	0.50
					Too clayey	0.50				
233C2:										
Birkbeck	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	0.82
	Restricted permeability	1.00	Slope	1.00	Too clayey	0.50			Too clayey	0.50
			Seepage	0.53						
261A:										
Niota	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	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	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	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
262A:										
Denrock	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	1.00	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.00	Seepage	1.00			Hard to compact	1.00
	Filtering capacity	1.00			Too clayey	1.00			Depth to saturated zone	1.00
268B:										
Mt. Carroll	Somewhat limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53						
			Slope	0.32						
268C2:										
Mt. Carroll	Somewhat limited		Very limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Slope	1.00						
			Seepage	0.53						
274B:										
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						

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
277B:										
Port Byron	Somewhat limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Seepage	0.53						
			Slope	0.32						
277C:										
Port Byron	Somewhat limited		Very limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.46	Slope	1.00						
			Seepage	0.53						
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				
279C2:										
Rozetta	Somewhat limited		Very limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
			Seepage	0.53						
	Depth to saturated zone	0.40			Too clayey	0.50				
280B:										
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:										
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						
354A:										
Hononegah	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
					Too sandy	1.00			Too sandy	0.50
									Gravel content	0.07

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
410D2:										
Woodbine	Very limited		Very limited		Very limited		Somewhat limited		Somewhat limited	
	Restricted permeability	1.00	Slope	1.00	Depth to bedrock	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Seepage	0.53	Slope	0.96	Depth to bedrock	0.42	Too clayey	0.50
	Depth to bedrock	0.78	Depth to hard bedrock	0.42	Too clayey	0.50			Depth to bedrock	0.42
411B:										
Ashdale	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
			Slope	0.18						
412B:										
Ogle	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						
412C:										
Ogle	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						
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						
485B:										
Richwood	Very limited		Very limited		Very limited		Not limited		Not limited	
	Filtering capacity	1.00	Seepage	1.00	Seepage	1.00				
			Slope	0.18						
	Restricted permeability	0.46								

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
485C2:										
Richwood	Very limited		Very limited		Very limited		Not limited		Not limited	
	Filtering capacity	1.00	Slope	1.00	Seepage	1.00				
			Seepage	1.00						
	Restricted permeability	0.46								
486B:										
Bertrand	Somewhat limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	0.50	Seepage	0.50						
			Slope	0.18						
486C2:										
Bertrand	Somewhat limited		Very limited		Very limited		Not limited		Not limited	
	Restricted permeability	0.50	Slope	1.00	Seepage	1.00				
			Seepage	1.00						
487A:										
Joyce	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				
	Restricted permeability	0.46								
488A:										
Hooppole	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	Depth to saturated zone	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00				
	Restricted permeability	0.46								
509B:										
Whalan	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
					Too clayey	0.50	Depth to bedrock	1.00	Too clayey	0.50
			Seepage	1.00						
			Slope	0.18						

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
529A:										
Selmass	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	Depth to saturated zone	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00	Too sandy	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46			Ponding	1.00			Too sandy	0.50
533:										
Urban land	Not rated		Not rated		Not rated		Not rated		Not rated	
564A:										
Waukegan	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
	Restricted permeability	0.46			Too sandy	1.00			Seepage	1.00
564B:										
Waukegan	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
	Restricted permeability	0.46	Slope	0.18	Too sandy	1.00			Seepage	1.00
564C2:										
Waukegan	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
	Restricted permeability	0.46	Slope	1.00	Too sandy	1.00			Seepage	1.00
565B:										
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
	Restricted permeability	0.46	Slope	0.18	Too sandy	1.00			Too sandy	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
565C2:										
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
	Restricted permeability	0.46	Slope	1.00	Too sandy	1.00			Too sandy	0.50
565D2:										
Tell	Very limited		Very limited		Very limited		Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Slope	0.96	Seepage	1.00	Too sandy	1.00	Slope	0.96	Slope	0.96
	Restricted permeability	0.46			Slope	0.96			Too sandy	0.50
638A:										
Muskego	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	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	1.00	Content of organic matter	1.00	Seepage	1.00	Carbonate content	1.00
	Subsidence	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Hard to compact	1.00
	Ponding	1.00	Content of organic matter	1.00					Ponding	1.00
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
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				

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
675C2:										
Greenbush	Somewhat limited		Very limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Depth to saturated zone	0.40	Seepage	0.53	Too clayey	0.50				
686B:										
Parkway	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				
686C2:										
Parkway	Somewhat limited		Very limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Depth to saturated zone	0.40	Seepage	0.53	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
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								

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
759A:										
Udolpho	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	Depth to saturated zone	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Restricted permeability	0.46			Too sandy	1.00			Seepage	1.00
760A:										
Marshan	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	Depth to saturated zone	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Restricted permeability	0.46			Too sandy	1.00			Seepage	1.00
763A:										
Joslin	Very limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	1.00	Seepage	0.53						
767A:										
Prophetstown	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53						
777A:										
Adrian	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	Depth to saturated zone	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Subsidence	1.00	Ponding	1.00	Too sandy	1.00	Ponding	1.00	Seepage	1.00
	Ponding	1.00	Content of organic matter	1.00	Ponding	1.00			Ponding	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
785G:										
Lacrescent	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
	Content of large stones	0.31	Seepage	1.00	Seepage	1.00	Seepage	1.00	Content of large stones	0.66
			Content of large stones	0.74	Content of large stones	0.66			Seepage	0.52
802B:										
Orthents	Very limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	1.00	Slope	0.32						
865, 868:										
Pits	Not rated		Not rated		Not rated		Not rated		Not rated	
869:										
Pits	Not rated		Not rated		Not rated		Not rated		Not rated	
Orthents	Very limited		Somewhat limited		Not limited		Not limited		Not limited	
	Restricted permeability	1.00	Slope	0.02						
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

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
917D2:										
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								
943D3:										
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						
943E3, 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						
1082A:										
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		
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	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
1107A:										
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	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Too clayey	0.50
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50				
1400A:										
Calco	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	Hard to compact	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
2087B:										
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	0.32	Too sandy	1.00			Seepage	1.00
Urban land	Not rated		Not rated		Not rated		Not rated		Not rated	
2198A:										
Elburn	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				
Urban land	Not rated		Not rated		Not rated		Not rated		Not rated	
2408A:										
Aquents	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	Seepage	1.00	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Depth to saturated zone	1.00						
Urban land	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
2485B:										
Richwood	Somewhat limited		Very limited		Very limited		Not limited		Not limited	
	Restricted permeability	0.46	Seepage	1.00	Seepage	1.00				
			Slope	0.18						
Urban land	Not rated		Not rated		Not rated		Not rated		Not rated	
3076A:										
Otter	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	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00		
	Restricted permeability	0.46	Seepage	0.53						
3077A:										
Huntsville	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	0.40								
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				
3302A:										
Ambraw	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	Hard to compact	1.00
	Restricted permeability	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Seepage	0.28	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
3321A:										
Du Page	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	0.40								
3400A:										
Calco	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	Hard to compact	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53	Too clayey	0.50			Too clayey	0.50
3404A:										
Titus	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
	Restricted permeability	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	Ponding	1.00	Ponding	1.00	Ponding		Too clayey	0.50
	Ponding	1.00			Too clayey	0.50				
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		

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
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						
3452A:										
Riley	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Depth to saturated zone	1.00	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46			Too sandy	1.00				
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 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						
7070A:										
Beaucoup	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	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				
7073A:										
Ross	Somewhat limited		Very limited		Very limited		Very limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.22
	Depth to saturated zone	0.40	Flooding	0.40	Seepage	1.00	Seepage	1.00		
	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
7076A:										
Otter	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53	Flooding	0.40	Flooding	0.40		
	Flooding	0.40	Flooding	0.40						
7082A:										
Millington	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53	Flooding	0.40	Flooding	0.40		
	Flooding	0.40	Flooding	0.40						
7100A:										
Palms	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
	Subsidence	1.00	Ponding	1.00	Ponding	1.00	Seepage	1.00	Ponding	1.00
	Ponding	1.00	Content of organic matter	1.00	Flooding	0.40	Ponding	1.00		
	Restricted permeability	0.72	Flooding	0.40			Flooding	0.40		
	Flooding	0.40	Seepage	0.28						
7103A:										
Houghton	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Depth to saturated zone	1.00	Content of organic matter	1.00	Seepage	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Seepage	1.00	Ponding	1.00	Ponding	1.00
	Flooding	0.40	Flooding	0.40	Ponding	1.00	Flooding	0.40	Seepage	0.16
					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
7107A:										
Sawmill	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	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				
7210A:										
Lena	Very limited		Very limited		Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Seepage	1.00	Seepage	1.00	Seepage	1.00	Content of organic matter	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Content of organic matter	1.00	Ponding	1.00	Ponding	1.00
	Flooding	0.40	Ponding	1.00	Ponding	1.00	Flooding	0.40	Seepage	0.52
			Flooding	0.40	Flooding	0.40				
7302A:										
Ambraw	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	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Hard to compact	1.00
	Ponding	1.00	Flooding	0.40	Too clayey	0.50	Flooding	0.40	Ponding	1.00
	Flooding	0.40	Seepage	0.28	Flooding	0.40			Too clayey	0.50
7345A:										
Elvers	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
	Ponding	1.00	Seepage	1.00	Content of organic matter	1.00	Seepage	1.00	Content of organic matter	1.00
	Restricted permeability	0.50	Ponding	1.00	Seepage	1.00	Ponding	1.00	Ponding	1.00
	Flooding	0.40	Content of organic matter	1.00	Ponding	1.00	Flooding	0.40	Seepage	0.50
			Flooding	0.40	Flooding	0.40				
7349B:										
Zumbro	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	0.02	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
7404A:										
Titus	Very limited		Very limited		Very limited		Very limited		Very limited	
	Restricted permeability	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	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	0.40	Too clayey	0.50	Flooding	0.40	Too clayey	0.50
	Flooding	0.40			Flooding	0.40				
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		
7452A:										
Riley	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	Flooding	0.40	Too sandy	1.00	Flooding	0.40	Depth to saturated zone	1.00
	Flooding	0.40			Flooding	0.40				
7516A:										
Faxon	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	Depth to saturated zone	1.00	Depth to bedrock	1.00
	Depth to saturated zone	1.00	Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00	Depth to saturated zone	1.00
	Filtering capacity	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	Too clayey	0.50	Ponding	1.00	Too clayey	0.50
	Restricted permeability	0.46	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
7603A:										
Blackoar	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
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53	Flooding	0.40	Flooding	0.40		
	Flooding	0.40	Flooding	0.40						
7682A:										
Medway	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	0.95
	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		
7777A:										
Adrian	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	Depth to saturated zone	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Subsidence	1.00	Ponding	1.00	Too sandy	1.00	Ponding	1.00	Seepage	1.00
	Ponding	1.00	Content of organic matter	1.00	Ponding	1.00	Flooding	0.40	Ponding	1.00
	Flooding	0.40	Flooding	0.40	Flooding	0.40				
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				
8166A:										
Cohoctah	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	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Ponding	1.00
			Ponding	1.00	Too sandy	1.00	Ponding	1.00	Seepage	0.52
					Ponding	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
8302A:										
Ambraw	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	Ponding	1.00
	Restricted permeability	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Too clayey	0.50
	Ponding	1.00	Seepage	0.28	Too clayey	0.50				
8321A:										
Du Page	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	0.40								
8400A:										
Calco	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	Hard to compact	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	1.00	Ponding	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
8415A:										
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						

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
8451A:										
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						
8452A:										
Riley	Very limited		Very limited		Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Depth to saturated zone	1.00	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Seepage	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46			Too sandy	1.00				
8499A:										
Fella	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	Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00	Seepage	1.00	Ponding	1.00	Too clayey	0.50
	Ponding	1.00	Ponding	1.00	Ponding	1.00				
	Restricted permeability	0.46			Too clayey	0.50				
M-W. Miscellaneous water										
W. Water										

Table 16a.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
8D3, 8F2:				
Hickory	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
21C2:				
Pecatonica	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
21D2:				
Pecatonica	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
49A:				
Watseka	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.50
	Thickest layer	0.00	Bottom layer	0.99
51A:				
Muscatune	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
54C, 54E:				
Plainfield	Poor		Good	
	Bottom layer	0.00	Thickest layer	0.80
	Thickest layer	0.00	Bottom layer	1.00
61A:				
Atterberry	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
68A:				
Sable	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
69A:				
Milford	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
81A:				
Littleton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
86B, 86C2:				
Osco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
87A, 87B2:				
Dickinson	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.06
	Thickest layer	0.00	Bottom layer	0.90
88A, 88C, 88E:				
Sparta	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.67
	Thickest layer	0.00	Bottom layer	0.90
98B:				
Ade	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.50
	Thickest layer	0.00	Bottom layer	0.90
104A:				
Virgil	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.06
152A:				
Drummer	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
172A:				
Hoopeston	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.06
	Thickest layer	0.00	Bottom layer	0.76
175B2, 175D2, 175F:				
Lamont	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.07
	Thickest layer	0.00	Bottom layer	0.50
198A:				
Elburn	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.02
200A:				
Orio	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.76
201A:				
Gilford	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.90
206A:				
Thorp	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.03
233C2:				
Birkbeck	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
261A:				
Niota	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
262A:				
Denrock	Poor		Good	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	1.00
268B, 268C2:				
Mt. Carroll	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
274B, 274C2, 274D2:				
Seaton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
275A:				
Joy	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
277B, 277C:				
Port Byron	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
279B, 279C2:				
Rozetta	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280B, 280C2:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
354A:				
Hononegah	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.40
	Bottom layer	0.00	Bottom layer	0.77
410D2:				
Woodbine	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
411B:				
Ashdale	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
412B, 412C:				
Ogle	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
430A, 430B:				
Raddle	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
485B, 485C2:				
Richwood	Poor		Good	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	1.00
486B, 486C2:				
Bertrand	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
487A:				
Joyce	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.22
488A:				
Hooppole	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.90
509B:				
Whalan	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
529A:				
Selmass	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.43
533:				
Urban land	Not rated		Not rated	
564A, 564B, 564C2:				
Waukegan	Poor		Good	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	1.00
565B, 565C2, 565D2:				
Tell	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.43
638A:				
Muskego	Not rated		Not rated	
647A:				
Lawler	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.43
675B, 675C2:				
Greenbush	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
686B, 686C2:				
Parkway	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
689B, 689D:				
Coloma	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.76
	Thickest layer	0.00	Thickest layer	0.83
727A:				
Waukee	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.86
759A:				
Udolpho	Poor		Good	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	1.00
760A:				
Marshan	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.94
763A:				
Joslin	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
767A:				
Prophetstown	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
777A:				
Adrian	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.84
785G:				
Lacrescent	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
802B:				
Orthents	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
865, 868:				
Pits	Not rated		Not rated	
869:				
Pits	Not rated		Not rated	
Orthents	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
917C2, 917D2:				
Oakville	Poor		Good	
	Bottom layer	0.00	Thickest layer	0.54
	Thickest layer	0.00	Bottom layer	1.00
Tell	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.90

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
943D3, 943E3, 943F2:				
Seaton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Timula	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
1082A:				
Millington	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
1107A:				
Sawmill	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
1400A:				
Calco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
2087B:				
Dickinson	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.06
	Thickest layer	0.00	Bottom layer	0.90
Urban land	Not rated		Not rated	
2198A:				
Elburn	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.02
Urban land	Not rated		Not rated	
2408A:				
Aquents	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Urban land	Not rated		Not rated	
2485B:				
Richwood	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Urban land	Not rated		Not rated	
3076A:				
Otter	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3077A:				
Huntsville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
3107A:				
Sawmill	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3302A:				
Ambraw	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3321A:				
Du Page	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3400A:				
Calco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3404A:				
Titus	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3415A:				
Orion	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3428A:				
Coffeen	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3451A:				
Lawson	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3452A:				
Riley	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.26
3646L:				
Fluvaquents	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7070A:				
Beaucoup	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7073A:				
Ross	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.10
7076A:				
Otter	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
7082A:				
Millington	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7100A:				
Palms	Not rated		Not rated	
7103A:				
Houghton	Not rated		Not rated	
7107A:				
Sawmill	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7210A:				
Lena	Not rated		Not rated	
7302A:				
Ambraw	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7345A:				
Elvers	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7349B:				
Zumbro	Poor		Good	
	Bottom layer	0.00	Thickest layer	0.08
	Thickest layer	0.00	Bottom layer	1.00
7404A:				
Titus	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7428A:				
Coffeen	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7452A:				
Riley	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.76
7516A:				
Faxon	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7603A:				
Blackoar	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
7682A:				
Medway	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7777A:				
Adrian	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.84
8107+:				
Sawmill	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8166A:				
Cohoctah	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.90
8302A:				
Ambraw	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8321A:				
Du Page	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8400A:				
Calco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8404A:				
Titus	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8415A:				
Orion	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8451A:				
Lawson	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8452A:				
Riley	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.76
8499A:				
Fella	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.22

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
M-W. Miscellaneous water				
W. Water				

Table 16b.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D3, 8F2:						
Hickory----------	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Too acid	0.88	Low strength	0.00	Too clayey	0.57
	Too clayey	0.98	Shrink-swell	0.98	Rock fragments	0.88
21C2:						
Pecatonica-------	Fair		Poor		Fair	
	Low content of organic matter	0.24	Low strength	0.00	Too clayey	0.60
	Too acid	0.54	Shrink-swell	0.95		
	Water erosion	0.90				
	Too clayey	0.98				
21D2:						
Pecatonica-------	Fair		Poor		Fair	
	Low content of organic matter	0.24	Low strength	0.00	Slope	0.04
	Too acid	0.54	Shrink-swell	0.95	Too clayey	0.60
	Water erosion	0.90				
	Too clayey	0.98				
49A:						
Watseka----------	Poor		Fair		Poor	
	Too sandy	0.00	Depth to saturated zone	0.12	Too sandy	0.00
	Wind erosion	0.00			Depth to saturated zone	0.12
	Low content of organic matter	0.12				
	Droughty	0.92				
	Too acid	0.97				
51A:						
Muscatune--------	Fair		Poor		Fair	
	Too acid	0.84	Low strength	0.00	Depth to saturated zone	0.14
	Too clayey	0.92	Depth to saturated zone	0.14		
	Low content of organic matter	0.92			Too clayey	0.67
	Water erosion	0.99	Shrink-swell	0.99		
54C:						
Plainfield-------	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.96
	Droughty	0.10				
	Low content of organic matter	0.12				
	Too acid	0.97				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
54E:						
Plainfield	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.98	Too sandy	0.00
	Wind erosion	0.00			Slope	0.00
	Droughty	0.10				
	Low content of organic matter	0.12				
	Too acid	0.97				
61A:						
Atterberry	Fair		Poor		Fair	
	Low content of organic matter	0.18	Low strength	0.00	Depth to saturated zone	0.04
	Too acid	0.54	Depth to saturated zone	0.04	Too clayey	0.55
	Water erosion	0.90	Shrink-swell	0.99	Too acid	0.98
	Too clayey	0.92				
68A:						
Sable	Fair		Poor		Poor	
	Low content of organic matter	0.68	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too clayey	0.98	Low strength	0.00	Too clayey	0.98
	Water erosion	0.99	Shrink-swell	0.87		
69A:						
Milford	Poor		Poor		Poor	
	Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Water erosion	0.99	Low strength	0.00	Too clayey	0.00
			Shrink-swell	0.87		
81A:						
Littleton	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Depth to saturated zone	0.14
	Water erosion	0.68	Depth to saturated zone	0.14		
86B:						
Osco	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Too acid	0.84	Shrink-swell	0.87		
	Too clayey	0.98				
	Water erosion	0.99				
86C2:						
Osco	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
	Water erosion	0.68	Shrink-swell	0.87		
	Too acid	0.84				
	Too clayey	0.98				
87A:						
Dickinson	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.84				
	Droughty	0.96				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
87B2:						
Dickinson	Fair		Good		Good	
	Low content of organic matter	0.12				
	Droughty	0.70				
	Too acid	0.84				
88A:						
Sparta	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Low content of organic matter	0.12				
	Too acid	0.74				
88C:						
Sparta	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.96
	Low content of organic matter	0.68				
	Too acid	0.74				
88E:						
Sparta	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.98	Too sandy	0.00
	Wind erosion	0.00			Slope	0.00
	Low content of organic matter	0.12				
	Droughty	0.69				
	Too acid	0.97				
98B:						
Ade	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00				
	Low content of organic matter	0.68				
	Too acid	0.74				
104A:						
Virgil	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Depth to saturated zone	0.04
	Water erosion	0.90	Depth to saturated zone	0.04	Too clayey	0.67
	Too acid	0.97				
	Too clayey	0.98				
152A:						
Drummer	Fair		Poor		Poor	
	Low content of organic matter	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Carbonate content	0.92	Low strength	0.00		
			Shrink-swell	0.99		
172A:						
Hoopeston	Fair		Fair		Fair	
	Low content of organic matter	0.68	Depth to saturated zone	0.29	Depth to saturated zone	0.29
	Too acid	0.97				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
175B2:						
Lamont	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.74				
175D2:						
Lamont	Fair		Good		Fair	
	Low content of organic matter	0.12			Slope	0.04
	Too acid	0.74				
175F:						
Lamont	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Too acid	0.54				
198A:						
Elburn	Fair		Poor		Fair	
	Too clayey	0.98	Low strength	0.00	Depth to saturated zone	0.14
	Water erosion	0.99	Depth to saturated zone	0.14	Too clayey	0.81
			Shrink-swell	0.96		
200A:						
Orio	Fair		Poor		Poor	
	Low content of organic matter	0.02	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.97				
201A:						
Gilford	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
206A:						
Thorp	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Water erosion	0.90	Low strength	0.00		
	Too acid	0.97	Shrink-swell	0.99		
233C2:						
Birkbeck	Fair		Poor		Fair	
	Low content of organic matter	0.40	Low strength	0.00	Too clayey	0.52
	Water erosion	0.68	Depth to saturated zone	0.59	Depth to saturated zone	0.59
	Too clayey	0.82	Shrink-swell	0.97		
	Too acid	0.84				
	Carbonate content	0.92				
261A:						
Niota	Poor		Poor		Poor	
	Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.12	Shrink-swell	0.81	Too clayey	0.00
	Too acid	0.50			Too acid	0.76
	Water erosion	0.90				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
262A:						
Denrock----------	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Too acid	0.74	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Water erosion	0.99	Shrink-swell	0.99		
268B:						
Mt. Carroll------	Fair		Poor		Good	
	Low content of organic matter	0.24	Low strength	0.00		
	Too acid	0.84				
	Water erosion	0.90				
268C2:						
Mt. Carroll------	Fair		Poor		Good	
	Low content of organic matter	0.24	Low strength	0.00		
	Water erosion	0.68				
	Too acid	0.84				
274B, 274C2:						
Seaton----------	Fair		Poor		Good	
	Low content of organic matter	0.88	Low strength	0.00		
	Too acid	0.88				
	Water erosion	0.90				
	Carbonate content	0.97				
274D2:						
Seaton----------	Fair		Poor		Fair	
	Low content of organic matter	0.88	Low strength	0.00	Slope	0.04
	Too acid	0.88				
	Water erosion	0.90				
	Carbonate content	0.97				
275A:						
Joy----------	Fair		Poor		Fair	
	Low content of organic matter	0.60	Low strength	0.00	Depth to saturated zone	0.14
	Water erosion	0.90	Depth to saturated zone	0.14		
	Too acid	0.97				
277B, 277C:						
Port Byron-------	Fair		Poor		Good	
	Low content of organic matter	0.24	Low strength	0.00		
	Water erosion	0.90				
	Too acid	0.97				
279B:						
Rozetta----------	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Water erosion	0.68	Shrink-swell	0.92		
	Too acid	0.68				
	Too clayey	0.98				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
279C2:						
Rozetta	Fair		Poor		Fair	
	Low content of organic matter	0.24	Low strength	0.00	Too clayey	0.60
	Water erosion	0.68	Shrink-swell	0.93		
	Too acid	0.68				
	Too clayey	0.98				
280B:						
Fayette	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Water erosion	0.68	Shrink-swell	0.87		
	Too acid	0.68				
	Too clayey	0.98				
280C2:						
Fayette	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.68	Shrink-swell	0.87		
	Water erosion	0.90				
	Too clayey	0.98				
354A:						
Hononegah	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Droughty	0.00			Hard to reclaim	0.00
	Low content of organic matter	0.00				
	Too sandy	0.00				
	Carbonate content	0.68				
410D2:						
Woodbine	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Slope	0.04
	Water erosion	0.90	Depth to bedrock	0.58		
	Too acid	0.92	Shrink-swell	0.88		
411B:						
Ashdale	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.54
	Too clayey	0.82	Depth to bedrock	0.58		
	Too acid	0.84	Shrink-swell	0.93		
	Water erosion	0.99				
412B:						
Ogle	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Too acid	0.74	Shrink-swell	0.94		
	Too clayey	0.98				
	Water erosion	0.99				
412C:						
Ogle	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
	Too acid	0.74	Shrink-swell	0.91		
	Too clayey	0.98				
	Water erosion	0.99				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
430A, 430B:						
Raddle	Fair		Fair		Good	
	Water erosion	0.68	Low strength	0.22		
485B, 485C2:						
Richwood	Fair		Poor		Good	
	Low content of organic matter	0.88	Low strength	0.00		
			Shrink-swell	0.99		
	Water erosion	0.90				
486B, 486C2:						
Bertrand	Fair		Poor		Good	
	Low content of organic matter	0.50	Low strength	0.00		
			Shrink-swell	0.98		
	Water erosion	0.68				
	Too acid	0.99				
487A:						
Joyce	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Depth to saturated zone	0.29
			Depth to saturated zone	0.29		
	Too acid	0.84				
	Water erosion	0.90				
488A:						
Hooppole	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.98		
509B:						
Whalan	Fair		Poor		Fair	
	Low content of organic matter	0.02	Depth to bedrock	0.00	Too clayey	0.52
			Low strength	0.00	Depth to bedrock	0.58
	Depth to bedrock	0.58	Shrink-swell	0.99		
	Too acid	0.84				
	Droughty	0.98				
	Too clayey	0.98				
	Water erosion	0.99				
529A:						
Selmass	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too clayey	0.98			Too clayey	0.81
	Water erosion	0.99				
	Too acid	0.99				
533:						
Urban land	Not rated		Not rated		Not rated	
564A, 564B, 564C2:						
Waukegan	Fair		Good		Good	
	Low content of organic matter	0.02				
	Water erosion	0.90				
	Too acid	0.97				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
565B, 565C2:						
Tell	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.84				
	Water erosion	0.90				
565D2:						
Tell	Fair		Good		Fair	
	Low content of organic matter	0.12			Slope	0.04
	Too acid	0.84				
	Water erosion	0.90				
638A:						
Muskego	Poor		Poor		Poor	
	Wind erosion	0.00	Depth to saturated zone	0.00	Carbonate content	0.00
	Carbonate content	0.00	Low strength	0.22	Depth to saturated zone	0.00
			Shrink-swell	0.99	Rock fragments	0.92
647A:						
Lawler	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.84			Hard to reclaim	0.82
					Rock fragments	0.97
675B, 675C2:						
Greenbush	Fair		Poor		Fair	
	Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
	Too acid	0.97	Shrink-swell	0.91		
	Too clayey	0.98				
	Water erosion	0.99				
686B, 686C2:						
Parkway	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Water erosion	0.90	Shrink-swell	0.99		
	Too acid	0.97				
	Too clayey	0.98				
689B:						
Coloma	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Low content of organic matter	0.12				
	Droughty	0.36				
	Too acid	0.88				
689D:						
Coloma	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00			Slope	0.63
	Low content of organic matter	0.12				
	Droughty	0.31				
	Too acid	0.88				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
727A:						
Waukee	Fair		Good		Fair	
	Low content of organic matter	0.50			Rock fragments	0.97
	Too acid	0.74			Hard to reclaim	0.98
759A:						
Udolpho	Fair		Poor		Poor	
	Low content of organic matter	0.05	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.84				
	Water erosion	0.99				
760A:						
Marshan	Fair		Poor		Poor	
	Low content of organic matter	0.02	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too clayey	0.98			Too clayey	0.98
763A:						
Joslin	Fair		Poor		Good	
	Low content of organic matter	0.88	Low strength	0.00		
767A:						
Prophetstown	Fair		Poor		Poor	
	Carbonate content	0.74	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.88	Low strength	0.00	Carbonate content	0.80
	Water erosion	0.90				
777A:						
Adrian	Not rated		Poor		Not rated	
			Depth to saturated zone	0.00		
785G:						
Lacrescent	Fair		Poor		Poor	
	Cobble content	0.34	Slope	0.00	Slope	0.00
	Water erosion	0.90	Cobble content	0.00	Hard to reclaim	0.00
	Droughty	0.99			Rock fragments	0.00
802B:						
Orthents	Fair		Poor		Good	
	Low content of organic matter	0.68	Low strength	0.00		
			Shrink-swell	0.87		
	Water erosion	0.90				
865, 868:						
Pits	Not rated		Not rated		Not rated	
869:						
Pits	Not rated		Not rated		Not rated	
Orthents	Fair		Poor		Good	
	Low content of organic matter	0.68	Low strength	0.00		
			Shrink-swell	0.87		
	Water erosion	0.90				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
917C2:						
Oakville	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Low content of organic matter	0.12				
	Droughty	0.62				
	Too acid	0.88				
Tell	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.84				
	Water erosion	0.90				
917D2:						
Oakville	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.04
	Low content of organic matter	0.12				
	Droughty	0.42				
	Too acid	0.88				
Tell	Fair		Good		Fair	
	Low content of organic matter	0.12			Slope	0.04
	Too acid	0.84				
	Water erosion	0.90				
943D3:						
Seaton	Fair		Poor		Fair	
	Water erosion	0.68	Low strength	0.00	Slope	0.04
	Low content of organic matter	0.88				
	Too acid	0.88				
Timula	Fair		Fair		Fair	
	Low content of organic matter	0.12	Low strength	0.78	Slope	0.04
	Water erosion	0.37				
	Carbonate content	0.92				
943E3:						
Seaton	Fair		Poor		Poor	
	Water erosion	0.68	Low strength	0.00	Slope	0.00
	Low content of organic matter	0.88	Slope	0.18		
	Too acid	0.88				
Timula	Fair		Fair		Poor	
	Low content of organic matter	0.05	Slope	0.02	Slope	0.00
	Water erosion	0.37				
	Carbonate content	0.92				
943F2:						
Seaton	Fair		Poor		Poor	
	Low content of organic matter	0.88	Slope	0.00	Slope	0.00
			Low strength	0.00		
	Too acid	0.88				
	Water erosion	0.90				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
943F2:						
Timula	Fair		Poor		Poor	
	Low content of organic matter	0.24	Slope	0.00	Slope	0.00
	Water erosion	0.37				
	Carbonate content	0.92				
1082A:						
Millington	Fair		Poor		Poor	
	Carbonate content	0.92	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.95		
1107A:						
Sawmill	Fair		Poor		Poor	
	Too clayey	0.98	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00	Too clayey	0.98
			Shrink-swell	0.87		
1400A:						
Calco	Fair		Poor		Poor	
	Too clayey	0.08	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Carbonate content	0.97	Low strength	0.00	Too clayey	0.08
			Shrink-swell	0.87	Carbonate content	0.97
2087B:						
Dickinson	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.84				
	Droughty	0.99				
Urban land	Not rated		Not rated		Not rated	
2198A:						
Elburn	Fair		Poor		Fair	
	Low content of organic matter	0.02	Low strength	0.00	Depth to saturated zone	0.14
	Water erosion	0.90	Depth to saturated zone	0.14		
Urban land	Not rated		Not rated		Not rated	
2408A:						
Aquents	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
Urban land	Not rated		Not rated		Not rated	
2485B:						
Richwood	Fair		Poor		Good	
	Low content of organic matter	0.88	Low strength	0.00		
	Water erosion	0.90	Shrink-swell	0.97		
Urban land	Not rated		Not rated		Not rated	

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
3076A:						
Otter	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
3077A:						
Huntsville	Good		Poor		Good	
			Low strength	0.00		
			Shrink-swell	0.87		
3107A:						
Sawmill	Fair		Poor		Poor	
	Too clayey	0.98	Low strength	0.00	Depth to saturated zone	0.00
			Depth to saturated zone	0.00	Too clayey	0.98
			Shrink-swell	0.87		
3302A:						
Ambraw	Fair		Poor		Poor	
	Too clayey	0.68	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.97	Low strength	0.00	Too clayey	0.56
			Shrink-swell	0.95		
3321A:						
Du Page	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.80				
3400A:						
Calco	Fair		Poor		Poor	
	Too clayey	0.08	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Carbonate content	0.97	Low strength	0.00	Too clayey	0.08
			Shrink-swell	0.87	Carbonate content	0.97
3404A:						
Titus	Fair		Poor		Poor	
	Too clayey	0.02	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.68	Shrink-swell	0.12	Too clayey	0.01
3415A:						
Orion	Fair		Poor		Fair	
	Water erosion	0.90	Low strength	0.00	Depth to saturated zone	0.14
			Depth to saturated zone	0.14		
3428A:						
Coffeen	Fair		Fair		Fair	
	Low content of organic matter	0.08	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Water erosion	0.68				
3451A:						
Lawson	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Depth to saturated zone	0.14
	Water erosion	0.68	Depth to saturated zone	0.14		

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
3452A:						
Riley	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.12	Depth to saturated zone	0.12
3646L:						
Fluvaquents	Fair		Poor		Poor	
	Water erosion	0.68	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.88	Low strength	0.00		
			Shrink-swell	0.99		
7070A:						
Beaucoup	Fair		Poor		Poor	
	Too clayey	0.98	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00	Too clayey	0.76
			Shrink-swell	0.87		
7073A:						
Ross	Good		Good		Good	
7076A:						
Otter	Fair		Poor		Poor	
	Water erosion	0.68	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
7082A:						
Millington	Fair		Poor		Poor	
	Carbonate content	0.92	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too clayey	0.98	Shrink-swell	0.87	Carbonate content	0.97
					Too clayey	0.98
7100A:						
Palms	Not rated		Poor		Not rated	
			Depth to saturated zone	0.00		
			Low strength	0.22		
7103A:						
Houghton	Not rated		Poor		Not rated	
			Depth to saturated zone	0.00		
7107A:						
Sawmill	Fair		Poor		Poor	
	Too clayey	0.98	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00	Too clayey	0.93
			Shrink-swell	0.87		
7210A:						
Lena	Not rated		Poor		Not rated	
			Depth to saturated zone	0.00		

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
7302A:						
Ambraw	Fair		Poor		Poor	
	Too acid	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.98		
7345A:						
Elvers	Not rated		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
7349B:						
Zumbro	Fair		Good		Good	
	Low content of organic matter	0.50				
	Droughty	0.99				
7404A:						
Titus	Fair		Poor		Poor	
	Too clayey	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.68	Low strength	0.00	Too clayey	0.12
			Shrink-swell	0.21		
7428A:						
Coffeen	Fair		Fair		Fair	
	Water erosion	0.68	Depth to saturated zone	0.14	Depth to saturated zone	0.14
7452A:						
Riley	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.12	Depth to saturated zone	0.12
	Too clayey	0.98			Too clayey	0.81
7516A:						
Faxon	Fair		Poor		Poor	
	Depth to bedrock	0.58	Depth to bedrock	0.00	Depth to saturated zone	0.00
	Droughty	0.92	Depth to saturated zone	0.00	Depth to bedrock	0.58
			Shrink-swell	0.96		
7603A:						
Blackoar	Fair		Poor		Poor	
	Low content of organic matter	0.88	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Water erosion	0.90				
7682A:						
Medway	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.32	Depth to saturated zone	0.32
7777A:						
Adrian	Not rated		Poor		Not rated	
			Depth to saturated zone	0.00		

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
8107+:						
Sawmill	Good		Poor		Poor	
			Low strength	0.00	Depth to saturated zone	0.00
			Depth to saturated zone	0.00		
			Shrink-swell	0.87		
8166A:						
Cohoctah	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
8302A:						
Ambraw	Fair		Poor		Poor	
	Too acid	0.97	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.99		
8321A:						
Du Page	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.80				
8400A:						
Calco	Fair		Poor		Poor	
	Too clayey	0.08	Depth to saturated zone	0.00	Depth to saturated zone	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	
	Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.68	Shrink-swell	0.12	Too clayey	0.00
8415A:						
Orion	Fair		Poor		Fair	
	Water erosion	0.37	Low strength	0.00	Depth to saturated zone	0.14
			Depth to saturated zone	0.14		
8451A:						
Lawson	Fair		Poor		Fair	
	Water erosion	0.68	Low strength	0.00	Depth to saturated zone	0.14
			Depth to saturated zone	0.14		
8452A:						
Riley	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.12	Depth to saturated zone	0.12
	Too clayey	0.98			Too clayey	0.81
8499A:						
Fella	Fair		Poor		Poor	
	Carbonate content	0.80	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.98
	Too clayey	0.98	Shrink-swell	0.92		

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
M-W. Miscellaneous water						
W. Water						

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. "Not rated" indicates that data are not available or that no rating is applicable. 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
8D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
	Slope	0.02				
8F2:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.17	Depth to water	1.00
	Slope	0.36				
21C2:						
Pecatonica	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
21D2:						
Pecatonica	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
	Slope	0.02				
49A:						
Watseka	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.99		
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	0.18		
54C:						
Plainfield	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
54E:						
Plainfield	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
	Slope	0.04				
61A:						
Atterberry	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.03		
68A:						
Sable	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	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
69A:						
Milford	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.28
			Ponding	1.00	Cutbanks cave	0.10
81A:						
Littleton	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.82	Cutbanks cave	0.10
86B, 86C2:						
Osco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00
87A, 87B2:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Depth to water	1.00
88A, 88C:						
Sparta	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Depth to water	1.00
88E:						
Sparta	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Depth to water	1.00
	Slope	0.04				
98B:						
Ade	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Depth to water	1.00
104A:						
Virgil	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.07		
			Seepage	0.06		
152A:						
Drummer	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00	Slow refill	0.28
172A:						
Hoopeston	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.76		
175B2:						
Lamont	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.50	Depth to water	1.00
175D2:						
Lamont	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.50	Depth 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
175F:						
Lamont	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.50	Depth to water	1.00
	Slope	0.34				
198A:						
Elburn	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Seepage	0.02		
200A:						
Orio	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
			Seepage	0.76		
201A:						
Gilford	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
			Seepage	0.90		
206A:						
Thorp	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.36		
			Seepage	0.03		
233C2:						
Birkbeck	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	0.99	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.12	Depth to water	0.01
261A:						
Niota	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.54	Depth to saturated zone	1.00	Slow refill	0.46
					Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.14		
262A:						
Denrock	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	1.00		
			Piping	0.10		
268B, 268C2:						
Mt. Carroll	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.61	Depth to water	1.00
274B, 274C2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.90	Depth 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
274D2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.91	Depth to water	1.00
	Slope	0.02				
275A:						
Joy	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.73		
277B, 277C:						
Port Byron	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.90	Depth to water	1.00
279B, 279C2:						
Rozetta	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
280B, 280C2:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.21	Depth to water	1.00
354A:						
Hononegah	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Depth to water	1.00
410D2:						
Woodbine	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10	Piping	0.01		
	Slope	0.02				
411B:						
Ashdale	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10				
412B, 412C:						
Ogle	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
430A, 430B:						
Raddle	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
485B, 485C2:						
Richwood	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
			Piping	1.00		
486B:						
Bertrand	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.70	Piping	0.86	Depth to water	1.00
486C2:						
Bertrand	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.75	Depth 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
487A:						
Joyce	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00		
			Seepage	0.22		
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00		
			Seepage	0.90		
509B:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.85	Depth to water	1.00
	Depth to bedrock	0.85	Piping	0.14		
529A:						
Selmass	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00		
			Ponding	1.00		
			Seepage	0.43		
533:						
Urban land	Not rated		Not rated		Not rated	
564A, 564B, 564C2:						
Waukegan	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
565B, 565C2:						
Tell	Very limited		Very limited		Very limited	
	Seepage	1.00	Piping	1.00	Depth to water	1.00
			Seepage	0.43		
565D2:						
Tell	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.43	Depth to water	1.00
	Slope	0.02				
638A:						
Muskego	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Content of organic matter	1.00	Cutbanks cave	0.10
			Depth to saturated zone	1.00		
			Piping	1.00		
			Ponding	1.00		
647A:						
Lawler	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.95		
675B, 675C2:						
Greenbush	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.17	Depth 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
686B, 686C2:						
Parkway	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
689B:						
Coloma	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
689D:						
Coloma	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
	Slope	0.01				
727A:						
Waukee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.90	Depth to water	1.00
759A:						
Udolpho	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	1.00		
760A:						
Marshan	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	1.00		
763A:						
Joslin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.10	Depth to water	1.00
767A:						
Prophetstown	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
					Slow refill	0.28
			Ponding	1.00		
			Piping	0.92		
777A:						
Adrian	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
785G:						
Lacrescent	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Content of large stones	0.31	Depth to water	1.00
	Slope	0.93				
802B:						
Orthents	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.50	Depth to water	1.00
865, 868:						
Pits	Not rated		Not rated		Not rated	
869:						
Pits	Not rated		Not rated		Not rated	
Orthents	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.50	Depth 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
917C2:						
Oakville	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
Tell	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.43	Depth to water	1.00
917D2:						
Oakville	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
	Slope	0.02				
Tell	Very limited		Very limited		Very limited	
	Seepage	1.00	Piping	1.00	Depth to water	1.00
	Slope	0.02	Seepage	0.90		
943D3:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.89	Depth to water	1.00
	Slope	0.02				
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
	Slope	0.02				
943E3:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.89	Depth to water	1.00
	Slope	0.18				
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
	Slope	0.24				
943F2:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.90	Depth to water	1.00
	Slope	0.36				
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
	Slope	0.36				
1082A:						
Millington	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.76		
1107A:						
Sawmill	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
1400A:						
Calco	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	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
2087B:						
Dickinson	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Depth to water	1.00
Urban land	Not rated		Not rated		Not rated	
2198A:						
Elburn	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping Seepage	1.00 0.53 0.02	Somewhat limited Cutbanks cave	0.10
Urban land	Not rated		Not rated		Not rated	
2408A:						
Aquents	Somewhat limited Seepage	0.72	Very limited Ponding Depth to saturated zone Piping	 1.00 1.00 0.85	Somewhat limited Cutbanks cave	0.10
Urban land	Not rated		Not rated		Not rated	
2485B:						
Richwood	Very limited Seepage	1.00	Somewhat limited Piping	 0.87	Very limited Depth to water	1.00
Urban land	Not rated		Not rated		Not rated	
3076A:						
Otter	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.75	Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
3077A:						
Huntsville	Somewhat limited Seepage	0.72	Somewhat limited Piping	 0.50	Very limited Depth to water	1.00
3107A:						
Sawmill	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	 1.00	Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
3302A:						
Ambraw	Somewhat limited Seepage	0.54	Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.06	Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
3321A:						
Du Page	Somewhat limited Seepage	0.72	Somewhat limited Piping Seepage	 0.97 0.01	Very limited Depth to water	1.00
3400A:						
Calco	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Ponding	 1.00 1.00	Somewhat limited Slow refill Cutbanks cave	 0.28 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
3404A:						
Titus	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
					Cutbanks cave	0.10
			Ponding	1.00		
3415A:						
Orion	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
					Slow refill	0.28
			Piping	1.00		
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
					Cutbanks cave	0.10
			Piping	0.75		
3452A:						
Riley	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.76		
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		
7070A:						
Beaucoup	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.05		
7073A:						
Ross	Very limited		Very limited		Very limited	
	Seepage	1.00	Piping	1.00	Depth to water	1.00
			Seepage	0.10		
7076A:						
Otter	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.74		
7082A:						
Millington	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.60		

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
7100A:						
Palms	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
7103A:						
Houghton	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Content of organic matter	1.00	Cutbanks cave	0.10
			Depth to saturated zone	1.00		
7107A:						
Sawmill	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
7210A:						
Lena	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Content of organic matter	1.00	Cutbanks cave	0.10
			Depth to saturated zone	1.00		
7302A:						
Ambraw	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.37		
7345A:						
Elvers	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Content of organic matter	1.00	Cutbanks cave	0.10
			Depth to saturated zone	1.00		
			Ponding	1.00		
7349B:						
Zumbro	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Depth to water	1.00
7404A:						
Titus	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
					Cutbanks cave	0.10
			Ponding	1.00		
7428A:						
Coffeen	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	1.00		
7452A:						
Riley	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.76		

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
7516A:						
Faxon	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to	1.00	Depth to hard	1.00
	Depth to bedrock	0.85	saturated zone		bedrock	
			Ponding	1.00	Cutbanks cave	0.10
			Thin layer	0.85		
			Piping	0.19		
7603A:						
Blackoar	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to	1.00	Slow refill	0.28
			saturated zone		Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.95		
7682A:						
Medway	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to	1.00	Cutbanks cave	0.10
			saturated zone			
			Piping	0.35		
			Seepage	0.01		
7777A:						
Adrian	Very limited		Not rated		Very limited	
	Seepage	1.00			Cutbanks cave	1.00
8107+:						
Sawmill	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to	1.00	Slow refill	0.28
			saturated zone		Cutbanks cave	0.10
8166A:						
Cohoctah	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to	1.00	Cutbanks cave	1.00
			saturated zone			
			Ponding	1.00		
			Seepage	0.90		
8302A:						
Ambraw	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.54	Depth to	1.00	Slow refill	0.28
			saturated zone		Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.36		
8321A:						
Du Page	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.97	Depth to water	1.00
			Seepage	0.01		
8400A:						
Calco	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to	1.00	Slow refill	0.28
			saturated zone		Cutbanks cave	0.10
			Ponding	1.00		
8404A:						
Titus	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Ponding	1.00	Slow refill	0.96
			Depth to	1.00	Cutbanks cave	0.10
			saturated zone			

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
8415A:						
Orion	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	1.00	Cutbanks cave	0.10
8451A:						
Lawson	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.64	Cutbanks cave	0.10
8452A:						
Riley	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.76		
8499A:						
Fella	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
			Piping	0.43		
			Seepage	0.22		
M-W.						
Miscellaneous water						
W.						
Water						

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. "Not rated" indicates that data are not available or that no rating is applicable. 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
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
8F2:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Cutbanks cave	0.10
21C2:						
Pecatonica	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
21D2:						
Pecatonica	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.10
49A:						
Watseka	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
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
54C:						
Plainfield	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.04
54E:						
Plainfield	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	1.00
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
68A:						
Sable	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Ponding	1.00	Ponding	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
69A:						
Milford	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
					Too clayey	0.01
81A:						
Littleton	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
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		
87B2:						
Dickinson	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.25		
			Water erosion	0.17		
88A:						
Sparta	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
88C:						
Sparta	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.04
88E:						
Sparta	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	1.00
98B:						
Ade	Somewhat limited		Very limited		Very limited	
	Slope	0.36	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.36		
104A:						
Virgil	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
152A:						
Drummer	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Water erosion	0.56	Ponding	1.00
172A:						
Hoopeston	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.17	Cutbanks cave	1.00
175B2:						
Lamont	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.25	Slope	0.25	Cutbanks cave	1.00
			Water erosion	0.17		
175D2:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Water erosion	0.17	Slope	0.96
175F:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.17	Cutbanks cave	1.00
198A:						
Elburn	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
200A:						
Orio	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Ponding	1.00
			Water erosion	0.56		
201A:						
Gilford	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Ponding	1.00
			Water erosion	0.56		
206A:						
Thorp	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Ponding	1.00	Ponding	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
233C2:						
Birkbeck	Somewhat limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Slope	1.00		
261A:						
Niota	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Too clayey	0.41
					Cutbanks cave	0.10
262A:						
Denrock	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
					Too clayey	0.18
268B:						
Mt. Carroll	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.36	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.36		
268C2:						
Mt. Carroll	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
274B:						
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
277B:						
Port Byron	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.36	Water erosion	1.00	Cutbanks cave	0.50
			Slope	0.36		
277C:						
Port Byron	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		

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
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
279C2:						
Rozetta	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
280B:						
Fayette	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
280C2:						
Fayette	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
354A:						
Hononegah	Not limited		Not limited		Very limited	
					Cutbanks cave	1.00
410D2:						
Woodbine	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
	Depth to bedrock	0.42	Slope	1.00	Depth to bedrock	0.42
			Depth to bedrock	0.42	Too clayey	0.12
					Cutbanks cave	0.10
411B:						
Ashdale	Somewhat limited		Very limited		Somewhat limited	
	Depth to bedrock	0.42	Water erosion	1.00	Too clayey	0.50
	Slope	0.25	Depth to bedrock	0.42	Depth to bedrock	0.42
			Slope	0.25	Cutbanks cave	0.10
412B:						
Ogle	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
412C:						
Ogle	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
430A:						
Raddle	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Cutbanks cave	0.10
430B:						
Raddle	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
485B:						
Richwood	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.25		

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
485C2:						
Richwood	Somewhat limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Cutbanks cave	1.00
			Slope	1.00		
486B:						
Bertrand	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
486C2:						
Bertrand	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
487A:						
Joyce	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
					Depth to dense layer	0.50
488A:						
Hooppole	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	1.00
509B:						
Whalan	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Water erosion	1.00	Depth to bedrock	1.00
	Slope	0.25	Depth to bedrock	1.00	Too clayey	0.32
			Slope	0.25	Cutbanks cave	0.10
529A:						
Selmass	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Ponding	1.00
533:						
Urban land	Not rated		Not rated		Not rated	
564A:						
Waukegan	Not limited		Very limited		Very limited	
			Water erosion	1.00	Cutbanks cave	1.00
			Too sandy	1.00		
564B:						
Waukegan	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	1.00
			Too sandy	1.00		
			Slope	0.25		
564C2:						
Waukegan	Somewhat limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Cutbanks cave	1.00
			Too sandy	1.00		
			Slope	1.00		

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
565B:						
Tell	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.25		
565C2:						
Tell	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.99		
565D2:						
Tell	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.96
638A:						
Muskego	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Content of organic matter	1.00
			Too sandy	1.00	Ponding	1.00
			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		
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
675C2:						
Greenbush	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
686B:						
Parkway	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
686C2:						
Parkway	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
689B:						
Coloma	Somewhat limited		Very limited		Very limited	
	Slope	0.36	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.36		

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
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
727A:						
Waukee	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.89		
759A:						
Udolpho	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Too sandy	1.00		
760A:						
Marshan	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		
763A:						
Joslin	Not limited		Somewhat limited		Somewhat limited	
			Water erosion	0.89	Cutbanks cave	0.10
					Too clayey	0.04
767A:						
Prophetstown	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Ponding	1.00
777A:						
Adrian	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Ponding	1.00
					Content of organic matter	1.00
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Content of large stones	1.00	Slope	1.00	Content of large stones	0.31
			Content of large stones	1.00	Cutbanks cave	0.10
802B:						
Orthents	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.36	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.36		
865, 868:						
Pits	Not rated		Not rated		Not rated	

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
869:						
Pits	Not rated		Not rated		Not rated	
Orthents	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.09	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.09		
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		
943D3:						
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
943E3, 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
1082A:						
Millington	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
1107A:						
Sawmill	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	0.56	Ponding	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	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.56	Ponding	1.00
					Cutbanks cave	0.10
2087B:						
Dickinson	Somewhat limited		Very limited		Very limited	
	Slope	0.36	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.36		
			Water erosion	0.17		
Urban land	Not rated		Not rated		Not rated	
2198A:						
Elburn	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
Urban land	Not rated		Not rated		Not rated	
2408A:						
Aquents	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	Cutbanks cave	0.10
Urban land	Not rated		Not rated		Not rated	
2485B:						
Richwood	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.25		
Urban land	Not rated		Not rated		Not rated	
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
3077A:						
Huntsville	Not limited		Somewhat limited		Very limited	
			Water erosion	0.89	Flooding	1.00
					Depth to saturated zone	0.15
					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

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
3302A:						
Ambraw	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
					Ponding	1.00
					Cutbanks cave	0.10
3321A:						
Du Page	Not limited		Somewhat limited		Very limited	
			Water erosion	0.89	Flooding	1.00
					Depth to saturated zone	0.15
					Cutbanks cave	0.10
3400A:						
Calco	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
					Ponding	1.00
					Cutbanks cave	0.10
3404A:						
Titus	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
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
			Water erosion	0.89	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3452A:						
Riley	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Flooding	1.00
			Too sandy	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	1.00

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
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
7070A:						
Beaucoup	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	1.00
			Water erosion	0.89	Cutbanks cave	0.10
7073A:						
Ross	Not limited		Somewhat limited		Very limited	
			Water erosion	0.89	Cutbanks cave	1.00
					Depth to saturated zone	0.15
7076A:						
Otter	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	1.00
			Water erosion	0.89	Cutbanks cave	0.10
7082A:						
Millington	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	1.00
			Water erosion	0.56	Cutbanks cave	0.10
7100A:						
Palms	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	1.00
					Content of organic matter	1.00
					Cutbanks cave	0.10
7103A:						
Houghton	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Content of organic matter	1.00
			Too sandy	1.00	Ponding	1.00
					Cutbanks cave	0.10
7107A:						
Sawmill	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	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
7210A:						
Lena	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Content of organic matter	1.00
			Too sandy	1.00	Ponding	1.00
					Cutbanks cave	0.10
7302A:						
Ambraw	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	1.00
			Water erosion	0.56	Cutbanks cave	0.10
7345A:						
Elvers	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Content of organic matter	1.00
			Too sandy	1.00	Cutbanks cave	0.10
7349B:						
Zumbro	Somewhat limited		Very limited		Very limited	
	Slope	0.09	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.09		
			Water erosion	0.01		
7404A:						
Titus	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	1.00
			Water erosion	0.89		
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
7452A:						
Riley	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		
7516A:						
Faxon	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Ponding	1.00	Depth to bedrock	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Depth to bedrock	1.00	Ponding	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
7603A:						
Blackoar	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
7682A:						
Medway	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.56	Cutbanks cave	0.10
7777A:						
Adrian	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Ponding	1.00
					Content of organic matter	1.00
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
8166A:						
Cohoctah	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Ponding	1.00
			Water erosion	0.89	Flooding	0.60
8302A:						
Ambraw	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	1.00
			Water erosion	0.89	Flooding	0.60
					Cutbanks cave	0.10
8321A:						
Du Page	Not limited		Somewhat limited		Somewhat limited	
			Water erosion	0.89	Flooding	0.60
					Depth to saturated zone	0.15
					Cutbanks cave	0.10
8400A:						
Calco	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Ponding	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
8415A:						
Orion	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Flooding	0.60
					Cutbanks cave	0.10
8451A:						
Lawson	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
8452A:						
Riley	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	Flooding	0.60
8499A:						
Fella	Not limited		Very limited		Very limited	
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Water erosion	0.89	Ponding	1.00
					Flooding	0.60
M-W.						
Miscellaneous water						
W.						
Water						

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	Plas-ticity index
	In				Pct	Pct					Pct	
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
8F2:												
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	8-15
	12-46	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
	46-72	Loam*, sandy loam, gravelly clay loam	CL-ML*, CL, SC, SC-SM	A-6*, A-2, A-4	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
21C2:												
Pecatonica------	0-7	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	95-100	95-100	25-40	5-17
	7-19	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	90-100	85-100	30-41	13-21
	19-60	Clay loam*, sandy clay loam, loam	CL*	A-7-6*, A-6, A-7	0-1	0-5	90-100	80-100	45-95	30-80	35-46	17-25
21D2:												
Pecatonica------	0-7	Silt loam*	CL*, ML	A-6*, A-4	0	0	100	100	95-100	95-100	25-40	5-17
	7-19	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	90-100	85-100	30-41	13-21
	19-60	Clay loam*, sandy clay loam, loam	CL*	A-7-6*, A-6, A-7	0-1	0-5	90-100	80-100	45-95	30-80	35-46	17-25

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	
49A:												
Watseka---------	0-18	Loamy fine sand*	SM*, SC-SM	A-2*	0	0	100	100	85-90	14-21	15-20	2-7
	18-60	Fine sand*, sand, loamy fine sand	SP*, SM, SP-SM	A-3*, A-2	0	0	90-100	80-100	55-75	1-16	6-16	NP-5
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
54C:												
Plainfield------	0-4	Sand*	SP-SM*, SM, SP	A-2-6*, A-1, A-3	0	0	75-100	75-100	55-80	3-35	0-20	NP-2
	4-26	Sand*	SP-SM*, SM, SP	A-2-4*, A-1, A-3	0	0	75-100	75-100	55-80	1-15	0-18	NP-1
	26-60	Sand*, fine sand	SP-SM*, SM, SP	A-2-4*, A-1, A-3	0	0	75-100	75-100	55-90	1-15	0-18	NP-1
54E:												
Plainfield------	0-4	Sand*	SP-SM*, SM, SP	A-2-6*, A-1, A-3	0	0	75-100	75-100	55-80	3-35	0-20	NP-2
	4-39	Sand*	SP-SM*, SM, SP	A-2-4*, A-1, A-3	0	0	75-100	75-100	55-80	1-15	0-18	NP-1
	39-60	Sand*, fine sand	SP-SM*, SM, SP	A-2-4*, A-1, A-3	0	0	75-100	75-100	55-90	1-15	0-18	NP-1
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*, MH, ML, CL	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

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	
69A:												
Milford---------	0-7	Silty clay loam*	CL*, CH	A-7*	0	0	100	95-100	90-100	70-100	43-53	21-28
	7-24	Silty clay*, silty clay loam, clay loam	CH*, CL	A-7*	0	0	100	95-100	85-100	72-100	46-56	25-33
	24-43	Silty clay loam*, silty clay, clay loam	CL*, CH	A-7*	0	0	100	95-100	85-100	68-100	40-55	21-32
	43-60	Silt loam*, stratified clay to sandy loam, silty clay loam	CL*, SC	A-6*, A-7	0	0	95-100	90-100	76-100	48-100	23-59	8-36
81A:												
Littleton-------	0-9	Silt loam*	CL*	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	7-20
	9-32	Silt loam*	CL*	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	7-20
	32-60	Silt loam*	CL*, CL-ML	A-6*, A-4, A-7	0	0	100	100	95-100	80-100	20-45	5-20
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
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

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	
87B2:												
Dickinson-------	0-8	Sandy loam*	SC-SM*, SC, SM	A-4*, A-2	0	0	100	100	63-76	24-50	17-26	3-11
	8-22	Sandy loam*, fine sandy loam	SC*, SC-SM, SM	A-4*	0	0	100	100	63-87	24-50	17-26	4-12
	22-31	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
	31-60	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
88C:												
Sparta----------	0-8	Loamy sand*	SM*	A-2-4*, A-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	8-17	Loamy sand*	SM*	A-2-4*, A-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	17-33	Loamy sand*, fine sand, sand	SP-SM*, SM	A-2-4*, A-3, A-4	0	0	85-100	85-100	50-95	5-50	0-14	NP
	33-72	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
88E:												
Sparta----------	0-17	Loamy sand*	SM*	A-2-4*, A-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	17-32	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
	32-60	Sand*, fine sand	SP-SM*, SM, SP	A-2-4*, A-3	0	0	85-100	85-100	50-95	4-50	0-14	NP-4
98B:												
Ade----------	0-10	Loamy fine sand*	SM*	A-2-4*	0	0	100	100	75-95	18-34	6-20	NP-3
	10-27	Loamy fine sand*, fine sand	SM*	A-2-4*, A-3	0	0	100	100	75-98	8-35	4-15	NP-3
	27-80	Stratified sand to loam*	SP-SM*, SM, SP	A-2-4*, A-3	0	0	100	100	65-95	2-15	0-14	NP-4

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	
104A:												
Virgil----------	0-7	Silt loam*	CL*	A-6*, A-4	0	0	100	100	90-100	85-95	23-37	5-16
	7-13	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	90-100	23-37	8-19
	13-49	Silty clay loam*	CL*	A-7-6*	0	0	100	100	100	85-100	37-47	18-27
	49-58	Loam*	CL*	A-6*, A-7	0	0	100	100	80-100	55-80	23-37	8-20
	58-60	Sandy loam*, loam, silt loam	SM*, CL, CL-ML, SC-SM	A-2-4*, A-2-6, A-4, A-6	0	0-5	90-100	80-100	55-95	20-80	18-30	NP-7
152A:												
Drummer---------	0-14	Silty clay loam*	CL*	A-6*, A-7	0	0	100	95-100	95-100	85-95	30-50	15-30
	14-41	Silty clay loam*, silt loam, silty clay	CL*	A-6*, A-7	0	0	100	95-100	95-100	85-95	30-50	15-30
	41-47	Loam*, silt loam, clay loam, sandy loam	CL*, SC	A-6*, A-7	0	0-5	95-100	90-100	75-95	40-85	30-50	15-30
	47-60	Stratified loamy sand to silty clay loam*	SC*, CL	A-6*, A-2-4, A-4	0	0-5	95-100	75-95	75-95	15-80	20-35	7-20
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
175B2:												
Lamont----------	0-7	Fine sandy loam*	CL-ML*, ML, SC-SM	A-4*, A-2	0	0	100	100	80-95	25-55	16-28	1-10
	7-44	Fine sandy loam*, loam, sandy clay loam	SC-SM*, SC, SM	A-4*, A-2	0	0	100	100	85-95	30-50	16-33	2-15
	44-60	Loamy fine sand*, loamy sand, sand	SM*, SP-SM	A-2-4*, A-3	0	0	100	100	70-90	5-25	0-23	NP-6

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	
175D2:												
Lamont----------	0-7	Fine sandy loam*	CL-ML*, ML, SC-SM	A-4*, A-2	0	0	100	100	80-95	25-55	16-28	1-10
	7-45	Fine sandy loam*, loam, sandy clay loam	SC-SM*, SC, SM	A-4*, A-2	0	0	100	100	85-95	30-50	16-33	2-15
	45-60	Loamy fine sand*, loamy sand, sand	SM*, SP-SM	A-2-4*, A-3	0	0	100	100	70-90	5-25	0-23	NP-6
175F:												
Lamont----------	0-4	Fine sandy loam*	CL-ML*, SC-SM, ML	A-4*, A-2	0	0	100	100	80-95	25-55	16-28	1-10
	4-10	Fine sandy loam*, loamy fine sand	SM*, SC-SM	A-2-4*, A-4	0	0	100	100	80-95	15-50	0-23	NP-6
	10-58	Fine sandy loam*, loam, sandy clay loam	SC-SM*, SC, SM	A-4*, A-2	0	0	100	100	85-95	30-50	16-33	2-15
	58-60	Loamy fine sand*, loamy sand, sand	SM*, SP-SM	A-2-4*, A-3	0	0	100	100	70-90	5-25	0-23	NP-6
198A:												
Elburn----------	0-13	Silt loam*	CL*	A-6*	0	0	100	100	95-100	90-100	25-40	10-25
	13-52	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	90-100	30-50	15-35
	52-60	Sandy loam*, loam, clay loam	SM*, CL, CL-ML, SC-SM	A-4*, A-2, A-6	0	0	90-100	85-100	60-90	30-85	20-40	1-20
200A:												
Orio----------	0-9	Loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	75-90	50-85	25-40	5-15
	9-18	Sandy loam*, loam, loamy sand	SM*, ML	A-4*, A-2-4	0	0	100	100	75-90	15-60	0-35	2-10
	18-35	Clay loam*, sandy clay loam, sandy loam	CL*, SC	A-6*, A-7-6	0	0	100	100	80-95	35-75	30-45	10-20
	35-41	Sandy loam*, loamy sand, sandy clay loam	SC*, SC-SM	A-2-4*, A-2-6, A-4, A-6	0	0	100	100	75-90	15-45	25-35	5-15
	41-60	Sand*, loamy sand, loamy fine sand	SC*, SC-SM, SM, SP-SM	A-2-4*, A-3	0	0	100	100	60-90	5-35	20-30	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	
201A:												
Gilford---------	0-18	Fine sandy loam*	SC*, SC-SM, SM	A-2-4*, A-4	0	0	95-100	95-100	55-85	25-45	10-25	2-10
	18-32	Fine sandy loam*, sandy loam	SC*, SC-SM, SM	A-2-4*, A-4	0	0	95-100	85-100	55-85	25-40	10-25	3-10
	32-60	Sand*, loamy sand, coarse sand	SM*, SP, SP-SM	A-2-4*, A-1-b, A-3	0	0	95-100	85-100	5-75	0-20	0-15	NP-2
206A:												
Thorp----------	0-14	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	95-100	95-100	90-100	30-49	7-18
	14-19	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	95-100	95-100	90-100	28-37	12-17
	19-43	Silty clay loam*, silt loam	CL*	A-6*, A-7	0	0	100	95-100	95-100	90-100	32-46	15-25
	43-50	Sandy clay loam*, silt loam, clay loam	SC*, CL	A-6*, A-4, A-7	0	0	90-100	90-100	80-100	40-90	29-42	12-21
	50-65	Stratified sandy loam to silty clay loam*	SC*, CL-ML, ML, SC-SM, SM	A-4*, A-2	0	0	85-100	85-100	65-90	20-85	16-27	2-21
233C2:												
Birkbeck--------	0-7	Silt loam*	CL*, ML	A-6*	0	0	100	100	97-100	95-100	29-37	11-18
	7-46	Silty clay loam*	CL*, ML	A-7-6*, A-6	0	0	100	100	97-100	95-100	37-46	16-25
	46-57	Loam*	CL*, ML, SC	A-6*, A-4	0	0	90-100	85-100	70-90	45-70	25-33	8-14
	57-60	Loam*	CL*, ML, SC, SC-SM, CL-ML	A-4*, A-6	0-1	0-3	90-100	85-100	70-90	45-70	22-33	4-14
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,	A-2-4*, A-4	0	0-5	90-100	70-95	40-80	15-55	20-25	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	
262A:												
Denrock---------	0-13	Silt loam*	CL*	A-6*, A-4	0	0	100	100	95-100	90-100	30-40	9-19
	13-36	Silty clay*, silty clay loam, clay	CH*, MH	A-7-6*	0	0	100	95-100	95-100	90-100	50-75	25-40
	36-40	Clay loam*, loam	CL*	A-6*, A-4	0	0	100	95-100	90-100	60-80	20-40	8-25
	40-60	Sand*, stratified sand to loam, sandy loam	SP-SM*, SM, ML, CL-ML	A-2-4*, A-3, A-4	0	0	100	90-100	50-75	5-60	0-20	NP-7
268B:												
Mt. Carroll-----	0-7	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	95-100	29-39	9-15
	7-10	Silt loam*	CL*	A-4*, A-6	0	0	100	100	100	90-100	26-34	9-15
	10-55	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	95-100	27-38	12-19
	55-60	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	90-100	26-35	10-16
268C2:												
Mt. Carroll-----	0-7	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	95-100	29-39	9-15
	7-38	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	95-100	27-38	12-19
	38-60	Silt loam*	CL*	A-6*, A-4	0	0	100	100	100	90-100	26-35	10-16
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
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

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	
277B:												
Port Byron------	0-13	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	25-40	5-15
	13-52	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	25-40	5-20
	52-60	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-15
	60-77	Silt loam*, silt	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	90-100	20-30	5-15
	77-89	Silt*	ML*, CL-ML	A-4*	0	0	100	100	95-100	90-100	15-25	NP-5
277C:												
Port Byron------	0-16	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	25-40	5-15
	16-40	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	95-100	25-40	5-20
	40-60	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-15
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
279C2:												
Rozetta---------	0-8	Silt loam*	CL*	A-6*, A-4	0	0	100	100	95-100	95-100	24-35	8-15
	8-56	Silty clay loam*	CL*	A-7*, A-6	0	0	100	100	95-100	95-100	35-50	15-30
	56-80	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
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

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	
354A:												
Hononegah-------	0-19	Loamy sand*, loamy coarse sand	SM*	A-2-4*	0	0	90-100	85-100	55-80	10-35	0-28	NP-7
	19-23	Loamy sand*, loamy coarse sand, coarse sand	SM*, SC-SM, SP-SM	A-2-4*, A-1	0-1	0-8	80-100	75-100	40-60	10-30	17-27	3-10
	23-28	Gravelly loamy sand*, loamy sand, gravelly loamy coarse sand	SP-SM*, GM, GP, SM, SP	A-3*	0-2	0-8	70-100	50-100	30-60	5-30	0-24	NP-7
	28-37	Gravelly loamy coarse sand*, gravelly sand, very gravelly loamy coarse sand	SP-SM*, GM, GP, SM, SP	A-3*	0-2	0-15	50-95	50-70	20-35	0-20	0-20	NP-4
	37-60	Very gravelly loamy coarse sand*, very gravelly sand, gravel	SP-SM*, GM, GP, SM, SP	A-1*	0-2	0-15	30-65	20-60	10-35	0-20	0-20	NP-4
410D2:												
Woodbine--------	0-7	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	95-100	31-41	13-19
	7-24	Silt loam*, silty clay loam	CL*	A-6*, A-7-6	0	0	100	100	100	95-100	34-47	16-25
	24-41	Clay loam*, sandy clay loam, loam	CL*, CL-ML, SC, SC-SM	A-7-6*, A-4, A-6	0	0	90-100	80-100	65-95	40-80	34-46	16-25
	41-46	Silty clay*, clay, cherty silty clay, cherty clay	CH*, CL	A-7-6*	0-6	0-11	85-100	75-100	70-95	60-95	50-78	29-51
	46-80	Unweathered bedrock*	---	---	---	---	---	---	---	---	---	---
411B:												
Ashdale---------	0-15	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	95-100	30-40	8-18
	15-43	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	100	95-100	35-47	17-25
	43-51	Silty clay*, clay	CH*	A-7-6*	0-1	0-5	90-100	80-100	80-100	75-99	35-50	15-30
	51-60	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	
412B:												
Ogle----------	0-17	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	10-18
	17-39	Silty clay loam*, silt loam	CL*	A-7-6*	0	0	100	95-100	95-100	93-100	35-47	17-25
	39-60	Clay loam*, silty clay loam, sandy clay loam	CL*	A-7-6*, A-6	0	0	95-100	85-100	75-100	58-95	37-46	19-25
412C:												
Ogle----------	0-14	Silt loam*	CL*	A-6*	0	0	100	100	100	95-100	30-40	10-18
	14-30	Silty clay loam*, silt loam	CL*	A-7-6*	0	0	100	95-100	95-100	93-100	35-47	17-25
	30-60	Clay loam*, silty clay loam, sandy clay loam	CL*	A-7-6*, A-6	0	0	95-100	85-100	75-100	58-95	37-46	19-25
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
485B:												
Richwood--------	0-18	Silt loam*	CL-ML*, ML	A-4*, A-6	0	0	100	100	90-100	85-100	25-35	5-13
	18-46	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	90-100	85-100	25-40	7-20
	46-60	Stratified silt loam to loamy sand*	CL*, CL-ML, SC, SC-SM	A-4*, A-6	0	0	100	100	85-95	35-75	20-30	4-11
	60-79	Sand*, fine sand	SP-SM*, SM	A-2-4*, A-3	0	0	100	100	50-80	5-35	0-14	NP
485C2:												
Richwood--------	0-9	Silt loam*	CL-ML*, ML	A-4*, A-6	0	0	100	100	90-100	85-100	25-35	5-13
	9-42	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	90-100	85-100	25-40	7-20
	42-60	Stratified silt loam to loamy sand*	CL*, CL-ML, SC, SC-SM	A-4*, A-6	0	0	100	100	85-95	35-75	20-30	4-11
	60-79	Sand*, fine sand	SP-SM*, SM	A-2-4*, A-3	0	0	100	100	50-80	5-35	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	Plas-ticity index
	In				Pct	Pct					Pct	
486B:												
Bertrand--------	0-9	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	20-35	6-15
	9-12	Silt loam*	CL*	A-4*, A-6	0	0	100	100	90-100	85-100	20-35	7-20
	12-40	Silt loam*	CL*	A-6*	0	0	100	100	90-100	85-100	25-40	7-20
	40-60	Stratified silt loam to sandy loam*	CL*, CL-ML, SC, SC-SM	A-4*	0	0	100	100	80-95	35-75	0-30	4-10
486C2:												
Bertrand--------	0-8	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	20-35	6-15
	8-43	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	90-100	85-95	25-40	7-20
	43-60	Stratified silt loam to sandy loam*	CL*, CL-ML, SC, SC-SM	A-4*	0	0	100	100	80-95	35-75	0-30	4-10
487A:												
Joyce----------	0-20	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	27-43	9-17
	20-44	Silt loam*	CL*	A-6*	0	0	100	100	95-100	85-100	29-39	13-19
	44-47	Loam*, sandy loam	CL*, ML, SC, SM	A-6*, A-2-4	0	0	100	100	70-100	20-80	15-40	NP-15
	47-60	Loamy sand*, sand	SM*, SC-SM, SW-SM	A-2-4*, A-3	0	0	100	95-100	70-90	5-30	0-20	NP-5
488A:												
Hooppole--------	0-17	Loam*	CL*	A-6*, A-4	0	0	100	95-100	80-100	55-85	25-35	7-17
	17-44	Loam*, clay loam, silt loam	CL*	A-6*, A-7-6	0	0	95-100	90-100	80-95	55-85	30-45	10-20
	44-60	Sand*, loamy sand	SM*, SP-SM	A-2-4*, A-3	0	0	95-100	90-100	50-75	5-25	0-25	NP-7
509B:												
Whalan----------	0-5	Loam*	CL*, ML	A-6*, A-4	0	0	100	95-100	85-95	60-90	29-39	12-17
	5-11	Loam*	CL*, ML	A-6*, A-4	0	0	100	95-100	85-95	60-90	27-36	12-17
	11-17	Loam*	CL*, ML	A-6*, A-4	0	0	100	95-100	85-95	60-90	27-36	12-17
	17-31	Clay loam*, loam	CL*	A-6*	0	0	95-100	90-100	75-97	55-85	37-46	19-25
	31-32	Clay*, clay loam, silty clay	CH*, CL	A-7-6*	0	0-6	80-100	70-95	65-90	55-85	49-69	29-44
	32-60	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	
529A:												
Selmass---------	0-13	Silt loam*	CL*	A-6*, A-4	0	0	100	95-100	95-100	95-100	30-47	11-18
	13-27	Silty clay loam*, clay loam, loam	CL*	A-7-6*, A-6	0	0	100	95-100	95-100	45-100	35-49	16-25
	27-35	Stratified loam*, sandy loam	CL*, ML, SC, SM	A-4*, A-2, A-6	0	0	95-100	85-100	60-85	35-70	20-32	6-13
	35-60	Loamy sand*, sand	SM*, SP, SP-SM	A-2-4*, A-1-b, A-3	0	0-3	90-100	85-100	50-70	3-25	0-23	NP-6
533. Urban land												
564A:												
Waukegan--------	0-17	Silt loam*	CL*	A-6*	0	0	95-100	95-100	92-100	85-95	25-40	3-10
	17-30	Silt loam*, loam	CL*, CL-ML	A-6*, A-4	0	0	95-100	95-100	95-99	85-95	25-40	5-15
	30-60	Sand*, coarse sand, loamy sand, sandy loam	SP-SM*, SP, SM	A-2-4*, A-3	0	0	85-100	85-100	50-75	2-30	0-9	NP
564B:												
Waukegan--------	0-13	Silt loam*	CL*	A-6*	0	0	95-100	95-100	92-100	85-95	25-40	3-10
	13-35	Silt loam*, loam	CL*, CL-ML	A-6*, A-4	0	0	95-100	95-100	95-99	85-95	25-40	5-15
	35-60	Sand*, loamy sand, sandy loam, coarse sand	SP-SM*, SP, SM	A-2-4*, A-3	0	0	85-100	85-100	50-75	2-30	0-9	NP
564C2:												
Waukegan--------	0-8	Silt loam*	CL*	A-6*	0	0	95-100	95-100	92-100	85-95	25-40	3-10
	8-25	Silt loam*, loam	CL*, CL-ML	A-6*, A-4	0	0	95-100	95-100	95-99	85-95	25-40	5-15
	25-60	Sand*, coarse sand, loamy sand, sandy loam	SP-SM*, SP, SM	A-2*, A-3	0	0-5	85-100	85-100	50-75	2-30	0-9	NP
565B:												
Tell----------	0-7	Silt loam*	CL*	A-4*	0	0	100	100	90-98	69-88	23-26	8-10
	7-28	Silt loam*, silty clay loam	CL*	A-6*	0	0	100	100	96-99	85-96	22-38	8-21
	28-35	Sandy loam*, loam, sandy clay	SC*, CL, CL-ML, SC-SM	A-4*, A-2-4, A-6	0	0	100	90-100	75-92	29-62	17-33	4-17
	35-60	Loamy sand*, sand	SP-SM*, SM, SP	A-2-4*, A-1, A-3	0	0	100	90-100	71-86	13-33	8-19	NP-7

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	
565C2:												
Tell----------	0-6	Silt loam*	CL*	A-4*	0	0	100	100	90-98	69-88	23-26	8-10
	6-29	Silt loam*, silty clay loam	CL*	A-6*	0	0	100	100	96-99	85-96	22-38	8-21
	29-33	Sandy loam*, loam, sandy clay loam	SC*, CL, CL-ML, SC-SM	A-4*, A-2-4, A-6	0	0	100	90-100	75-92	29-62	17-33	4-17
	33-60	Loamy sand*, sand	SP-SM*, SM, SP	A-2-4*, A-1, A-3	0	0	100	90-100	71-86	13-33	8-19	NP-7
565D2:												
Tell----------	0-7	Silt loam*	CL*	A-4*	0	0	100	100	90-98	69-88	23-26	8-10
	7-22	Silt loam*, silty clay loam	CL*	A-6*	0	0	100	100	96-99	85-96	22-38	8-21
	22-26	Sandy loam*, loam, sandy clay loam	SC*, CL, CL-ML, SC-SM	A-4*, A-2-4, A-6	0	0	100	90-100	75-92	29-62	17-33	4-17
	26-60	Loamy sand*, sand	SP-SM*, SM, SP	A-2-4*, A-1, A-3	0	0	100	90-100	71-86	13-33	8-19	NP-7
638A:												
Muskego---------	0-10	Muck*	PT*	A-8*	0	0	---	---	---	---	0-0	NP
	10-22	Muck*	PT*	A-8*	0	0	---	---	---	---	0-0	NP
	22-80	Coprogenous earth*	OL*	A-5*	0	0	91-100	80-100	85-100	75-96	40-50	2-8
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
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

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	
675C2:												
Greenbush-------	0-6	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	25-35	5-15
	6-46	Silty clay 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
686B:												
Parkway---------	0-16	Silt loam*	CL*, ML	A-6*, A-7-6	0	0	100	100	95-100	85-100	30-50	11-20
	16-49	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	85-100	30-50	15-30
	49-60	Silty clay loam*, loam, clay loam	CL*	A-6*, A-7-6	0	0-3	90-100	85-100	85-100	60-100	25-45	10-25
686C2:												
Parkway---------	0-9	Silt loam*	CL*, ML	A-6*, A-7-6	0	0	100	100	95-100	85-100	30-50	11-20
	9-40	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	90-100	80-100	35-50	20-30
	40-60	Silty clay loam*, loam, clay loam	CL*	A-6*, A-7-6	0	0-3	90-100	85-100	85-100	60-100	29-40	13-21
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-SM, SP	A-2-4*, A-3, A-4	0	0	85-100	85-100	50-100	2-40	0-14	NP
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*	SM*, SP, SP-SM	A-2-4*, A-4, A-3	0	0	85-100	85-100	50-100	2-40	0-14	NP
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*, gravelly coarse sand, loamy coarse sand, loamy sand	SM*, SP, SP-SM	A-1-b*	0	0-10	60-90	60-85	20-40	3-25	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	Plas- ticity index
	In				Pct	Pct					Pct	
759A:												
Udolpho---------	0-8	Loam*	CL*, ML	A-4*, A-6	0	0	100	100	75-90	40-75	15-35	2-17
	8-13	Loam*	CL-ML*, CL	A-4*, A-6	0	0	100	100	75-90	40-75	30-50	10-20
	13-30	Clay loam*, loam, sandy clay loam	CL*, SC, SC-SM	A-6*, A-7-6, A-2-4	0	0	92-100	85-100	65-90	35-70	29-47	12-27
	30-60	Stratified coarse sand to loamy sand*	SP-SM*, SC-SM, SM	A-2-4*, A-3	0	0	92-100	85-100	35-90	3-18	15-18	NP-5
760A:												
Marshan---------	0-9	Loam*	CL*, ML	A-4*, A-6	0	0	100	100	85-95	48-78	27-37	8-16
	9-23	Clay loam*, silty clay loam, silt loam, loam	CL*	A-7-6*, A-6	0	0	100	100	85-95	57-85	35-47	16-25
	23-34	Loam*, sandy loam	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	95-100	90-100	75-92	38-70	27-37	11-20
	34-60	Stratified coarse sand to loamy sand*	SP-SM*, SC-SM	A-2-4*, A-1, A-3	0	0-3	95-100	90-100	35-90	3-18	15-18	NP-5
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
767A:												
Prophetstown----	0-16	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	20-35	5-20
	16-40	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	85-100	25-40	5-20
	40-52	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	95-100	95-100	80-100	20-40	5-20
	52-60	Stratified silt loam to sand*	CL-ML*, CL, ML, SC	A-4*	0	0	100	90-100	85-100	50-80	0-25	NP-10
777A:												
Adrian----------	0-22	Muck*	PT*	A-8*	---	---	---	---	---	---	---	---
	22-60	Sand*, gravelly sand, loamy sand, fine sand	SM*, SP	A-2-4*, A-1, A-3	0	0	80-100	60-100	35-75	0-30	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	
785G:												
Lacrescent------	0-12	Cobbly loam*	SC*, CL	A-6*, A-7-6, A-2-4	0	17-30	75-100	60-100	45-90	30-70	27-37	8-16
	12-36	Very cobbly loam*, cobbly fine sandy loam, cobbly silt loam	SC*, SM, CL, ML	A-2-4*, A-1, A-4, A-6	0	30-45	55-85	40-90	35-80	20-70	15-32	2-15
	36-60	Extremely cobbly loam*, very cobbly silt loam, very cobbly fine sandy loam	SC*, CL, ML, SM	A-2-4*, A-1, A-4, A-6	0	40-55	55-85	40-85	35-80	20-70	15-29	2-14
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
865, 868. Pits												
869: Pits.												
Orthents--------	0-6	Clay 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
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

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	
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
943D3:												
Seaton----------	0-4	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	95-100	20-35	5-15
	4-39	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
	39-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
Timula----------	0-23	Silt loam*	CL-ML*	A-4*	0	0	100	100	95-100	85-100	21-31	6-12
	23-60	Silt loam*, silt	CL-ML*, ML	A-4*	0	0	100	100	95-100	85-100	20-30	6-12
943E3:												
Seaton----------	0-3	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	100	95-100	20-35	5-15
	3-36	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20
	36-60	Silt loam*, silt	CL*, CL-ML	A-6*, A-4	0	0	100	100	100	90-100	25-40	5-20
Timula----------	0-3	Silt loam*	ML*	A-4*	0	0	100	100	95-100	85-100	25-35	NP-10
	3-22	Silt loam*	ML*	A-4*	0	0	100	100	95-100	85-100	25-35	NP-10
	22-60	Silt*, silt loam	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

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
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
2087B:												
Dickinson-------	0-11	Sandy loam*	SC-SM*, SC, SM	A-4*, A-2-4	0	0	100	100	63-76	24-50	17-26	3-11
	11-17	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
	17-33	Sandy loam*, fine sandy loam	SC-SM*, SC, SM	A-4*	0	0	100	100	63-87	24-50	17-26	4-12
	33-37	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
	37-60	Sand*, loamy sand, loamy fine sand	SP-SM*, SM	A-2-4*, A-3	0	0	100	100	50-80	7-25	9-14	NP-5
Urban land.												

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	
2198A:												
Elburn----------	0-13	Silt loam*	CL*	A-6*	0	0	100	100	95-100	90-100	25-40	10-25
	13-25	Silty clay loam*, silt loam	CL*	A-7-6*, A-6	0	0	100	100	95-100	90-100	30-50	15-35
	25-46	Silt loam*, silty clay loam	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	20-40	5-20
	46-60	Sandy loam*, loam, clay loam	SM*, CL, CL-ML, SC-SM	A-4*, A-2, A-6	0	0	90-100	85-100	60-90	30-85	20-40	1-20
Urban land.												
2408A:												
Aquents---------	0-9	Loam*	CL*, ML	A-4*, A-6	0	0	100	100	75-90	40-75	15-35	2-17
	9-18	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
	18-41	Silt loam*	CL*	A-6*	0	0	100	100	95-100	90-100	25-40	10-25
	41-60	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
Urban land.												
2485B:												
Richwood--------	0-12	Silt loam*	CL-ML*, ML	A-4*, A-6	0	0	100	100	90-100	85-100	25-35	5-13
	12-48	Silt loam*, silty clay loam	CL*	A-6*, A-4	0	0	100	100	90-100	85-100	25-40	7-20
	48-60	Stratified silt loam to loamy sand*	CL*, CL-ML, SC, SC-SM	A-4*, A-6	0	0	100	100	85-95	35-75	20-30	4-11
Urban land.												
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
3077A:												
Huntsville------	0-43	Silt loam*	CL*	A-6*	0	0	100	95-100	90-100	85-100	25-40	10-20
	43-60	Silt loam*	CL*	A-6*	0	0	100	95-100	90-100	85-100	20-35	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	
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
3302A:												
Ambraw----------	0-8	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	100	85-95	85-95	30-45	10-20
	8-39	Clay loam*, clay, loam	CL*, CH	A-7-6*, A-6	0	0	100	100	80-90	60-80	35-55	15-30
	39-50	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
	50-60	Stratified clay loam to sandy clay loam*	CL*, ML, SC, SM	A-4*, A-6	0	0	100	90-100	80-90	40-80	20-40	NP-17
3321A:												
Du Page---------	0-17	Silt loam*	CL*	A-6*, A-7-6	0	0	95-100	90-100	80-100	55-90	27-37	11-18
	17-34	Loam*, sandy loam, gravelly sandy clay loam	CL*	A-6*, A-4, A-7-6	0	0	85-100	65-100	50-95	35-85	27-39	12-19
	34-60	Stratified loam to sandy loam*	CL*, CL-ML, SC, SC-SM	A-4*, A-6	0	0	85-100	65-100	50-95	35-85	17-35	3-16
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
3404A:												
Titus----------	0-13	Silty clay loam*	CL*, CH	A-7-6*, A-7	0	0	100	100	95-100	90-100	40-55	20-30
	13-67	Silty clay loam*, silty clay	CL*, CH	A-7-6*, A-7	0	0	100	100	95-100	90-100	40-55	20-30
	67-79	Silty clay loam*, silt loam, loam	CL*	A-6*	0	0	100	90-100	70-90	55-85	20-40	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	Plasticity index
	In				Pct	Pct					Pct	
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*	ML*, CL, SC, SM	A-4*, A-2-6	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
3452A:												
Riley----------	0-17	Loam*	CL*	A-6*	0	0	100	100	85-100	60-75	27-38	8-18
	17-27	Clay loam*, sandy clay loam, silty clay loam	CL*, SC	A-7-6*, A-6	0	0	100	100	85-100	45-85	33-47	16-26
	27-34	Sandy clay loam*, clay loam, silty clay loam	CL*, SC	A-7-6*, A-6	0	0	100	100	85-100	45-85	33-47	15-25
	34-60	Sand*, loamy sand, loamy fine sand	SM*, SC-SM, SP-SM	A-2-4*, A-4	0	0	100	100	50-80	15-25	0-17	NP-1
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	Plasticity index
	In				Pct	Pct					Pct	
7070A:												
Beaucoup--------	0-16	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	95-100	85-100	37-57	18-24
	16-43	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	95-100	85-100	37-49	19-25
	43-50	Silt loam*, stratified very fine sandy loam to silty clay loam	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	60-100	26-43	10-21
	50-60	Silt loam*, stratified very fine sandy loam to silty clay loam	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	60-100	22-43	6-21
7073A:												
Ross----------	0-20	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	90-100	90-100	80-100	65-95	20-35	NP-12
	20-36	Loam*, silt loam, silty clay loam	CL*, CL-ML, ML	A-6*, A-4, A-7	0	0	90-100	85-100	70-100	55-95	22-45	3-20
	36-60	Stratified loamy sand to sandy loam*, stratified gravelly sandy loam to silt loam	SM*, CL, GM, ML	A-2-4*, A-4, A-6	0	0-5	65-100	45-100	30-100	20-80	0-30	NP-12
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
7082A:												
Millington------	0-21	Clay loam*	CL*, ML	A-7-6*, A-6	0	0	100	95-100	90-100	90-100	35-50	11-20
	21-37	Loam*, clay loam, silty clay loam	CL*	A-6*, A-7-6	0	0	95-100	85-100	80-100	70-95	28-50	10-22
	37-60	Stratified loam to silty clay loam*	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	85-100	85-100	80-100	60-95	20-45	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	
7100A:												
Palms----------	0-28	Muck*	PT*	A-8*	---	---	---	---	---	---	---	---
	28-60	Silt loam*, silty clay loam, fine sandy loam	CL-ML*, CL	A-4*, A-6	0	0	85-100	80-100	70-95	50-90	25-40	5-20
7103A:												
Houghton--------	0-60	Muck*	PT*	A-8*	0	0	---	---	---	---	---	---
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
7210A:												
Lena----------	0-19	Muck*	PT*	A-8*	0	0	---	---	---	---	---	---
	19-60	Muck*	PT*	A-8*	0	0	---	---	---	---	---	---
7302A:												
Ambraw----------	0-20	Clay loam*	CL*	A-6*, A-7-6	0	0	100	100	85-95	55-80	30-45	10-20
	20-36	Clay loam*, clay, loam	CL*, CH	A-7-6*, A-6	0	0	100	100	80-90	60-80	35-55	15-30
	36-45	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
	45-60	Stratified clay loam to sandy clay loam*	CL*, ML, SC, SM	A-4*, A-6	0	0	100	90-100	80-90	40-80	20-40	NP-17
7345A:												
Elvers----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	85-100	14-26	2-10
	8-28	Silt loam*	ML*, CL, CL-ML	A-4*	0	0	100	100	90-100	85-100	16-27	1-10
	28-60	Muck*	PT*	A-8*	0	0	---	---	---	---	---	---
7349B:												
Zumbro----------	0-16	Sandy loam*	SC*	A-4*	0	0	100	100	63-90	24-50	15-28	NP-5
	16-25	Loamy sand*, loamy fine sand	SC*	A-4*	0	0	100	100	63-87	10-25	10-25	NP-5
	25-34	Loamy sand*, sand, fine sand	SM*, SP, SP-SM	A-2-4*, A-3	0	0	100	100	58-80	10-20	10-20	NP-5
	34-60	Sand*, fine sand, coarse sand	SP-SM*, SM, SP	A-2-4*, A-3	0	0	90-100	80-100	50-80	2-20	6-18	NP-5

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	
7404A:												
Titus----------	0-22	Silty clay loam*	CL*, CH	A-7-6*	0	0	100	100	95-100	90-100	40-55	20-30
	22-52	Silty clay loam*, silty clay	CL*, CH	A-7-6*	0	0	100	100	95-100	90-100	40-55	20-30
	52-60	Silt loam*, silty clay loam, loam	CL*	A-6*	0	0	100	90-100	70-90	55-85	20-40	10-25
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
7452A:												
Riley----------	0-8	Loam*	CL*	A-6*	0	0	100	100	85-100	60-75	27-38	8-18
	8-24	Clay loam*, sandy clay loam, silty clay loam	CL*, SC	A-7-6*, A-6	0	0	100	100	85-100	45-85	33-47	16-26
	24-31	Loam*, clay loam, sandy clay loam	CL*, SC	A-7-6*, A-6	0	0	100	100	85-100	45-85	33-47	15-25
	31-60	Sand*, loamy sand, sandy loam	SM*, SC-SM, SP-SM	A-2-4*, A-4	0	0	100	100	50-80	15-25	0-17	NP-1
7516A:												
Faxon----------	0-16	Silty clay loam*	CL*	A-7-6*	0	0	95-100	85-100	90-100	85-97	40-50	15-25
	16-27	Silty clay loam*, silt loam	CL*, ML, SC, SM	A-6*, A-7-6	0	0	95-100	90-100	85-100	85-97	30-50	10-25
	27-60	Unweathered bedrock*	---	---	---	---	---	---	---	---	---	---
7603A:												
Blackoar--------	0-13	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	25-40	5-18
	13-58	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	25-40	5-18
	58-60	Silt loam*, silty clay loam	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	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	
7682A:												
Medway----------	0-19	Loam*	CL*, SC	A-6*, A-4	0	0	100	82-100	63-87	43-71	27-37	10-17
	19-27	Loam*	CL*, SC	*, A-4, A-6	0	0	100	82-100	63-87	43-71	27-37	10-19
	27-37	Clay loam*, loam, silty clay loam	CL*, SC	A-6*, A-7-6	0	0	96-100	77-100	60-95	41-86	35-43	16-24
	37-60	Stratified sandy clay loam to sandy loam*, stratified gravelly sandy loam to silty clay loam	SC*, CL, ML	A-6*, A-2-6, A-7-6	0	0	82-100	50-100	44-94	22-86	29-41	13-23
7777A:												
Adrian----------	0-30	Muck*	PT*	A-8*	---	---	---	---	---	---	---	---
	30-60	Sand*, gravelly sand, loamy sand, fine sand	SM*, SP	A-2-4*, A-1, A-3	0	0	80-100	60-100	35-75	0-30	0-14	NP
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
8166A:												
Cohoctah--------	0-19	Loam*	CL*, CL-ML, ML	A-4*	0	0	100	100	90-97	50-72	15-31	2-13
	19-28	Sandy loam*, fine sandy loam, loam	SC*, CL, ML, SM	A-2-4*, A-4	0	0	95-100	85-100	55-90	20-70	0-30	NP-10
	28-60	Sand*, sandy loam, loamy fine sand	SP-SM*, CL, ML, SC, SM	A-2-4*, A-4	0	0	95-100	85-100	50-90	5-70	0-30	NP-10
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

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	
8321A:												
Du Page---------	0-17	Silt loam*	CL*	A-6*, A-7-6	0	0	95-100	90-100	80-100	55-90	27-37	11-18
	17-34	Loam*, sandy loam, gravelly sandy clay loam	CL*	A-6*, A-4, A-7-6	0	0	85-100	65-100	50-95	35-85	27-39	12-19
	34-60	Stratified loam to sandy loam*	CL*, CL-ML, SC, SC-SM	A-4*, A-6	0	0	85-100	65-100	50-95	35-85	17-35	3-16
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-7-6*, A-7	0	0	100	100	95-100	90-100	40-55	20-30
	13-68	Silty clay loam*, silty clay	CH*, CL	A-7-6*, 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
8415A:												
Orion----------	0-6	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	85-100	80-100	25-35	4-12
	6-25	Silt loam*, stratified silt loam to very fine sand	CL-ML*, CL	A-4*	0	0	100	100	90-100	70-80	20-30	4-10
	25-60	Silt loam*, silty clay loam	CL*, CL-ML	A-6*, A-4	0	0	100	100	85-100	85-100	20-40	4-18
8451A:												
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	0	0	100	100	90-100	60-100	20-45	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	
8452A:												
Riley----------	0-8	Loam*	CL*	A-6*	0	0	100	100	85-100	60-75	27-38	8-18
	8-24	Clay loam*, sandy clay loam, silty clay loam	CL*, SC	A-7-6*, A-6	0	0	100	100	85-100	45-85	33-47	16-26
	24-31	Loam*, clay loam, sandy clay loam	CL*, SC	A-7-6*, A-6	0	0	100	100	85-100	45-85	33-47	15-25
	31-60	Sand*, loamy sand, sandy loam	SM*, SC-SM, SP-SM	A-2-4*, A-4	0	0	100	100	50-80	15-25	0-17	NP-1
8499A:												
Fella----------	0-20	Silty clay loam*	CL*	A-7-6*	0	0	100	95-100	90-100	85-95	40-50	15-25
	20-43	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	95-100	90-100	85-95	30-50	15-30
	43-54	Stratified fine sandy loam to silty clay loam*	CL*, SC	A-6*, A-4, A-7-6	0	0	95-100	85-100	70-98	39-91	23-41	8-23
	54-61	Stratified sand to silty clay loam*	CL*, CL-ML, SP-SM	A-6*, A-2-4, A-4	0	0	92-100	77-100	53-97	53-86	15-41	3-23
	61-80	Stratified loamy fine sand to very fine sandy loam*	SM*, SC, SC-SM	A-2-4*, A-6, A-4	0	0	93-100	78-100	76-99	16-39	8-26	NP-12
M-W. Miscellaneous water												
W. Water												

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	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
8D3:														
Hickory----------	0-5	15-40	25-60	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	0.5-1.0	.28	.32	4	6	48
	5-30	15-45	20-60	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.32			
	30-40	15-45	20-60	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.32			
	40-60	20-50	20-65	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.28	.32			
8F2:														
Hickory----------	0-12	15-45	30-66	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	1.0-2.0	.32	.32	5	6	48
	12-46	15-45	20-58	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	46-72	20-50	18-65	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.32	.32			
21C2:														
Pecatonica----------	0-7	0-7	68-82	18-25	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-19	0-7	63-80	20-30	1.30-1.50	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.37	.37			
	19-60	20-65	10-60	25-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.28	.28			
21D2:														
Pecatonica----------	0-7	0-7	68-82	18-25	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-19	0-7	63-80	20-30	1.30-1.50	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.37	.37			
	19-60	20-65	10-60	25-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.28	.28			
49A:														
Watseka----------	0-18	70-95	1-20	8-13	1.35-1.55	6-20	0.10-0.12	0.0-2.9	1.0-3.0	.02	.02	4	2	134
	18-60	85-100	0-15	0-10	1.50-1.70	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.05	.05			
51A:														
Muscatune----------	0-16	2-7	66-83	24-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.28	.28	5	6	48
	16-22	2-7	58-73	25-35	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.37	.37			
	22-46	2-7	58-71	27-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	46-60	2-7	66-83	15-30	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.2	.49	.49			
54C:														
Plainfield----------	0-4	85-95	2-10	1-5	1.50-1.65	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.02	.02	5	1	220
	4-26	90-100	0-6	0-4	1.50-1.65	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.10	.10			
	26-60	90-100	0-6	0-4	1.50-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.05	.05			
54E:														
Plainfield----------	0-4	85-95	2-10	1-5	1.50-1.65	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.02	.02	5	1	220
	4-39	90-100	0-6	0-4	1.50-1.65	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.10	.10			
	39-60	90-100	0-6	0-4	1.50-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.05	.05			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
61A:														
Atterberry----------	0-9	2-7	68-78	15-27	1.25-1.45	0.6-2	0.19-0.26	0.0-2.9	1.5-3.5	.37	.37	5	6	48
	9-17	2-7	69-83	15-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.1-1.0	.43	.43			
	17-48	2-7	60-74	25-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	0.1-0.5	.37	.37			
	48-60	2-7	45-80	15-27	1.30-1.50	0.6-2	0.17-0.22	0.0-2.9	0.1-0.5	.49	.49			
68A:														
Sable----------	0-17	0-7	58-73	27-35	1.15-1.35	0.6-2	0.21-0.23	3.0-5.9	5.0-6.0	.24	.24	5	6	38
	17-23	0-7	58-73	27-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	2.0-4.0	.24	.24			
	23-60	0-7	58-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
69A:														
Milford----------	0-7	0-20	40-65	32-40	1.30-1.50	0.6-2	0.20-0.23	6.0-8.9	2.0-4.0	.20	.20	5	4	86
	7-24	0-25	40-65	35-43	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	24-43	0-25	40-65	30-42	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	43-60	0-50	38-80	15-45	1.50-1.70	0.2-0.6	0.20-0.22	3.0-5.9	0.2-0.4	.49	.49			
81A:														
Littleton----------	0-9	2-15	58-80	18-27	1.20-1.45	0.6-2	0.20-0.24	0.0-2.9	3.0-4.0	.32	.32	5	6	48
	9-32	0-15	58-78	22-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.49	.49			
	32-60	10-20	58-72	18-27	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
86B:														
Osco----------	0-14	0-7	67-80	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.28	.28	5	6	48
	14-55	0-7	58-76	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	55-60	0-7	63-80	20-30	1.35-1.40	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
86C2:														
Osco----------	0-9	0-7	67-80	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	2.0-3.0	.37	.37	5	6	48
	9-34	0-7	58-76	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	34-60	0-7	63-80	20-30	1.35-1.40	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
87A:														
Dickinson----------	0-8	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.15	.15	4	3	86
	8-20	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.5	.15	.15			
	20-31	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
	31-36	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.15	.15			
	36-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05	.05			
87B2:														
Dickinson----------	0-8	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.17	.17	4	3	86
	8-22	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
	22-31	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.15	.15			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
88A:														
Sparta----------	0-17	75-95	0-22	0-10	1.20-1.40	2-6	0.09-0.12	0.0-2.9	1.0-2.0	.02	.02	5	2	134
	17-31	72-95	0-27	1-8	1.40-1.60	6-20	0.05-0.11	0.0-2.9	0.1-1.0	.10	.10			
	31-72	52-100	0-29	3-16	1.50-1.70	6-20	0.06-0.08	0.0-2.9	0.0-0.5	.17	.17			
88C:														
Sparta----------	0-8	75-95	0-22	0-10	1.20-1.40	2-6	0.09-0.12	0.0-2.9	1.0-2.0	.02	.02	5	2	134
	8-17	75-95	0-22	0-10	1.20-1.40	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.02	.02			
	17-33	72-95	0-27	1-8	1.40-1.60	6-20	0.05-0.11	0.0-2.9	0.1-1.0	.10	.10			
	33-72	52-100	0-29	3-16	1.40-1.60	6-20	0.06-0.08	0.0-2.9	0.1-1.0	.17	.17			
88E:														
Sparta----------	0-17	---	---	3-10	1.20-1.40	2-6	0.09-0.12	0.0-2.9	1.0-2.0	.17	.17	5	2	134
	17-32	---	---	1-8	1.40-1.60	6-20	0.05-0.11	0.0-2.9	0.1-1.0	.17	.17			
	32-60	---	---	0-5	1.50-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.17	.17			
98B:														
Ade----------	0-10	70-90	5-27	3-12	1.35-1.55	6-20	0.10-0.12	0.0-2.9	1.0-3.0	.17	.17	5	2	134
	10-27	70-95	1-27	3-12	1.40-1.60	6-20	0.06-0.08	0.0-2.9	0.5-1.0	.17	.17			
	27-80	52-100	0-29	3-16	1.40-1.60	6-20	0.06-0.08	0.0-2.9	0.2-1.0	.17	.17			
104A:														
Virgil----------	0-8	0-10	60-80	15-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	7-13	0-10	60-80	15-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	0.5-1.5	.43	.43			
	13-49	2-20	45-70	27-35	1.35-1.55	0.6-2	0.22-0.24	0.0-2.9	0.2-1.0	.37	.37			
	49-58	25-50	30-50	15-27	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	0.2-0.5	.32	.32			
	58-60	20-80	20-60	5-27	1.45-1.75	0.6-6	0.05-0.11	0.0-2.9	0.0-0.5	.24	.24			
152A:														
Drummer----------	0-14	0-15	50-73	27-35	1.10-1.30	0.6-2	0.21-0.23	0.0-2.9	5.0-7.0	.28	.28	5	6	48
	14-41	0-15	50-80	20-35	1.20-1.45	0.6-2	0.21-0.24	3.0-5.9	0.0-1.0	.28	.28			
	41-47	15-55	12-70	15-33	1.30-1.55	0.6-2	0.17-0.20	3.0-5.9	0.0-0.5	.28	.32			
	47-60	15-80	0-75	10-32	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.28	.32			
172A:														
Hoopeston----------	0-14	35-75	17-40	8-18	1.35-1.70	2-6	0.12-0.15	0.0-2.9	2.0-3.0	.15	.15	4	3	86
	14-38	45-75	15-30	10-18	1.45-1.70	2-6	0.12-0.17	0.0-2.9	0.2-1.0	.24	.24			
	38-60	70-88	1-10	2-12	1.50-1.70	6-20	0.05-0.10	0.0-2.9	0.1-0.5	.05	.05			
175B2:														
Lamont----------	0-7	50-80	10-45	4-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	4	3	86
	7-44	45-85	5-40	5-22	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	44-60	60-95	0-20	2-10	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
175D2:														
Lamont----------	0-7	50-80	10-45	4-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	4	3	86
	7-45	45-85	5-40	5-22	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	45-60	60-95	0-20	2-10	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
175F:														
Lamont----------	0-4	50-80	10-45	4-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	4	3	86
	4-10	55-85	10-35	3-10	1.50-1.55	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	10-58	45-85	5-40	5-22	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	58-60	60-95	0-20	2-10	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
198A:														
Elburn----------	0-13	0-10	63-78	22-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	5	6	48
	13-52	0-10	57-75	25-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	52-60	15-70	0-70	15-30	1.50-1.70	0.6-6	0.12-0.18	0.0-2.9	0.0-0.2	.24	.24			
200A:														
Orio----------	0-9	30-50	30-50	10-20	1.25-1.45	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.28	.28	4	5	56
	9-18	40-80	15-45	6-20	1.30-1.50	0.6-2	0.09-0.18	0.0-2.9	0.2-0.5	.28	.28			
	18-35	25-60	15-45	18-35	1.40-1.60	0.2-0.6	0.12-0.19	3.0-5.9	0.0-0.2	.28	.28			
	35-41	54-80	14-36	10-22	1.50-1.70	0.6-2	0.09-0.17	0.0-2.9	0.0-0.2	.28	.28			
	41-60	70-95	2-10	3-10	1.55-1.75	6-20	0.05-0.13	0.0-2.9	0.0-0.2	.28	.28			
201A:														
Gilford----------	0-18	30-85	5-45	10-20	1.50-1.70	2-6	0.15-0.21	0.0-2.9	2.0-4.0	.28	.28	4	3	86
	18-32	45-85	5-35	8-17	1.60-1.70	2-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.24			
	32-60	70-100	0-20	2-10	1.65-1.80	6-20	0.03-0.11	0.0-2.9	0.0-0.5	.05	.05			
206A:														
Thorp----------	0-14	2-15	58-78	20-27	1.15-1.35	0.2-0.6	0.22-0.24	0.0-2.9	4.0-6.0	.28	.28	5	6	48
	14-19	3-15	60-79	18-25	1.30-1.50	0.2-0.6	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	19-43	3-15	50-75	22-35	1.35-1.55	0.06-0.2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	43-50	10-55	15-72	18-30	1.40-1.60	0.06-0.2	0.15-0.22	3.0-5.9	0.0-0.5	.28	.28			
	50-65	15-75	1-80	5-30	1.50-1.70	2-6	0.05-0.13	0.0-2.9	0.0-0.5	.28	.28			
233C2:														
Birkbeck----------	0-7	2-7	66-78	20-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	1.0-2.5	.49	.49	5	6	48
	7-46	2-7	58-71	27-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	0.1-0.5	.43	.43			
	46-57	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.1-0.5	.32	.37			
	57-60	30-50	28-50	17-27	1.65-1.85	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.43			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
261A:														
Niota----------	0-9	5-20	53-70	20-27	1.20-1.35	0.2-0.6	0.22-0.24	0.0-2.9	1.0-3.0	.37	.37	3	6	48
	9-16	7-25	50-75	18-25	1.30-1.55	0.2-0.6	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
	16-27	2-10	30-60	38-60	1.40-1.60	0-0.06	0.09-0.13	6.0-8.9	0.0-1.0	.32	.32			
	27-36	2-30	30-73	25-40	1.40-1.60	0.2-0.6	0.17-0.22	3.0-5.9	0.0-0.5	.37	.37			
	36-49	1-75	1-87	12-25	1.50-1.70	0.2-2	0.08-0.20	3.0-5.9	0.0-0.5	.32	.32			
	49-60	15-80	0-80	5-20	1.50-1.70	2-6	0.11-0.22	0.0-2.9	0.1-0.5	.28	.28			
262A:														
Denrock----------	0-13	10-30	43-72	18-27	1.20-1.35	0.2-0.6	0.22-0.24	0.0-2.9	3.0-5.0	.37	.37	3	6	48
	13-36	2-20	20-60	38-60	1.40-1.60	0.0015-0.06	0.09-0.13	3.0-5.9	0.0-2.0	.37	.37			
	36-40	20-46	20-45	25-40	1.40-1.60	0.2-0.6	0.15-0.19	3.0-5.9	0.0-0.5	.37	.37			
	40-60	40-100	0-35	1-20	1.60-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.1	.15	.15			
268B:														
Mt. Carroll---------	0-7	0-7	60-85	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	7-10	0-7	60-85	15-22	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	10-55	0-7	60-85	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.43	.43			
	55-60	0-7	60-85	16-24	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
268C2:														
Mt. Carroll---------	0-7	0-7	60-85	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	7-38	0-7	60-85	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.43	.43			
	38-60	0-7	60-85	16-24	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
274B:														
Seaton----------	0-9	1-7	71-89	10-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	9-60	1-7	66-81	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	60-80	1-7	68-89	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
274C2:														
Seaton----------	0-7	1-7	71-84	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	7-47	1-7	66-81	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	47-60	1-7	68-89	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
274D2:														
Seaton----------	0-8	1-7	71-84	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	8-52	1-7	66-81	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	52-60	1-7	68-89	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
275A:														
Joy----------	0-15	0-7	68-84	15-25	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	15-51	0-7	66-82	18-27	1.15-1.25	0.6-2	0.20-0.22	0.0-2.9	0.1-1.0	.43	.43			
	51-60	0-45	45-88	12-23	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.49	.49			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
277B:														
Port Byron----------	0-13	1-7	66-82	18-27	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	13-52	1-7	66-82	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.43	.43			
	52-60	1-7	66-85	15-27	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.43	.43			
	60-77	1-7	75-88	11-18	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55	.55			
	77-89	1-7	81-94	5-12	1.25-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.2	.55	.55			
277C:														
Port Byron----------	0-16	1-6	66-82	18-27	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	16-40	1-6	66-82	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.43	.43			
	40-60	1-6	66-85	15-27	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.49	.49			
279B:														
Rozetta----------	0-7	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	7-11	0-7	66-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.1-1.0	.49	.49			
	11-55	0-7	58-73	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
	55-60	0-7	63-80	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
279C2:														
Rozetta----------	0-8	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	8-56	0-7	58-73	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.2-0.5	.37	.37			
	56-80	0-7	63-80	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
280B:														
Fayette----------	0-9	0-7	66-85	15-27	1.30-1.35	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-39	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	39-60	0-7	67-78	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
280C2:														
Fayette----------	0-8	0-7	66-75	25-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43	5	6	48
	8-64	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	64-80	0-7	67-88	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
354A:														
Hononegah----------	0-19	---	---	3-12	1.60-1.70	20-100	0.04-0.06	0.0-2.9	1.0-2.0	.02	.02	3	2	134
	19-23	---	---	6-15	1.60-1.70	20-100	0.03-0.05	0.0-2.9	0.2-0.5	.15	.15			
	23-28	---	---	2-12	1.60-1.70	20-100	0.01-0.03	0.0-2.9	0.0-0.3	.05	.10			
	28-37	---	---	2-7	1.60-1.70	20-100	0.01-0.03	0.0-2.9	0.0-0.2	.02	.05			
	37-60	---	---	2-7	1.60-1.70	20-100	0.01-0.03	0.0-2.9	0.0-0.2	.02	.05			
410D2:														
Woodbine----------	0-7	0-7	60-85	20-27	1.15-1.35	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	3	6	48
	7-24	0-7	55-85	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	24-41	25-55	20-50	24-35	1.40-1.60	0.6-2	0.12-0.19	3.0-5.9	0.2-0.5	.32	.32			
	41-46	5-15	30-55	40-70	1.25-1.45	0.06-0.2	0.08-0.12	6.0-8.9	0.2-0.5	.17	.20			
	46-80	---	---	---	---	0.01-0.2	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
411B:														
Ashdale----------	0-15	0-7	65-85	20-27	1.20-1.40	0.6-2	0.22-0.25	0.0-2.9	3.0-5.0	.28	.28	3	6	48
	15-43	0-7	60-75	25-35	1.35-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	43-51	0-7	30-60	40-60	1.25-1.45	0.06-0.2	0.18-0.20	3.0-5.9	0.0-0.3	.20	.20			
	51-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
412B:														
Ogle----------	0-17	0-7	60-85	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	17-39	0-7	50-75	25-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	39-60	25-40	20-55	27-35	1.45-1.65	0.6-2	0.07-0.10	3.0-5.9	0.0-0.5	.32	.32			
412C:														
Ogle----------	0-14	0-7	60-85	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	14-30	0-7	50-75	25-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	30-60	25-40	20-55	27-35	1.45-1.65	0.6-2	0.07-0.10	3.0-5.9	0.0-0.5	.32	.32			
430A:														
Raddle----------	0-21	2-15	61-80	18-24	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	21-80	2-15	61-80	18-24	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.49	.49			
430B:														
Raddle----------	0-13	2-15	61-80	18-24	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	13-60	2-15	61-80	18-24	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.49	.49			
485B:														
Richwood----------	0-18	0-15	63-85	15-22	1.35-1.60	0.6-2	0.22-0.24	0.0-2.9	2.0-5.0	.32	.32	4	5	56
	18-46	0-15	55-82	18-30	1.55-1.65	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	46-60	20-40	40-70	10-20	1.55-1.65	0.6-6	0.09-0.22	0.0-2.9	0.0-0.5	.28	.28			
	60-79	85-100	0-10	0-4	1.55-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.05	.05			
485C2:														
Richwood----------	0-9	0-15	63-85	15-22	1.35-1.60	0.6-2	0.22-0.24	0.0-2.9	2.0-5.0	.28	.28	4	5	56
	9-42	0-15	55-82	18-30	1.55-1.65	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	42-60	20-40	40-70	10-20	1.55-1.65	0.6-6	0.09-0.22	0.0-2.9	0.0-0.5	.43	.43			
	60-79	85-100	0-10	0-4	1.55-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.05	.05			
486B:														
Bertrand----------	0-9	1-10	60-85	10-20	1.35-1.60	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	9-12	1-10	60-85	5-18	1.55-1.65	0.6-2	0.18-0.22	0.0-2.9	0.0-0.5	.49	.49			
	12-40	1-10	60-80	18-29	1.55-1.65	0.6-2	0.09-0.22	3.0-5.9	0.0-0.8	.49	.49			
	40-60	20-65	30-70	10-20	1.55-1.65	0.6-2	---	0.0-2.9	0.0-0.5	.32	.32			
486C2:														
Bertrand----------	0-8	1-10	65-85	10-20	1.35-1.60	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	8-43	1-10	60-80	18-29	1.55-1.65	0.6-2	0.18-0.22	3.0-5.9	0.0-0.8	.49	.49			
	43-60	20-65	30-70	10-20	1.55-1.65	0.6-6	0.09-0.22	0.0-2.9	0.0-0.5	.32	.32			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
487A:														
Joyce----------	0-20	5-30	55-80	15-25	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.28	.28	4	6	48
	20-44	5-20	53-75	20-27	1.15-1.25	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	44-47	30-60	25-50	15-22	1.40-1.65	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	47-60	70-95	1-25	2-10	1.80-1.95	6-20	0.05-0.10	0.0-2.9	0.0-0.4	.24	.24			
488A:														
Hooppole----------	0-17	30-50	30-50	20-27	1.40-1.60	0.6-2	0.20-0.24	3.0-5.9	4.0-8.0	.24	.24	4	4L	86
	17-44	30-60	25-50	15-31	1.35-1.50	0.6-2	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
	44-60	85-100	0-20	0-12	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.05	.05			
509B:														
Whalan----------	0-5	25-50	28-52	18-25	1.30-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.32	.32	4	6	48
	5-11	25-50	28-52	18-25	1.30-1.45	0.6-2	0.17-0.19	0.0-2.9	0.1-0.5	.37	.37			
	11-17	25-50	28-52	18-25	1.30-1.45	0.6-2	0.17-0.19	0.0-2.9	0.2-0.5	.24	.24			
	17-31	15-45	20-50	27-35	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.0-0.2	.24	.24			
	31-32	5-25	30-55	40-60	1.35-1.45	0.06-0.6	0.09-0.19	6.0-8.9	0.0-0.2	.17	.20			
	32-60	---	---	---	---	2-20	---	---	---	---	---			
529A:														
Selmass----------	0-13	0-7	60-85	18-27	1.35-1.45	0.6-2	0.20-0.24	0.0-2.9	4.0-5.0	.28	.28	4	6	48
	13-27	0-7	35-80	24-35	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.5-2.0	.37	.37			
	27-35	30-60	30-60	10-20	1.45-1.65	0.6-6	0.08-0.19	0.0-2.9	0.0-0.5	.32	.32			
	35-60	80-98	2-20	1-10	1.55-1.70	6-20	0.02-0.10	0.0-2.9	0.0-0.5	.05	.05			
533.														
Urban land														
564A:														
Waukegan----------	0-17	10-30	50-80	18-27	1.35-1.55	0.6-2	0.22-0.24	0.0-2.9	2.0-5.0	.32	.32	4	6	48
	17-30	10-40	35-75	18-27	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	1.0-2.0	.43	.43			
	30-60	85-100	0-10	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.3	.02	.02			
564B:														
Waukegan----------	0-13	10-30	50-80	18-27	1.35-1.55	0.6-2	0.22-0.24	0.0-2.9	2.0-5.0	.32	.32	4	6	48
	13-35	10-40	35-75	18-27	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	1.0-2.0	.43	.43			
	35-60	85-100	0-10	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.3	.02	.02			
564C2:														
Waukegan----------	0-8	10-30	50-80	18-27	1.35-1.55	0.6-2	0.22-0.24	0.0-2.9	2.0-5.0	.32	.32	4	6	48
	8-25	10-40	35-75	18-27	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	1.0-2.0	.43	.43			
	25-60	85-100	0-10	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.3	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
565B:														
Tell----------	0-7	15-35	50-70	14-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	4	5	56
	7-28	10-20	55-76	14-28	1.50-1.60	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
	28-35	45-75	10-40	10-25	1.50-1.60	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.37	.37			
	35-60	75-95	2-25	2-12	1.55-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.15	.15			
565C2:														
Tell----------	0-6	15-35	50-70	14-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	4	5	56
	6-29	10-20	55-76	14-28	1.50-1.60	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
	29-33	45-75	10-40	10-25	1.50-1.60	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.37	.37			
	33-60	75-95	2-25	2-12	1.55-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.15	.15			
565D2:														
Tell----------	0-7	15-35	50-70	14-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	4	5	56
	7-22	10-20	55-76	14-28	1.50-1.60	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
	22-26	45-75	10-40	10-25	1.50-1.60	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.37	.37			
	26-60	75-95	2-25	2-12	1.55-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.15	.15			
638A:														
Muskego----------	0-10	---	---	0-0	0.10-0.21	0.6-6	0.35-0.45	---	60-90	.10	.10	1	2	134
	10-22	---	---	0-0	0.10-0.21	0.6-6	0.35-0.45	---	60-90	.10	.10			
	22-60	4-25	40-78	18-35	0.30-1.10	0.06-0.2	0.18-0.24	3.0-5.9	6.0-20	.28	.28			
647A:														
Lawler----------	0-10	25-50	25-50	18-27	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	4.0-5.0	.24	.24	4	6	48
	10-31	25-60	15-50	20-28	1.45-1.60	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.32	.32			
	31-60	75-100	0-20	2-8	1.60-1.75	20-20	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
675B:														
Greenbush----------	0-14	0-7	68-82	18-25	1.25-1.30	0.6-2	0.21-0.23	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	14-60	0-7	58-74	26-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	60-80	0-7	66-82	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
675C2:														
Greenbush----------	0-6	0-7	68-82	18-25	1.25-1.30	0.6-2	0.21-0.23	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	6-46	0-7	58-74	26-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	46-60	0-7	66-82	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
686B:														
Parkway----------	0-16	0-7	66-82	18-27	1.25-1.45	0.6-2	0.23-0.26	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	16-49	0-7	50-73	27-35	1.25-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43	.43			
	49-60	15-50	20-65	20-30	1.40-1.70	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.32	.32			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
686C2:														
Parkway----------	0-9	0-7	66-82	18-27	1.25-1.45	0.6-2	0.23-0.26	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	9-40	0-15	50-73	27-35	1.25-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43	.43			
	40-60	15-50	20-65	20-30	1.40-1.70	0.6-2	0.07-0.11	0.0-2.9	0.0-0.5	.32	.32			
689B:														
Coloma----------	0-10	85-100	0-25	0-10	1.35-1.65	6-20	0.05-0.09	0.0-2.9	0.5-2.0	.02	.02	5	1	250
	10-27	75-100	0-25	0-10	1.35-1.65	6-20	0.05-0.12	0.0-2.9	0.0-0.5	.15	.15			
	27-60	70-90	2-28	2-12	1.50-1.65	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.15	.15			
689D:														
Coloma----------	0-12	85-100	0-25	0-10	1.35-1.65	6-20	0.05-0.09	0.0-2.9	0.5-2.0	.02	.02	5	1	250
	12-25	85-100	0-25	0-10	1.35-1.65	6-20	0.05-0.12	0.0-2.9	0.0-0.5	.15	.15			
	25-60	70-90	2-28	2-12	1.50-1.65	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.15	.15			
727A:														
Waukee----------	0-14	10-50	35-70	10-24	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	3.0-4.0	.24	.24	4	6	48
	14-34	30-65	10-45	18-27	1.40-1.50	0.6-2	0.15-0.19	0.0-2.9	1.0-2.0	.32	.32			
	34-60	75-100	0-20	2-8	1.50-1.75	2-20	0.02-0.06	0.0-2.9	0.0-1.0	.02	.05			
759A:														
Udolpho----------	0-8	35-52	28-50	10-27	1.30-1.50	0.6-2	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	4	6	48
	8-13	35-52	28-50	8-27	1.40-1.55	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.37	.37			
	13-30	30-60	15-40	20-35	1.40-1.55	0.6-2	0.15-0.22	3.0-5.9	0.3-0.5	.32	.32			
	30-60	85-98	1-12	1-8	1.55-1.65	6-20	0.05-0.10	0.0-2.9	0.0-0.3	.05	.05			
760A:														
Marshan----------	0-9	30-50	28-50	18-27	1.35-1.45	0.6-2	0.20-0.24	0.0-2.9	4.0-8.0	.24	.24	4	6	48
	9-23	20-45	30-55	25-35	1.40-1.55	0.6-2	0.17-0.22	3.0-5.9	3.0-5.0	.17	.17			
	23-34	30-60	20-50	18-30	1.45-1.55	0.6-2	0.15-0.19	0.0-2.9	0.2-0.6	.32	.32			
	34-60	85-98	1-12	0-5	1.35-1.65	6-20	0.05-0.10	0.0-2.9	0.0-0.2	.05	.05			
763A:														
Joslin----------	0-15	10-50	35-65	12-22	1.10-1.30	0.6-2	0.20-0.24	0.0-2.9	4.0-5.0	.24	.24	5	5	48
	15-40	10-50	35-65	18-27	1.15-1.35	0.6-2	0.17-0.22	0.0-2.9	0.5-1.0	.32	.32			
	40-60	0-20	30-60	35-50	1.40-1.65	0.2-0.6	0.08-0.19	3.0-5.9	0.0-0.5	.32	.32			
	60-85	5-45	30-70	18-35	1.45-1.65	0.2-0.6	0.17-0.22	0.0-2.9	0.0-0.4	.32	.32			
767A:														
Prophetstown--------	0-16	5-30	50-80	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	4.0-6.0	.28	.28	5	4L	86
	16-40	5-30	50-80	18-27	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	40-52	5-30	50-80	10-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.49	.49			
	52-60	15-50	50-80	5-20	1.40-1.65	0.6-2	0.07-0.16	0.0-2.9	0.0-0.2	.28	.28			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
777A:														
Adrian----------	0-22	---	---	0-0	0.30-0.55	0.2-6	0.35-0.45	---	55-75	---	---	2	2	134
	22-60	80-95	2-10	2-10	1.40-1.75	6-20	0.03-0.08	0.0-2.9	0.0-1.0	.02	.02			
785G:														
Lacrescent----------	0-12	30-52	28-50	18-33	1.25-1.40	0.6-2	0.15-0.22	0.0-2.9	3.0-5.0	.20	.24	5	8	0
	12-36	20-60	20-60	8-23	1.30-1.50	0.6-6	0.06-0.09	0.0-2.9	0.5-2.0	.43	.49			
	36-60	20-60	20-60	8-20	1.30-1.50	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.43	.49			
802B:														
Orthents----------	0-6	30-45	25-48	22-30	1.70-1.75	0.2-0.6	0.18-0.22	3.0-5.9	0.5-2.0	.43	.43	5	6	48
	6-60	30-45	25-55	22-30	1.70-1.80	0.2-0.6	0.16-0.20	3.0-5.9	0.2-1.0	.43	.43			
865, 868.														
Pits														
869:														
Pits.														
Orthents----------	0-6	---	---	22-30	1.70-1.75	0.2-0.6	0.18-0.22	3.0-5.9	0.5-2.0	.43	.43	5	4	86
	6-60	---	---	22-30	1.70-1.80	0.2-0.6	0.16-0.20	3.0-5.9	0.2-1.0	.43	.43			
917C2:														
Oakville----------	0-7	85-100	0-10	0-10	1.30-1.55	6-20	0.07-0.09	0.0-2.9	0.5-2.0	.02	.02	5	2	134
	7-51	80-100	0-10	0-10	1.30-1.65	6-20	0.06-0.10	0.0-2.9	0.0-0.5	.15	.15			
	51-60	85-100	0-10	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Tell----------	0-7	15-35	50-70	14-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	4	5	56
	7-23	10-20	55-76	14-28	1.50-1.60	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
	23-27	45-75	10-40	10-25	1.50-1.60	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.37	.37			
	27-60	75-95	2-25	2-12	1.55-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.15	.15			
917D2:														
Oakville----------	0-9	85-100	0-10	0-10	1.30-1.55	6-20	0.07-0.09	0.0-2.9	0.5-2.0	.02	.02	5	2	134
	9-36	80-100	0-10	0-10	1.30-1.65	6-20	0.06-0.10	0.0-2.9	0.0-0.5	.15	.15			
	36-60	85-100	0-10	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Tell----------	0-8	15-35	50-70	14-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	4	5	56
	8-28	10-20	55-76	14-28	1.50-1.60	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
	28-32	45-75	10-40	10-25	1.50-1.60	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.37	.37			
	32-60	75-95	2-25	2-12	1.55-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.15	.15			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
943D3:														
Seaton----------	0-4	0-7	71-84	11-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43	4	5	56
	4-39	0-7	72-81	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	39-60	0-7	74-84	11-25	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
Timula----------	0-23	0-7	75-89	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	0.5-1.0	.55	.55	4	5	56
	23-60	0-7	75-89	10-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
943E3:														
Seaton----------	0-3	1-7	71-84	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	4	5	56
	3-36	1-7	66-81	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	36-60	1-7	68-89	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
Timula----------	0-3	0-7	75-89	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	4	5	56
	3-22	0-7	75-89	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	0.3-0.7	.43	.43			
	22-60	0-7	75-95	5-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	0.0-0.3	.55	.55			
943F2:														
Seaton----------	0-6	1-7	71-84	15-22	1.10-1.20	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	6-49	1-7	66-81	18-27	1.15-1.30	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	49-60	1-7	68-89	10-25	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
Timula----------	0-6	0-7	75-89	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	6-28	0-7	75-89	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43			
	28-60	0-7	75-89	10-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	0.2-0.5	.55	.55			
1082A:														
Millington----------	0-19	0-40	50-75	20-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	4.0-6.0	.32	.32	5	4L	86
	19-35	10-50	25-65	18-35	1.40-1.60	0.6-2	0.17-0.20	3.0-5.9	1.0-3.0	.32	.32			
	35-60	10-70	10-70	15-35	1.50-1.70	0.6-2	0.14-0.20	3.0-5.9	0.1-2.0	.32	.32			
1107A:														
Sawmill----------	0-29	2-9	56-71	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	4.0-5.0	.28	.28	5	7	38
	29-38	3-10	55-70	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	1.0-3.0	.32	.32			
	38-60	5-25	40-70	25-35	1.30-1.45	0.6-2	0.17-0.20	3.0-5.9	0.0-2.0	.32	.32			
1400A:														
Calco----------	0-37	2-10	57-70	28-42	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	5.0-7.0	.28	.28	5	4L	86
	37-49	2-10	55-68	30-35	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	3.0-5.0	.32	.32			
	49-60	10-35	36-73	18-27	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.32	.32			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
2087B:														
Dickinson----------	0-11	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.15	.15	4	5	56
	11-17	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.5	.15	.15			
	17-33	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
	33-37	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.15	.15			
	37-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05	.05			
Urban land.														
2198A:														
Elburn----------	0-13	0-10	63-78	22-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	5	6	48
	13-25	0-10	57-75	25-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	25-46	0-10	50-80	22-30	1.50-1.70	0.6-2	0.18-0.20	0.0-2.9	0.0-0.2	.43	.43			
	46-60	15-70	0-70	15-30	1.50-1.70	0.6-6	0.12-0.18	0.0-2.9	0.0-0.2	.24	.24			
Urban land.														
2408A:														
Aquents----------	0-9	35-52	28-50	10-27	1.30-1.50	0.6-2	0.19-0.22	0.0-2.9	1.0-3.0	.28	.28	---	8	0
	9-18	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.15	.15			
	18-41	0-10	63-78	22-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-5.0	.28	.28			
	41-60	5-25	40-70	25-35	1.30-1.45	0.6-2	0.17-0.20	3.0-5.9	0.0-2.0	.32	.32			
Urban land.														
2485B:														
Richwood----------	0-12	0-15	63-85	15-22	1.35-1.60	0.6-2	0.22-0.24	0.0-2.9	2.0-5.0	.32	.32	4	5	56
	12-48	0-15	55-82	18-30	1.55-1.65	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	48-60	20-40	40-70	10-20	1.55-1.65	0.6-6	0.09-0.22	0.0-2.9	0.0-0.5	.28	.28			
Urban land.														
3076A:														
Otter----------	0-43	0-15	58-82	18-27	1.10-1.25	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.32	.32	5	6	48
	43-50	0-15	48-82	18-27	1.20-1.45	0.6-2	0.17-0.22	3.0-5.9	1.0-3.0	.49	.49			
	50-60	5-45	32-80	15-28	1.30-1.55	0.6-2	0.15-0.20	0.0-2.9	0.5-2.0	.49	.49			
3077A:														
Huntsville----------	0-43	0-15	58-82	18-27	1.15-1.35	0.6-2	0.22-0.24	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	43-60	5-30	33-77	18-27	1.20-1.40	0.6-2	0.20-0.22	3.0-5.9	0.2-0.5	.49	.49			
3107A:														
Sawmill----------	0-26	2-9	56-71	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	4.0-5.0	.28	.28	5	7	38
	26-54	3-10	55-70	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	1.0-3.0	.32	.32			
	54-60	5-25	40-70	25-35	1.30-1.45	0.6-2	0.17-0.20	3.0-5.9	0.0-2.0	.32	.32			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
3302A:														
Ambraw----------	0-8	5-15	50-68	27-35	1.25-1.45	0.6-2	0.15-0.19	3.0-5.9	2.0-3.0	.28	.28	5	7	38
	8-39	20-40	18-55	25-42	1.30-1.55	0.2-0.6	0.08-0.19	3.0-5.9	0.5-2.0	.28	.28			
	39-50	20-60	10-56	24-35	1.40-1.65	0.2-2	0.10-0.15	3.0-5.9	0.5-1.0	.28	.28			
	50-60	20-60	10-62	18-30	1.35-1.65	0.2-2	0.11-0.22	0.0-2.9	0.5-1.0	.28	.28			
3321A:														
Du Page----------	0-17	15-40	50-80	18-27	1.40-1.60	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.32	.32	5	6	48
	17-34	30-60	20-50	18-27	1.45-1.65	0.6-2	0.10-0.20	0.0-2.9	0.0-1.0	.32	.32			
	34-60	20-60	20-60	6-24	1.50-1.70	0.6-2	0.08-0.20	0.0-2.9	0.0-0.5	.32	.32			
3400A:														
Calco----------	0-34	2-10	57-70	28-42	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	5.0-7.0	.28	.28	5	4L	86
	34-45	2-10	55-68	30-35	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	3.0-5.0	.32	.32			
	45-60	10-35	36-73	18-27	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.32	.32			
3404A:														
Titus----------	0-13	1-15	45-65	35-45	1.30-1.50	0.06-0.2	0.11-0.18	6.0-8.9	2.0-4.0	.32	.32	5	4	86
	13-67	1-15	45-65	35-45	1.30-1.60	0.06-0.2	0.11-0.22	6.0-8.9	0.2-1.0	.32	.32			
	67-79	15-30	40-60	20-30	1.45-1.75	0.2-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.32	.32			
3415A:														
Orion----------	0-7	1-15	67-89	10-18	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-22	2-15	67-88	10-18	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	22-60	2-15	55-88	10-30	1.25-1.45	0.6-2	0.18-0.22	0.0-2.9	3.0-8.0	.32	.32			
	60-80	2-15	67-88	10-18	1.20-1.40	0.6-2	0.18-0.22	0.0-2.9	0.0-0.5	.28	.28			
3428A:														
Coffeen----------	0-17	1-15	58-84	15-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	2.0-3.0	.32	.32	5	6	48
	17-33	1-15	67-89	10-18	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-2.0	.49	.49			
	33-60	15-65	20-80	5-15	1.50-1.70	0.6-6	0.11-0.19	0.0-2.9	0.0-0.5	.32	.32			
3451A:														
Lawson----------	0-14	0-15	58-90	10-27	1.20-1.55	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	14-33	0-15	55-90	10-30	1.20-1.55	0.6-2	0.18-0.22	0.0-2.9	2.0-4.0	.32	.32			
	33-80	5-40	30-77	18-30	1.55-1.65	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.49	.49			
3452A:														
Riley----------	0-17	30-52	28-50	18-27	1.20-1.40	0.6-2	0.18-0.24	3.0-5.9	3.0-4.0	.32	.32	4	6	48
	17-27	15-60	15-60	24-35	1.45-1.65	0.6-2	0.16-0.20	3.0-5.9	0.5-2.0	.28	.28			
	27-34	15-60	15-60	24-35	1.45-1.65	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.28	.28			
	34-60	75-90	2-18	2-10	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.2	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
3646L:														
Fluvaquents---------	0-9	1-15	58-84	15-27	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	9-37	1-15	55-81	18-30	1.35-1.45	0.6-2	0.20-0.24	3.0-5.9	0.5-1.0	.49	.49			
	37-60	1-45	49-84	15-27	1.35-1.45	0.6-2	0.12-0.20	0.0-2.9	0.5-1.0	.49	.49			
7070A:														
Beaucoup----------	0-16	1-15	50-72	27-35	1.15-1.35	0.6-2	0.15-0.20	3.0-5.9	5.0-6.0	.28	.28	5	7	38
	16-43	1-15	50-72	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-2.0	.32	.32			
	43-50	5-60	30-80	15-30	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.49	.49			
	50-60	5-60	10-85	10-30	1.40-1.65	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.49	.49			
7073A:														
Ross----------	0-20	10-50	40-80	15-27	1.20-1.45	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32	.32	5	5	56
	20-36	20-45	35-70	18-32	1.20-1.50	0.6-2	0.16-0.22	0.0-2.9	1.0-3.0	.32	.32			
	36-60	30-90	5-60	5-25	1.35-1.60	0.6-6	0.05-0.18	0.0-2.9	0.5-2.0	.20	.24			
7076A:														
Otter----------	0-38	0-15	58-82	18-27	1.10-1.25	0.6-2	0.22-0.24	0.0-2.9	3.0-10	.32	.32	5	6	48
	38-50	0-15	40-82	18-27	1.20-1.45	0.6-2	0.17-0.22	3.0-5.9	1.0-3.0	.49	.49			
	50-60	5-60	32-80	15-28	1.30-1.55	0.6-2	0.15-0.20	0.0-2.9	0.5-2.0	.49	.49			
7082A:														
Millington----------	0-21	20-45	25-50	27-35	1.40-1.60	0.6-2	0.17-0.23	3.0-5.9	4.0-6.0	.28	.28	5	4L	86
	21-37	15-50	25-55	18-35	1.40-1.60	0.6-2	0.17-0.20	3.0-5.9	1.0-3.0	.28	.28			
	37-60	15-50	35-60	18-35	1.50-1.70	0.6-2	0.14-0.20	3.0-5.9	0.1-2.0	.28	.28			
7100A:														
Palms----------	0-28	---	---	0-0	0.25-0.45	0.2-6	0.35-0.45	---	75-99	---	---	2	2	134
	28-60	15-35	35-70	7-35	1.45-1.75	0.2-2	0.14-0.22	0.0-2.9	0.0-0.0	.32	.32			
7103A:														
Houghton----------	0-60	---	---	---	0.15-0.45	0.2-6	0.35-0.45	---	70-100	---	---	5	2	134
7107A:														
Sawmill----------	0-10	2-9	56-71	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	4.0-5.0	.28	.28	5	7	38
	10-35	3-10	55-70	27-35	1.20-1.40	0.6-2	0.17-0.20	3.0-5.9	1.0-3.0	.32	.32			
	35-60	5-25	45-75	20-35	1.35-1.50	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.32	.32			
7210A:														
Lena----------	0-19	---	---	---	0.15-0.45	2-6	0.35-0.45	---	60-99	---	---	3	2	134
	19-60	---	---	---	0.15-0.45	2-6	0.35-0.45	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
7302A:														
Ambraw----------	0-20	20-45	20-53	27-35	1.30-1.55	0.6-2	0.15-0.22	3.0-5.9	2.0-3.0	.24	.24	5	6	48
	20-36	20-40	18-55	25-42	1.30-1.55	0.2-0.6	0.08-0.19	3.0-5.9	0.5-2.0	.28	.28			
	36-45	20-60	10-56	24-35	1.40-1.65	0.2-2	0.10-0.15	3.0-5.9	0.5-1.0	.28	.28			
	45-60	20-60	10-62	18-30	1.35-1.65	0.2-2	0.11-0.22	0.0-2.9	0.5-1.0	.28	.28			
7345A:														
Elvers----------	0-8	2-15	67-80	8-18	1.35-1.55	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	8-28	2-15	67-80	8-18	1.35-1.55	0.6-2	0.20-0.24	0.0-2.9	0.5-1.0	.55	.55			
	28-60	---	---	---	0.10-0.24	2-6	0.35-0.45	---	---	---	---			
7349B:														
Zumbro----------	0-16	55-75	5-30	5-18	1.35-1.45	2-6	0.13-0.18	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	16-25	70-90	5-25	2-10	1.45-1.55	6-20	0.10-0.12	0.0-2.9	1.0-2.0	.17	.17			
	25-34	75-95	1-20	0-10	1.45-1.60	6-20	0.06-0.11	0.0-2.9	0.0-2.0	.17	.17			
	34-60	85-100	0-15	0-5	1.55-1.65	6-20	0.02-0.07	0.0-2.9	0.0-1.0	.17	.17			
7404A:														
Titus----------	0-22	2-9	51-63	35-40	1.30-1.50	0.06-0.2	0.18-0.22	6.0-8.9	2.0-4.0	.28	.28	5	4	86
	22-52	1-15	40-64	35-45	1.30-1.60	0.06-0.2	0.11-0.22	6.0-8.9	0.2-1.0	.32	.32			
	52-60	15-30	40-65	20-30	1.45-1.75	0.2-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.49	.49			
7428A:														
Coffeen----------	0-20	1-15	58-84	15-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	2.0-3.0	.32	.32	5	6	48
	20-32	1-15	67-89	10-18	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-2.0	.49	.49			
	32-60	15-65	20-80	5-15	1.50-1.70	0.6-6	0.11-0.19	0.0-2.9	0.0-2.0	.37	.37			
7452A:														
Riley----------	0-8	30-52	28-50	18-27	1.20-1.40	0.6-2	0.18-0.24	3.0-5.9	3.0-4.0	.32	.32	4	6	48
	8-24	15-60	15-60	24-35	1.45-1.65	0.6-2	0.16-0.20	3.0-5.9	0.5-2.0	.28	.28			
	24-31	35-60	20-50	18-35	1.45-1.65	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.32	.32			
	31-60	70-90	2-18	2-10	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.2	.02	.02			
7516A:														
Faxon----------	0-16	0-20	40-70	28-30	1.20-1.40	0.6-2	0.20-0.24	3.0-5.9	5.0-15	.28	.28	2	7	38
	16-27	0-30	40-70	18-33	1.40-1.60	0.6-2	0.12-0.19	3.0-5.9	0.3-0.8	.32	.32			
	27-60	---	---	---	---	2-20	---	---	---	---	---			
7603A:														
Blackoar----------	0-13	---	---	18-27	1.35-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	13-58	---	---	18-27	1.35-1.45	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	58-60	---	---	18-30	1.35-1.45	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
7682A:														
Medway----------	0-19	30-50	30-50	18-27	1.20-1.45	0.6-2	0.20-0.24	0.0-2.9	1.5-4.0	.28	.28	5	6	48
	19-27	30-50	30-50	18-27	1.20-1.45	0.6-2	0.20-0.24	0.0-2.9	0.8-1.5	.28	.28			
	27-37	15-40	30-60	25-32	1.20-1.50	0.6-2	0.14-0.18	0.0-2.9	0.5-1.0	.32	.32			
	37-60	15-60	15-55	15-30	1.20-1.60	0.6-6	0.08-0.15	0.0-2.9	0.0-0.5	.28	.28			
7777A:														
Adrian----------	0-30	---	---	0-0	0.30-0.55	0.2-6	0.35-0.45	---	55-75	---	---	2	2	134
	30-60	80-89	2-10	2-10	1.40-1.75	6-20	0.03-0.08	0.0-2.9	0.0-1.0	.02	.02			
8107+:														
Sawmill----------	0-8	0-15	58-82	18-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.32	.32	5	6	48
	8-14	2-9	59-71	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	1.0-3.0	.28	.28			
	14-46	3-25	45-72	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	1.0-3.0	.32	.32			
	46-60	5-25	40-77	25-35	1.30-1.45	0.6-2	0.17-0.20	3.0-5.9	0.0-2.0	.32	.32			
8166A:														
Cohoctah----------	0-19	30-52	28-50	8-22	1.20-1.60	2-6	0.18-0.24	0.0-2.9	3.0-6.0	.32	.32	5	5	56
	19-28	40-80	10-40	5-18	1.45-1.65	2-6	0.12-0.20	0.0-2.9	0.5-1.0	.24	.24			
	28-60	75-100	0-15	2-18	1.45-1.65	2-6	0.08-0.20	0.0-2.9	0.0-0.5	.02	.02			
8302A:														
Ambraw----------	0-9	20-45	28-50	18-27	1.30-1.55	0.6-2	0.15-0.22	3.0-5.9	2.0-3.0	.32	.32	5	6	48
	9-32	20-40	18-50	25-42	1.30-1.55	0.2-0.6	0.08-0.19	3.0-5.9	0.5-2.0	.28	.28			
	32-38	20-60	10-56	24-35	1.40-1.65	0.2-2	0.10-0.15	3.0-5.9	0.5-1.0	.28	.28			
	38-60	20-60	10-62	18-30	1.35-1.65	0.2-2	0.11-0.22	0.0-2.9	0.5-1.0	.28	.28			
8321A:														
Du Page----------	0-17	15-40	50-80	18-27	1.40-1.60	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.32	.32	5	6	48
	17-34	30-60	20-50	18-27	1.45-1.65	0.6-2	0.10-0.20	0.0-2.9	0.0-1.0	.32	.32			
	34-60	20-60	20-60	6-24	1.50-1.70	0.6-2	0.08-0.20	0.0-2.9	0.0-0.5	.32	.32			
8400A:														
Calco----------	0-34	2-10	57-70	28-42	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	5.0-7.0	.28	.28	5	4L	86
	34-45	2-10	55-68	30-35	1.25-1.30	0.6-2	0.21-0.23	3.0-5.9	3.0-5.0	.32	.32			
	45-60	10-35	36-73	18-27	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.32	.32			
8404A:														
Titus----------	0-13	2-9	51-63	35-40	1.30-1.50	0.06-0.2	0.18-0.22	6.0-8.9	2.0-4.0	.28	.28	5	4	86
	13-68	2-15	40-64	35-45	1.30-1.60	0.06-0.2	0.11-0.22	6.0-8.9	0.2-1.0	.32	.32			
	68-80	15-30	40-65	20-30	1.45-1.75	0.2-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.32	.32			
8415A:														
Orion----------	0-6	1-15	67-89	10-18	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	6-25	2-15	67-88	10-18	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.55	.55			
	25-60	2-15	55-88	10-30	1.25-1.45	0.6-2	0.18-0.22	0.0-2.9	3.0-8.0	.37	.37			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
8451A:														
Lawson----------	0-14	0-15	15-90	10-27	1.20-1.55	0.6-2	0.22-0.24	0.0-2.9	3.0-7.0	.32	.32	5	5	56
	14-33	0-15	15-90	10-30	1.20-1.55	0.6-2	0.18-0.22	0.0-2.9	3.0-7.0	.32	.32			
	33-80	0-40	40-97	18-30	1.55-1.65	0.6-2	0.18-0.20	3.0-5.9	1.0-4.0	.49	.49			
8452A:														
Riley----------	0-8	30-52	28-50	18-27	1.20-1.40	0.6-2	0.18-0.24	3.0-5.9	3.0-4.0	.32	.32	4	6	48
	8-24	15-60	15-60	24-35	1.45-1.65	0.6-2	0.16-0.20	3.0-5.9	0.5-2.0	.28	.28			
	24-31	35-60	20-50	18-35	1.45-1.65	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.32	.32			
	31-60	70-90	2-18	2-10	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.2	.02	.02			
8499A:														
Fella----------	0-20	0-15	50-73	27-35	1.10-1.30	0.6-2	0.21-0.23	3.0-5.9	5.0-6.0	.28	.28	5	7	38
	20-43	0-15	50-73	27-35	1.20-1.45	0.6-2	0.21-0.24	3.0-5.9	0.5-1.0	.32	.32			
	43-54	10-55	15-75	15-30	1.35-1.60	0.6-2	0.15-0.20	3.0-5.9	0.2-0.5	.32	.32			
	54-61	15-90	15-75	10-30	1.40-1.70	2-6	0.05-0.19	0.0-2.9	0.2-0.5	.24	.24			
	61-80	70-90	5-30	2-18	1.40-1.70	6-20	0.08-0.18	0.0-2.9	0.0-0.2	.15	.15			
M-W.														
Miscellaneous water														
W.														
Water														

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	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
8D3:				
Hickory---------	0-5	4.5-7.3	17-23	0
	5-30	4.5-7.3	16-22	0
	30-40	4.5-7.8	16-22	0
	40-60	5.6-8.4	5.0-15	0-25
8F2:				
Hickory---------	0-12	4.5-7.3	14-19	0
	12-46	4.5-7.3	16-22	0
	46-72	5.1-7.8	9.0-19	0-25
21C2:				
Pecatonica------	0-7	5.1-6.5	13-21	0
	7-19	4.5-6.5	13-24	0
	19-60	4.5-6.5	15-22	0
21D2:				
Pecatonica------	0-7	5.1-6.5	13-21	0
	7-19	4.5-6.5	13-24	0
	19-60	4.5-6.5	15-22	0
49A:				
Watseka---------	0-18	5.6-7.3	7.0-14	0
	18-60	5.1-7.3	1.0-7.0	0
51A:				
Muscatune-------	0-16	6.1-7.3	16-32	0
	16-22	5.6-7.3	16-27	0
	22-46	5.6-7.3	17-31	0
	46-60	6.6-7.8	9.0-22	0-15
54C:				
Plainfield------	0-4	5.6-7.3	7.0-17	0
	4-26	4.5-7.3	1.0-12	0
	26-60	4.5-6.5	1.0-12	0
54E:				
Plainfield------	0-4	5.6-7.3	7.0-17	0
	4-39	4.5-7.3	1.0-12	0
	39-60	4.5-6.5	1.0-12	0
61A:				
Atterberry------	0-9	6.1-7.3	11-28	0
	9-17	5.6-6.5	9.0-24	0
	17-48	5.1-6.0	16-29	0
	48-60	5.6-7.3	9.0-23	0-8
68A:				
Sable----------	0-17	5.6-7.3	26-33	0
	17-23	5.6-7.3	20-30	0
	23-60	5.6-7.8	15-23	0
69A:				
Milford---------	0-7	5.6-7.3	24-36	0
	7-24	5.6-7.8	22-29	0-10
	24-43	5.6-7.8	22-29	0-10
	43-60	6.6-8.4	4.0-18	0-30

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
81A:				
Littleton-------	0-9	5.6-7.8	11-28	0
	9-32	5.6-7.8	11-29	0
	32-60	5.6-7.8	11-23	0
86B:				
Osco----------	0-14	5.1-7.3	18-25	0
	14-55	5.1-6.5	15-23	0
	55-60	5.6-7.3	12-18	0-15
86C2:				
Osco----------	0-9	5.1-7.3	18-25	0
	9-34	5.1-6.5	15-23	0
	34-60	5.6-7.3	12-18	0-15
87A:				
Dickinson-------	0-8	5.6-7.3	15-20	0
	8-20	5.6-7.3	7.0-17	0
	20-31	5.1-6.5	9.0-17	0
	31-36	5.1-6.5	0.0-10	0
	36-60	5.6-6.5	0.0-10	0
87B2:				
Dickinson-------	0-8	5.6-7.3	15-20	0
	8-22	5.1-6.5	7.0-17	0
	22-31	5.1-6.5	0.0-10	0
	31-60	5.6-6.5	0.0-10	0
88A:				
Sparta----------	0-17	5.1-7.3	2.0-12	0
	17-31	5.1-7.3	1.0-6.0	0
	31-72	5.1-6.0	1.0-9.0	0
88C:				
Sparta----------	0-8	5.1-7.3	2.0-12	0
	8-17	5.1-7.3	2.0-12	0
	17-33	5.1-7.3	1.0-6.0	0
	33-72	5.1-6.0	1.0-9.0	0
88E:				
Sparta----------	0-17	5.1-7.3	2.0-12	0
	17-32	5.1-7.3	1.0-6.0	0
	32-60	5.1-7.8	1.0-4.0	0
98B:				
Ade----------	0-10	5.1-6.5	6.0-15	0
	10-27	5.1-6.5	1.0-7.0	0
	27-80	5.1-6.0	1.0-9.0	0
104A:				
Virgil----------	0-8	6.1-7.8	13-24	0
	7-13	6.1-7.8	13-24	0
	13-49	5.1-7.3	9.0-17	0
	49-58	5.1-7.8	16-23	0
	58-60	5.6-8.4	9.0-20	0-20
152A:				
Drummer---------	0-14	5.6-7.3	26-53	0
	14-41	5.6-7.8	12-23	0
	41-47	6.1-8.4	13-21	0-20
	47-60	6.6-8.4	9.0-19	0-40

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
172A:				
Hoopeston-------	0-14	5.1-7.3	9.0-17	0
	14-38	5.1-7.8	7.0-13	0-5
	38-60	4.5-8.4	1.0-7.0	0-20
175B2:				
Lamont----------	0-7	5.1-7.3	10-15	0
	7-44	5.1-7.3	10-15	0
	44-60	5.1-6.5	5.0-10	0
175D2:				
Lamont----------	0-7	5.1-7.3	10-15	0
	7-45	5.1-7.3	10-15	0
	45-60	5.1-6.5	5.0-10	0
175F:				
Lamont----------	0-4	5.1-7.3	10-15	0
	4-10	5.1-7.3	10-15	0
	10-58	5.1-7.3	10-15	0
	58-60	5.1-6.5	5.0-10	0
198A:				
Elburn----------	0-13	5.6-7.3	20-30	0
	13-52	5.6-7.3	15-25	0
	52-60	6.1-8.4	9.0-15	0-20
200A:				
Orio----------	0-9	4.5-7.8	8.0-15	0
	9-18	4.5-7.8	5.0-15	0
	18-35	4.5-7.8	10-20	0
	35-41	4.5-7.8	6.0-12	0
	41-60	4.5-7.8	1.0-5.0	0
201A:				
Gilford---------	0-18	5.6-7.3	6.0-20	0
	18-32	5.6-7.3	4.0-14	0
	32-60	6.6-8.4	1.0-6.0	0-30
206A:				
Thorp----------	0-14	5.1-7.8	20-28	0
	14-19	5.1-7.3	11-17	0
	19-43	5.1-7.3	13-22	0
	43-50	5.6-7.8	12-19	0-5
	50-65	6.1-8.4	3.0-13	0-20
233C2:				
Birkbeck--------	0-7	5.6-7.3	13-24	0
	7-46	5.6-7.3	16-29	0
	46-57	6.1-7.8	9.0-19	0-5
	57-60	7.4-8.4	4.0-16	15-40
261A:				
Niota----------	0-9	5.1-7.3	14-22	0
	9-16	5.1-6.0	11-16	0
	16-27	3.6-6.0	21-35	0
	27-36	4.5-6.0	15-25	0
	36-49	5.6-7.3	7.0-15	0
	49-60	5.6-8.4	6.0-13	0-20

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
262A:				
Denrock---------	0-13	5.6-7.8	17-26	0
	13-36	5.1-6.0	23-40	0
	36-40	5.1-6.5	15-25	0
	40-60	6.1-7.3	3.0-10	0
268B:				
Mt. Carroll-----	0-7	5.6-7.3	10-18	0
	7-10	5.6-7.3	10-16	0
	10-55	5.1-7.3	10-18	0
	55-60	5.6-8.4	10-15	0-30
268C2:				
Mt. Carroll-----	0-7	5.6-7.3	10-18	0
	7-38	5.1-7.3	10-18	0
	38-60	5.6-8.4	10-15	0-30
274B:				
Seaton----------	0-9	5.6-7.3	8.0-19	0
	9-60	4.5-7.3	11-16	0
	60-80	5.6-8.4	6.0-15	0-35
274C2:				
Seaton----------	0-7	5.6-7.3	10-17	0
	7-47	4.5-7.3	11-16	0
	47-60	5.6-8.4	6.0-15	0-35
274D2:				
Seaton----------	0-8	5.6-7.3	10-17	0
	8-52	4.5-7.3	11-16	0
	52-60	5.6-8.4	6.0-15	0-35
275A:				
Joy----------	0-15	5.6-7.3	13-23	0
	15-51	5.1-7.3	11-28	0
	51-60	6.1-8.4	7.0-14	0-30
277B:				
Port Byron------	0-13	5.1-7.3	15-24	0-10
	13-52	5.6-7.3	11-17	0
	52-60	5.6-8.4	9.0-17	0-30
	60-77	6.1-8.4	7.0-11	0-30
	77-89	6.1-8.4	3.0-7.0	0-30
277C:				
Port Byron------	0-16	5.1-7.3	15-24	0-10
	16-40	5.6-7.3	11-17	0
	40-60	5.6-8.4	9.0-17	0-30
279B:				
Rozetta---------	0-7	5.1-7.3	10-22	0
	7-11	4.5-7.3	7.0-17	0
	11-55	4.5-6.0	16-22	0
	55-60	5.6-7.8	12-17	0-15
279C2:				
Rozetta---------	0-8	5.1-7.3	10-22	0
	8-56	4.5-6.0	16-22	0
	56-80	5.6-7.8	12-17	0-15

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
280B:				
Fayette---------	0-9	5.1-7.3	15-20	0
	9-39	4.5-6.0	15-20	0
	39-60	5.1-7.8	15-20	0-15
280C2:				
Fayette---------	0-8	5.1-7.3	18-25	0
	8-64	4.5-6.0	15-20	0
	64-80	5.1-7.8	15-20	0-15
354A:				
Hononegah-------	0-19	5.6-7.8	4.0-12	0
	19-23	5.6-7.8	4.0-10	0
	23-28	5.6-7.8	1.0-5.0	0
	28-37	6.6-8.4	1.0-5.0	10-40
	37-60	6.6-8.4	1.0-5.0	10-40
410D2:				
Woodbine--------	0-7	5.1-7.3	13-20	0
	7-24	5.1-6.5	16-23	0
	24-41	5.1-6.5	16-22	0
	41-46	5.6-6.5	27-38	0
	46-80	---	---	---
411B:				
Ashdale---------	0-15	6.1-7.3	18-26	0
	15-43	5.6-6.0	16-23	0
	43-51	5.6-7.3	16-23	0
	51-60	---	---	---
412B:				
Ogle----------	0-17	5.1-6.5	18-26	0
	17-39	5.1-6.0	16-23	0
	39-60	5.6-6.0	12-18	0
412C:				
Ogle----------	0-14	5.1-6.5	18-26	0
	14-30	5.1-6.0	16-23	0
	30-60	5.6-6.0	12-18	0
430A:				
Raddle----------	0-21	5.6-7.3	12-18	0
	21-80	5.6-7.3	12-18	0
430B:				
Raddle----------	0-13	5.6-7.3	12-18	0
	13-60	5.6-7.3	12-18	0
485B:				
Richwood--------	0-18	5.6-7.3	7.0-30	0
	18-46	5.6-7.3	4.0-25	0
	46-60	5.6-7.3	2.0-15	0
	60-79	6.1-7.3	0.0-4.0	0
485C2:				
Richwood--------	0-9	5.6-7.3	7.0-30	0
	9-42	5.6-7.3	4.0-25	0
	42-60	5.6-7.3	2.0-15	0
	60-79	6.1-7.3	0.0-4.0	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
486B:				
Bertrand--------	0-9	6.6-7.3	5.0-20	0
	9-12	6.6-7.3	4.0-25	0
	12-40	6.1-6.5	2.0-20	0
	40-60	6.1-6.5	0.0-7.0	0
486C2:				
Bertrand--------	0-8	6.6-7.3	5.0-20	0
	8-43	6.1-6.5	2.0-25	0
	43-60	6.1-6.5	0.0-7.0	0
487A:				
Joyce----------	0-20	5.6-7.3	15-23	0
	20-44	5.1-6.5	11-18	0
	44-47	5.1-6.5	6.0-10	0
	47-60	5.6-7.3	0.0-6.0	0
488A:				
Hooppole--------	0-17	7.4-8.4	15-32	5-15
	17-44	7.4-8.4	12-29	12-18
	44-60	7.4-8.4	1.0-8.0	10-15
509B:				
Whalan----------	0-5	5.6-7.3	14-19	0
	5-11	5.6-7.3	13-18	0
	11-17	5.6-7.3	16-22	0
	17-31	5.1-6.5	16-22	0
	31-32	5.6-7.8	22-38	0
	32-60	---	---	---
529A:				
Selmass---------	0-13	5.6-7.3	20-27	0
	13-27	5.6-7.3	13-25	0
	27-35	6.1-7.8	6.0-18	0-10
	35-60	6.6-8.4	1.0-7.0	0-20
533.				
Urban land				
564A:				
Waukegan--------	0-17	5.6-7.3	13-24	0
	17-30	5.1-7.3	11-18	0
	30-60	4.6-7.8	1.0-6.0	0-15
564B:				
Waukegan--------	0-13	5.6-7.3	13-24	0
	13-35	5.1-7.3	11-18	0
	35-60	4.6-7.8	1.0-6.0	0-15
564C2:				
Waukegan--------	0-8	5.6-7.3	13-24	0
	8-25	5.1-7.3	11-18	0
	25-60	4.6-7.8	1.0-6.0	0-15
565B:				
Tell----------	0-7	5.1-7.3	5.0-20	0
	7-28	5.1-6.5	4.0-25	0
	28-35	5.1-6.5	2.0-20	0
	35-60	5.1-6.5	0.0-7.0	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
565C2:				
Tell----------	0-6	5.1-7.3	5.0-20	0
	6-29	5.1-6.5	4.0-25	0
	29-33	5.1-6.5	2.0-20	0
	33-60	5.1-6.5	0.0-7.0	0
565D2:				
Tell----------	0-7	5.1-7.3	5.0-20	0
	7-22	5.1-6.5	4.0-25	0
	22-26	5.1-6.5	2.0-20	0
	26-60	5.1-6.5	0.0-7.0	0
638A:				
Muskego---------	0-10	5.6-7.3	140-180	0
	10-22	5.6-7.3	150-190	0
	22-60	6.6-8.4	10-45	60-80
647A:				
Lawler----------	0-10	5.6-7.3	20-25	0
	10-31	5.1-6.5	15-20	0
	31-60	5.1-7.3	5.0-10	0
675B:				
Greenbush-------	0-14	5.1-7.3	20-25	0
	14-60	4.5-7.3	25-30	0
	60-80	5.6-7.3	20-25	0
675C2:				
Greenbush-------	0-6	5.1-7.3	20-25	0
	6-46	4.5-7.3	25-30	0
	46-60	5.6-7.3	20-25	0
686B:				
Parkway---------	0-16	5.1-7.3	17-24	0
	16-49	5.1-7.3	16-23	0
	49-60	6.1-8.4	12-19	0-20
686C2:				
Parkway---------	0-9	5.1-7.3	17-24	0
	9-40	5.1-7.3	16-23	0
	40-60	6.1-8.4	12-19	0-20
689B:				
Coloma----------	0-10	4.5-7.3	1.0-12	0
	10-27	4.5-7.3	0.1-9.0	0
	27-60	4.5-7.3	0.4-11	0
689D:				
Coloma----------	0-12	4.5-7.3	1.0-12	0
	12-25	4.5-7.3	0.1-9.0	0
	25-60	4.5-7.3	0.4-11	0
727A:				
Waukee----------	0-14	5.1-7.3	20-25	0
	14-34	5.1-6.0	20-25	0
	34-60	5.6-6.5	5.0-10	0
759A:				
Udolpho---------	0-8	5.6-7.3	20-25	0
	8-13	5.1-6.5	12-18	0
	13-30	5.1-6.5	9.0-15	0
	30-60	5.1-7.3	0.0-3.0	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
760A:				
Marshan---------	0-9	5.6-7.3	17-30	0
	9-23	5.6-7.3	19-28	0
	23-34	5.6-7.3	9.0-15	0
	34-60	6.1-7.3	0.0-3.0	0
763A:				
Joslin----------	0-15	5.6-7.8	15-23	0
	15-40	5.6-7.3	12-18	0
	40-60	5.6-7.3	21-30	0
	60-85	5.6-8.4	11-21	0-20
767A:				
Prophetstown----	0-16	7.4-8.4	19-28	10-40
	16-40	7.4-8.4	12-23	10-40
	40-52	7.4-8.4	6.0-20	10-40
	52-60	7.4-8.4	3.0-12	10-40
777A:				
Adrian----------	0-22	5.1-7.8	125-200	0
	22-60	5.6-8.4	1.0-2.0	0-40
785G:				
Lacrescent------	0-12	6.6-7.3	15-27	0
	12-36	6.6-7.3	5.0-16	0
	36-60	7.4-7.8	4.0-11	0-5
802B:				
Orthents--------	0-6	5.6-7.8	10-25	0-10
	6-60	5.6-7.8	10-20	0-20
865, 868.				
Pits				
869:				
Pits.				
Orthents--------	0-6	5.6-7.8	10-25	0-10
	6-60	5.6-7.8	10-20	0-20
917C2:				
Oakville--------	0-7	4.5-7.3	1.0-2.0	0
	7-51	4.5-7.3	1.0-2.0	0
	51-60	5.6-7.3	1.0-2.0	0
Tell----------	0-7	5.1-7.3	5.0-20	0
	7-23	5.1-6.5	4.0-25	0
	23-27	5.1-6.5	2.0-20	0
	27-60	5.1-6.5	0.0-7.0	0
917D2:				
Oakville--------	0-9	4.5-7.3	1.0-2.0	0
	9-36	4.5-7.3	1.0-2.0	0
	36-60	5.6-7.3	1.0-2.0	0
Tell----------	0-8	5.1-7.3	5.0-20	0
	8-28	5.1-6.5	4.0-25	0
	28-32	5.1-6.5	2.0-20	0
	32-60	5.1-6.5	0.0-7.0	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
943D3:				
Seaton----------	0-4	5.6-7.3	10-17	0
	4-39	4.5-7.3	11-16	0
	39-60	5.6-8.4	6.0-15	0-25
Timula----------	0-23	6.1-7.8	8.0-15	0-5
	23-60	7.4-8.4	6.0-12	5-35
943E3:				
Seaton----------	0-3	5.6-7.3	10-17	0
	3-36	4.5-7.3	11-16	0
	36-60	5.6-8.4	6.0-15	0-35
Timula----------	0-3	6.1-7.8	8.0-15	0-5
	3-22	6.1-7.8	8.0-15	0-5
	22-60	7.4-8.4	6.0-12	5-35
943F2:				
Seaton----------	0-6	5.6-7.3	10-17	0
	6-49	4.5-7.3	11-16	0
	49-60	5.6-8.4	6.0-15	0-35
Timula----------	0-6	6.1-7.8	8.0-15	0-5
	6-28	6.1-7.8	8.0-15	0-5
	28-60	7.4-8.4	6.0-12	5-35
1082A:				
Millington------	0-19	7.4-8.4	20-28	5-20
	19-35	7.4-8.4	12-27	5-30
	35-60	7.4-8.4	11-25	10-30
1107A:				
Sawmill---------	0-29	6.1-7.8	24-31	0
	29-38	6.1-7.8	17-27	0
	38-60	6.1-7.8	16-25	0-10
1400A:				
Calco----------	0-37	7.4-8.4	36-41	5-30
	37-49	7.4-8.4	36-41	5-30
	49-60	7.4-8.4	36-41	5-30
2087B:				
Dickinson-------	0-11	5.6-7.3	15-20	0
	11-17	5.6-7.3	7.0-17	0
	17-33	5.1-6.5	9.0-17	0
	33-37	5.1-6.5	0.0-10	0
	37-60	5.6-6.5	0.0-10	0
Urban land.				
2198A:				
Elburn----------	0-13	5.6-7.3	20-30	0
	13-25	5.6-7.3	15-25	0
	25-46	6.1-8.4	15-25	0-20
	46-60	6.1-8.4	9.0-15	0-20
Urban land.				
2408A:				
Aquents---------	0-9	5.6-8.3	---	0
	9-18	5.1-7.8	0.0-10	0
	18-41	5.6-7.8	20-30	0
	41-60	6.1-7.8	16-25	0-10

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
2408A:				
Urban land.				
2485B:				
Richwood--------	0-12	5.6-7.3	7.0-30	0
	12-48	5.6-7.3	4.0-25	0
	48-60	5.6-7.3	2.0-15	0
Urban land.				
3076A:				
Otter----------	0-43	6.1-7.8	16-36	0
	43-50	6.1-7.8	12-22	0
	50-60	6.1-8.4	10-21	0
3077A:				
Huntsville------	0-43	5.6-7.8	17-24	0
	43-60	5.6-7.8	11-17	0
3107A:				
Sawmill---------	0-26	6.1-7.8	24-31	0
	26-54	6.1-7.8	17-27	0
	54-60	6.1-7.8	16-25	0-10
3302A:				
Ambraw----------	0-8	5.6-7.3	20-27	0
	8-39	5.1-7.3	19-29	0
	39-50	5.1-7.3	15-23	0
	50-60	5.6-8.4	11-19	0
3321A:				
Du Page---------	0-17	6.6-8.4	17-26	0-15
	17-34	7.4-8.4	11-18	5-40
	34-60	7.9-8.4	4.0-15	5-40
3400A:				
Calco----------	0-34	7.4-8.4	36-41	5-30
	34-45	7.4-8.4	36-41	5-30
	45-60	7.4-8.4	36-41	5-30
3404A:				
Titus----------	0-13	6.1-7.3	28-35	0
	13-67	6.1-7.8	21-29	0
	67-79	6.1-7.8	12-19	0-5
3415A:				
Orion----------	0-7	5.6-7.8	7.0-20	0
	7-22	5.6-7.8	7.0-20	0
	22-60	5.6-7.8	10-35	0
	60-80	5.6-7.8	5.0-15	0
3428A:				
Coffeen---------	0-17	5.6-7.8	13-22	0
	17-33	5.6-7.3	6.0-15	0
	33-60	5.6-7.3	3.0-13	0
3451A:				
Lawson----------	0-14	6.1-7.8	11-28	0
	14-33	6.1-7.8	11-29	0
	33-80	6.1-7.8	11-23	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
3452A:				
Riley----------	0-17	5.6-7.8	20-27	0
	17-27	5.6-7.8	10-25	0
	27-34	5.6-7.8	10-25	0
	34-60	6.6-8.4	1.0-10	0-20
3646L:				
Fluvaquents-----	0-9	5.6-7.3	8.0-12	0
	9-37	5.6-7.8	8.0-14	0
	37-60	5.6-7.3	6.0-12	0
7070A:				
Beaucoup--------	0-16	5.6-7.8	26-33	0
	16-43	5.6-7.8	16-25	0
	43-50	6.1-7.8	9.0-20	0-5
	50-60	6.1-8.4	6.0-20	0-25
7073A:				
Ross----------	0-20	6.1-7.8	12-26	0
	20-36	6.1-8.4	8.0-20	0-20
	36-60	6.1-8.4	2.0-15	0-30
7076A:				
Otter----------	0-38	6.1-7.8	16-36	0
	38-50	6.1-7.8	12-22	0
	50-60	6.1-8.4	10-21	0
7082A:				
Millington------	0-21	7.4-8.4	24-33	5-30
	21-37	7.4-8.4	12-27	5-30
	37-60	7.4-8.4	11-25	10-30
7100A:				
Palms----------	0-28	5.1-7.8	150-180	0
	28-60	6.1-8.4	2.0-15	0-30
7103A:				
Houghton--------	0-60	5.6-7.8	140-180	0
7107A:				
Sawmill---------	0-10	6.1-7.8	24-31	0
	10-35	6.1-7.8	17-27	0
	35-60	6.1-7.8	12-23	0-10
7210A:				
Lena----------	0-19	7.4-8.4	50-150	5-20
	19-60	7.4-8.4	50-150	5-20
7302A:				
Ambraw----------	0-20	5.6-7.3	15-27	0
	20-36	5.1-7.3	19-29	0
	36-45	5.1-7.3	15-23	0
	45-60	5.6-8.4	11-19	0
7345A:				
Elvers----------	0-8	5.6-7.8	15-20	0
	8-28	5.6-7.8	15-20	0
	28-60	5.6-7.8	---	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
7349B:				
Zumbro----------	0-16	5.6-7.8	7.0-17	0-5
	16-25	5.6-7.8	3.0-13	0-5
	25-34	6.1-7.8	0.0-9.0	1-5
	34-60	6.1-7.8	0.0-7.0	1-5
7404A:				
Titus----------	0-22	6.1-7.3	25-32	0
	22-52	6.1-7.8	21-29	0
	52-60	6.1-7.8	12-19	0-5
7428A:				
Coffeen---------	0-20	5.6-7.8	13-22	0
	20-32	5.6-7.3	6.0-15	0
	32-60	5.6-7.3	3.0-13	0
7452A:				
Riley----------	0-8	5.6-7.8	20-27	0
	8-24	5.6-7.8	10-25	0
	24-31	5.6-7.8	10-25	0
	31-60	6.6-8.4	1.0-10	0-20
7516A:				
Faxon----------	0-16	6.6-7.8	8.0-24	0
	16-27	6.6-7.8	8.0-26	0-10
	27-60	---	---	---
7603A:				
Blackoar--------	0-13	5.6-7.3	25-30	0
	13-58	5.6-7.3	20-25	0
	58-60	5.6-7.3	25-30	0
7682A:				
Medway----------	0-19	6.1-7.8	20-35	0
	19-27	6.1-7.8	13-28	0
	27-37	6.1-8.4	21-34	0-5
	37-60	6.1-8.4	2.0-18	0-20
7777A:				
Adrian----------	0-30	5.1-7.8	125-200	0
	30-60	5.6-8.4	1.0-2.0	0-40
8107+:				
Sawmill---------	0-8	6.1-7.8	19-26	0
	8-14	6.1-7.8	17-27	0
	14-46	6.1-7.8	17-27	0
	46-60	6.1-7.8	16-25	0-10
8166A:				
Cohoctah--------	0-19	6.1-7.8	10-20	0
	19-28	6.1-8.0	5.0-20	0
	28-60	6.1-8.0	1.0-10	0
8302A:				
Ambraw----------	0-9	5.6-7.3	15-27	0
	9-32	5.1-7.3	19-29	0
	32-38	5.1-7.3	15-23	0
	38-60	5.6-8.4	11-19	0
8321A:				
Du Page---------	0-17	6.6-8.4	17-26	0-15
	17-34	7.4-8.4	11-18	5-40
	34-60	7.9-8.4	4.0-15	5-40

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	pH	meq/100 g	Pct
8400A:				
Calco----------	0-34	7.4-8.4	36-41	5-30
	34-45	7.4-8.4	36-41	5-30
	45-60	7.4-8.4	36-41	5-30
8404A:				
Titus----------	0-13	6.1-7.3	25-32	0
	13-68	6.1-7.8	21-29	0
	68-80	6.1-7.8	12-19	0-5
8415A:				
Orion----------	0-6	5.6-7.8	7.0-20	0
	6-25	5.6-7.8	7.0-20	0
	25-60	5.6-7.8	10-35	0
8451A:				
Lawson----------	0-14	6.1-7.8	11-28	0
	14-33	6.1-7.8	11-29	0
	33-80	6.1-7.8	11-23	0
8452A:				
Riley----------	0-8	5.6-7.8	20-27	0
	8-24	5.6-7.8	10-25	0
	24-31	5.6-7.8	10-25	0
	31-60	6.6-8.4	1.0-10	0-20
8499A:				
Fella----------	0-20	6.1-7.8	26-33	0-10
	20-43	6.6-7.8	16-22	0-20
	43-54	7.4-8.4	9.0-19	10-35
	54-61	7.4-8.4	5.0-19	10-35
	61-80	7.4-8.4	5.0-19	10-35
M-W. Miscellaneous water				
W. Water				

Table 21.--Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydrologic group	Months	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
			Ft	Ft		Ft				
8D3, 8F2:										
Hickory---------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
21C2, 21D2:										
Pecatonica------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
49A:										
Watseka---------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
51A:										
Muscatune-------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
54C, 54E:										
Plainfield------	A									
		All months	>6.0	>6.0	---	---	---	---	---	
61A:										
Atterberry------	B									
		Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	---	---
68A:										
Sable-----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	---
69A:										
Milford---------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	---	---
81A:										
Littleton-------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
86B, 86C2:										
Osco------------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---
87A, 87B2:										
Dickinson-------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
88A, 88C, 88E:										
Sparta----------	A									
		All months	>6.0	>6.0	---	---	---	---	---	---
98B:										
Ade-------------	A									
		All months	>6.0	>6.0	---	---	---	---	---	---
104A:										
Virgil----------	B									
		Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	---	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Months	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
			Ft	Ft		Ft				
152A:										
Drummer---------	B									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	---	---
172A:										
Hoopeston-------	B									
		Jan-May	1.0-2.5	>6.0	Apparent	---	---	---	---	---
175B2, 175D2, 175F:										
Lamont---------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
198A:										
Elburn----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
200A:										
Orio------------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	---
201A:										
Gilford---------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	---	---
206A:										
Thorp-----------	C									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	---
233C2:										
Birkbeck--------	B									
		Feb-Apr	2.0-3.5	>6.0	Apparent	---	---	---	---	---
261A:										
Niota-----------	D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	---
262A:										
Denrock---------	D									
		Jan-Jun	1.0-2.0	1.5-3.0	Perched	---	---	---	---	---
268B, 268C2:										
Mt. Carroll-----	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
274B, 274C2, 274D2:										
Seaton---------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
275A:										
Joy-------------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
277B, 277C:										
Port Byron------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
279B, 279C2:										
Rozetta---------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	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
			Ft	Ft		Ft				
280B, 280C2:										
Fayette---------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
354A:										
Hononegah-------	A									
		All months	>6.0	>6.0	---	---	---	---	---	---
410D2:										
Woodbine--------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
411B:										
Ashdale---------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
412B, 412C:										
Ogle----------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
430A, 430B:										
Raddle----------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
485B, 485C2:										
Richwood--------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
486B, 486C2:										
Bertrand--------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
487A:										
Joyce----------	B									
		Jan-May	1.0-2.5	>6.0	Apparent	---	---	---	---	---
488A:										
Hooppole--------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	---	---	---	---	---
509B:										
Whalan----------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
529A:										
Selmass---------	B									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	---	---
533.										
Urban land										
564A, 564B, 564C2:										
Waukegan-------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
565B, 565C2, 565D2:										
Tell----------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Months	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
			Ft	Ft		Ft				
638A:										
Muskego---------	A/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	---	---
		November	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	---	---
		December	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	---	---
647A:										
Lawler----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
675B, 675C2:										
Greenbush-------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---
686B, 686C2:										
Parkway---------	B									
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	---
689B, 689D:										
Coloma----------	A									
		All months	>6.0	>6.0	---	---	---	---	---	---
727A:										
Waukee----------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
759A:										
Udolpho---------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	---	---	---	---	---
760A:										
Marshan---------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	---	---	---	---	---
763A:										
Joslin----------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
767A:										
Prophetstown----	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	---	---
777A:										
Adrian----------	A/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	---	---
		November	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	---	---
		December	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	---	---
785G:										
Lacrescent------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
802B:										
Orthents--------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
865, 868.										
Pits										

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	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
			Ft	Ft		Ft				
869:										
Pits.										
Orthents--------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
917C2, 917D2:										
Oakville--------	A									
		All months	>6.0	>6.0	---	---	---	---	---	---
Tell----------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
943D3, 943E3, 943F2:										
Seaton---------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
Timula----------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
1082A:										
Millington------	B/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
		November	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
		December	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
1107A:										
Sawmill---------	B/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
		November	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
		December	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
1400A:										
Calco----------	B/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
		November	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
		December	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Brief	Frequent
2087B:										
Dickinson-------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
Urban land.										
2198A:										
Elburn----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	---
Urban land.										
2408A:										
Aquents---------	---									
		All months	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	---	---
Urban land.										
2485B:										
Richwood--------	B									
		All months	>6.0	>6.0	---	---	---	---	---	---
Urban land.										

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Months	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
			Ft	Ft		Ft				
3076A:										
Otter----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		June	---	---	---	---	---	None	Brief	Frequent
		November	---	---	---	---	---	None	Brief	Frequent
		December	---	---	---	---	---	None	Brief	Frequent
3077A:										
Huntsville------	B									
		January	---	---	---	---	---	---	Brief	Frequent
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	Brief	Frequent
		May	---	---	---	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	Brief	Frequent
3107A:										
Sawmill---------	B/D									
		Jan-May	0.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	Brief	Frequent
3302A:										
Ambraw----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Very brief	Occasional	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	Brief	Frequent
3321A:										
Du Page---------	B									
		January	---	---	---	---	---	---	Brief	Frequent
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	Brief	Frequent
		May	---	---	---	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	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
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	Brief	Frequent
3404A:										
Titus----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	Brief	Frequent
3415A:										
Orion----------	C									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	Brief	Frequent

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	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
			Ft	Ft		Ft				
3428A:										
Coffeen---------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	Brief	Frequent
3451A:										
Lawson----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	Brief	Frequent
3452A:										
Riley----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		June	---	---	---	---	---	---	Brief	Frequent
		November	---	---	---	---	---	---	Brief	Frequent
		December	---	---	---	---	---	---	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	0.0-0.5	Long	Frequent	---	---
		November	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		December	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
7070A:										
Beaucoup--------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7073A:										
Ross----------	B									
		January							Very brief	Rare
		Feb-Apr	5.0-6.0	>6.0	Apparent	---	---	---	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
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
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7082A:										
Millington------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7100A:										
Palms----------	A/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		November	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		December	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Months	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
			Ft	Ft		Ft				
7103A:										
Houghton--------	A/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		November	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		December	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very 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
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7210A:										
Lena----------	D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		November	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		December	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
7302A:										
Ambraw----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7345A:										
Elvers----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7349B:										
Zumbro----------	A									
		Jan-Jun	>6.0	>6.0	---	---	---	---	---	---
		November	>6.0	>6.0	---	---	---	---	---	---
		December	>6.0	>6.0	---	---	---	---	---	---
7404A:										
Titus----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7428A:										
Coffeen---------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7452A:										
Riley----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	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
			Ft	Ft		Ft				
7516A:										
Faxon----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7603A:										
Blackoar--------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7682A:										
Medway----------	B									
		January	---	---	---	---	---	---	Very brief	Rare
		Feb-Apr	1.5-3.0	>6.0	Apparent	---	---	---	Very brief	Rare
		May	---	---	---	---	---	---	Very brief	Rare
		June	---	---	---	---	---	---	Very brief	Rare
		November	---	---	---	---	---	---	Very brief	Rare
		December	---	---	---	---	---	---	Very brief	Rare
7777A:										
Adrian----------	A/D									
		Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		November	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
		December	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Occasional	Very brief	Rare
8107+:										
Sawmill---------	B/D									
		Jan-May	0.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional
8166A:										
Cohoctah--------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	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
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional
8321A:										
Du Page---------	B									
		January	---	---	---	---	---	---	Brief	Occasional
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	Brief	Occasional
		May	---	---	---	---	---	---	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	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
			Ft	Ft		Ft				
8400A:										
Calco----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional
8404A:										
Titus----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional
8415A:										
Orion----------	C									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional
8451A:										
Lawson----------	C									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional
8452A:										
Riley----------	B									
		Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional
8499A:										
Fella----------	B/D									
		Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Occasional	Brief	Occasional
		June	---	---	---	---	---	---	Brief	Occasional
		November	---	---	---	---	---	---	Brief	Occasional
		December	---	---	---	---	---	---	Brief	Occasional
M-W. Miscellaneous water										
W. Water										

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	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In	In			
8D3, 8F2:							
Hickory	---	---	---	---	Moderate	Moderate	Moderate
21C2, 21D2:							
Pecatonica	---	---	---	---	Moderate	Moderate	Moderate
49A:							
Watseka	---	---	---	---	Moderate	Low	High
51A:							
Muscatune	---	---	---	---	High	High	Moderate
54C, 54E:							
Plainfield	---	---	---	---	Low	Low	High
61A:							
Atterberry	---	---	---	---	High	High	Moderate
68A:							
Sable	---	---	---	---	High	High	Low
69A:							
Milford	---	---	---	---	High	High	Low
81A:							
Littleton	---	---	---	---	High	High	Low
86B, 86C2:							
Osco	---	---	---	---	High	Moderate	Moderate
87A, 87B2:							
Dickinson	---	---	---	---	Moderate	Low	Moderate
88A, 88C, 88E:							
Sparta	---	---	---	---	Low	Low	Moderate
98B:							
Ade	---	---	---	---	Low	Low	High
104A:							
Virgil	---	---	---	---	High	High	Moderate
152A:							
Drummer	---	---	---	---	High	High	Moderate
172A:							
Hoopeston	---	---	---	---	High	Low	Moderate
175B2, 175D2, 175F:							
Lamont	---	---	---	---	Moderate	Low	Moderate
198A:							
Elburn	---	---	---	---	High	High	Moderate
200A:							
Orio	---	---	---	---	High	High	Moderate
201A:							
Gilford	---	---	---	---	High	High	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In	In			
206A:							
Thorp	---	---	---	---	High	High	Moderate
233C2:							
Birkbeck	---	---	---	---	High	High	Moderate
261A:							
Niota	---	---	---	---	High	High	High
262A:							
Denrock	---	---	---	---	High	High	Moderate
268B, 268C2:							
Mt. Carroll	---	---	---	---	High	Low	Moderate
274B, 274C2, 274D2:							
Seaton	---	---	---	---	High	Low	Moderate
275A:							
Joy	---	---	---	---	High	High	Moderate
277B, 277C:							
Port Byron	---	---	---	---	High	Low	Moderate
279B, 279C2:							
Rozetta	---	---	---	---	High	Moderate	Moderate
280B, 280C2:							
Fayette	---	---	---	---	High	Moderate	Moderate
354A:							
Hononegah	---	---	---	---	Low	Low	Low
410D2:							
Woodbine	Bedrock (lithic)	40-60	---	---	Moderate	High	Moderate
411B:							
Ashdale	Bedrock (lithic)	40-60	---	---	High	Moderate	Moderate
412B, 412C:							
Ogle	---	---	---	---	High	Moderate	Moderate
430A, 430B:							
Raddle	---	---	---	---	High	Moderate	Moderate
485B, 485C2:							
Richwood	---	---	---	---	High	Low	Low
486B, 486C2:							
Bertrand	---	---	---	---	High	Low	Moderate
487A:							
Joyce	---	---	---	---	High	High	Moderate
488A:							
Hooppole	---	---	---	---	High	High	Low
509B:							
Whalan	Bedrock (lithic)	20-40	---	---	Moderate	Moderate	Low
529A:							
Selmass	---	---	---	---	High	High	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
533. Urban land							
564A, 564B, 564C2:							
Waukegan	---	---	---	---	Low	Low	Moderate
565B, 565C2, 565D2:							
Tell	---	---	---	---	High	Moderate	Moderate
638A:							
Muskego	---	---	---	35-45	High	Moderate	Moderate
647A:							
Lawler	---	---	---	---	High	High	Moderate
675B, 675C2:							
Greenbush	---	---	---	---	High	Moderate	Moderate
686B, 686C2:							
Parkway	---	---	---	---	High	Moderate	Moderate
689B, 689D:							
Coloma	---	---	---	---	Low	Low	Moderate
727A:							
Waukee	---	---	---	---	Moderate	Low	Moderate
759A:							
Udolpho	---	---	---	---	High	High	Moderate
760A:							
Marshan	---	---	---	---	High	High	Moderate
763A:							
Joslin	---	---	---	---	Moderate	High	Moderate
767A:							
Prophetstown	---	---	---	---	High	High	Low
777A:							
Adrian	---	---	6-18	29-33	High	High	Moderate
785G:							
Lacrescent	---	---	---	---	Moderate	Low	Low
802B:							
Orthents	---	---	---	---	Moderate	Moderate	Moderate
865, 868. Pits							
869:							
Pits.							
Orthents	---	---	---	---	---	Moderate	Moderate
917C2, 917D2:							
Oakville	---	---	---	---	Low	Low	Moderate
Tell	---	---	---	---	High	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In	In			
943D3, 943E3, 943F2:							
Seaton	---	---	---	---	High	Low	Moderate
Timula	---	---	---	---	High	Low	Low
1082A:							
Millington	---	---	---	---	High	High	Low
1107A:							
Sawmill	---	---	---	---	High	High	Low
1400A:							
Calco	---	---	---	---	High	High	Low
2087B:							
Dickinson	---	---	---	---	Moderate	Low	Moderate
Urban land.							
2198A:							
Elburn	---	---	---	---	High	High	Moderate
Urban land.							
2408A:							
Aquents.							
Urban land.							
2485B:							
Richwood	---	---	---	---	High	Low	Low
Urban land.							
3076A:							
Otter	---	---	---	---	High	High	Low
3077A:							
Huntsville	---	---	---	---	High	Low	Low
3107A:							
Sawmill	---	---	---	---	High	High	Low
3302A:							
Ambraw	---	---	---	---	High	High	Moderate
3321A:							
Du Page	---	---	---	---	Moderate	Low	Low
3400A:							
Calco	---	---	---	---	High	High	Low
3404A:							
Titus	---	---	---	---	High	High	Low
3415A:							
Orion	---	---	---	---	High	High	Low
3428A:							
Coffeen	---	---	---	---	High	High	Moderate
3451A:							
Lawson	---	---	---	---	High	Moderate	Low

Table 22.--Soil Features--Continued

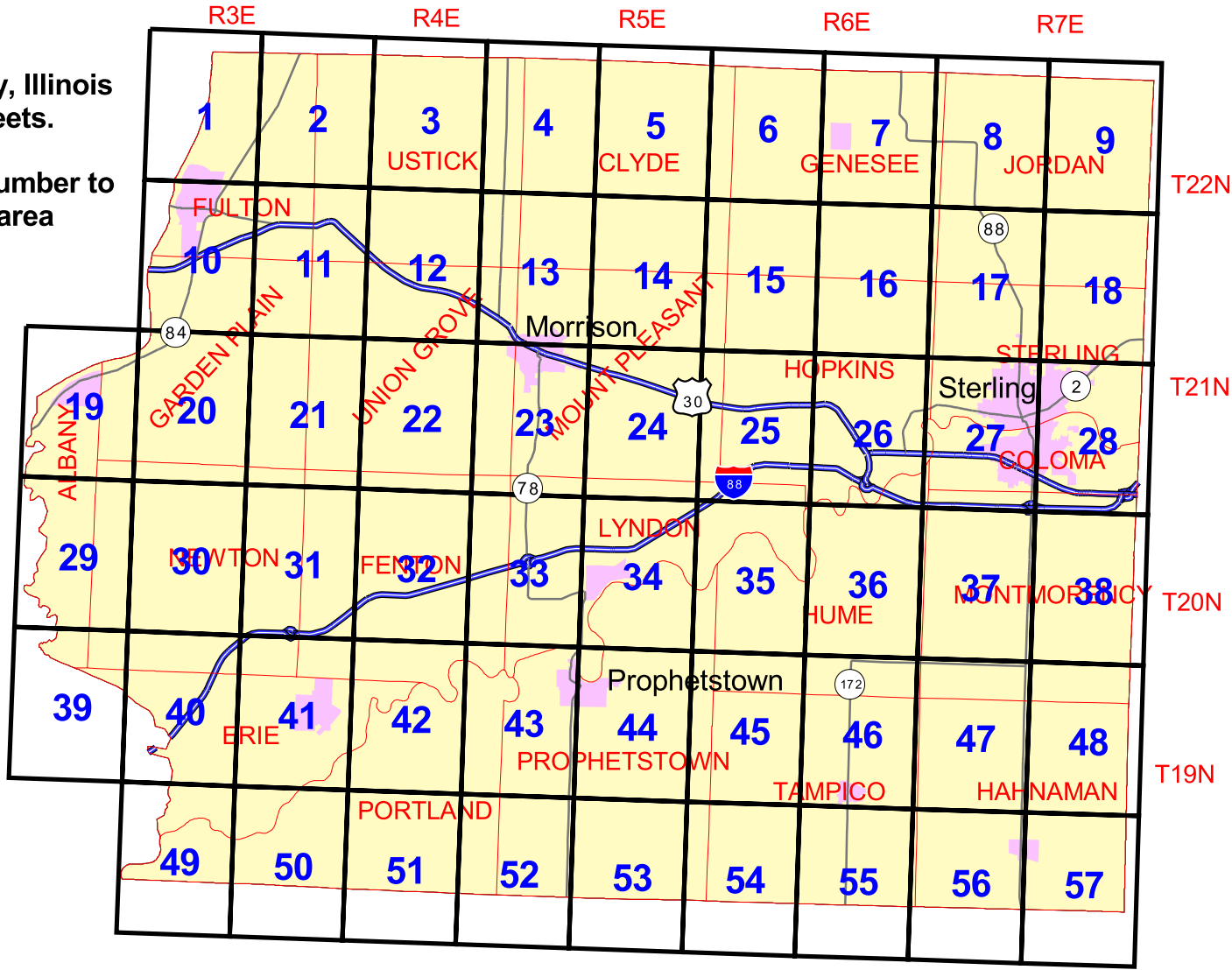
Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
3452A:							
Riley	---	---	---	---	High	High	Low
3646L:							
Fluvaquents	---	---	---	---	High	Moderate	Low
7070A:							
Beaucoup	---	---	---	---	High	High	Low
7073A:							
Ross	---	---	---	---	Moderate	Low	Low
7076A:							
Otter	---	---	---	---	High	High	Low
7082A:							
Millington	---	---	---	---	High	High	Low
7100A:							
Palms	---	---	2-4	25-32	High	High	Moderate
7103A:							
Houghton	---	---	1-4	55-60	High	High	Low
7107A:							
Sawmill	---	---	---	---	High	High	Low
7210A:							
Lena	---	---	---	50-90	High	High	Low
7302A:							
Ambraw	---	---	---	---	High	High	Moderate
7345A:							
Elvers	---	---	---	---	High	High	Moderate
7349B:							
Zumbro	---	---	---	---	Low	Low	Low
7404A:							
Titus	---	---	---	---	High	High	Low
7428A:							
Coffeen	---	---	---	---	High	High	Moderate
7452A:							
Riley	---	---	---	---	High	High	Low
7516A:							
Faxon	Bedrock (lithic)	20-40	---	---	High	High	Low
7603A:							
Blackoar	---	---	---	---	High	High	Low
7682A:							
Medway	---	---	---	---	High	High	Low
7777A:							
Adrian	---	---	6-18	29-33	High	High	Moderate
8107+:							
Sawmill	---	---	---	---	High	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
8166A:							
Cohoctah	---	---	---	---	High	High	Low
8302A:							
Ambraw	---	---	---	---	High	High	Moderate
8321A:							
Du Page	---	---	---	---	Moderate	Low	Low
8400A:							
Calco	---	---	---	---	High	High	Low
8404A:							
Titus	---	---	---	---	High	High	Low
8415A:							
Orion	---	---	---	---	High	High	Low
8451A:							
Lawson	---	---	---	---	High	Moderate	Low
8452A:							
Riley	---	---	---	---	High	High	Low
8499A:							
Fella	---	---	---	---	High	High	Low
M-W.							
Miscellaneous water							
W.							
Water							

Whiteside County, Illinois index to atlas sheets.

Click on a blue number to view soil map of area



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, FRIC, LOW

MISCELLANEOUS WATER FEATURES

- Spring
- Well, artesian
- Well, irrigation

DESCRIPTION SYMBOL

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS — DAM, W, Fe, BcC, 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	
Iron bog	18 BFE		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 noncalcareous. Typically 0.5 acre to 2.0 acres.	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 that does not have 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 as a result of human activity. Typically 0.25 acre to 2.0 acres.	DSS
Dumps	Areas of nonsoil material that support little or no vegetation. Typically 0.5 acre 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 spot	An exposure of glacial till at the surface of the earth. Typically 0.25 acre 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 that has less than 15 percent rock fragments. Typically 0.2 acre to 2.0 acres.	GRA

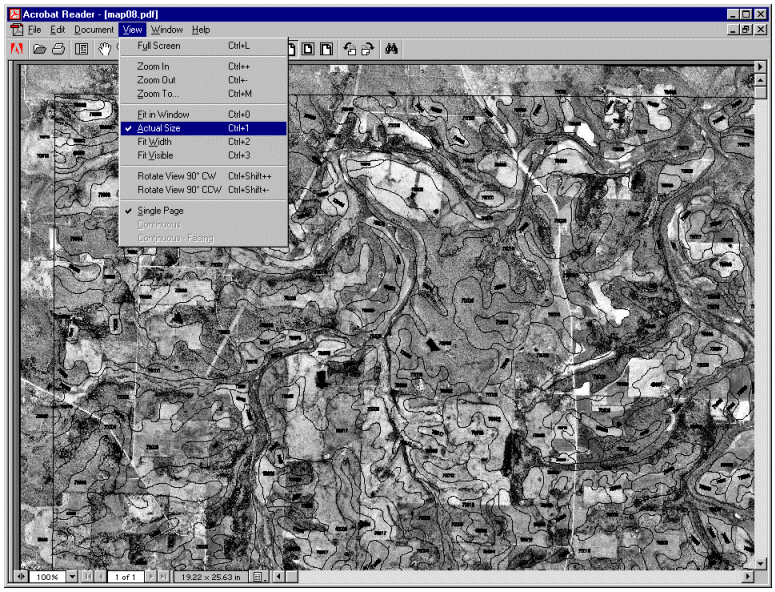
Name	Description	Label
Gray spot	A spot in which the surface layer is gray in areas where the subsurface layer of the named soils in the surrounding map unit are darker. Typically 0.25 acre to 2.0 acres.	GSP
Gully	A small channel with steep sides cut by running water through which water ordinarily runs only after a rain or after melting of snow or ice. 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.	BFE
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 banks of a river to prevent overflow onto lowlands.	LVS
Marsh or swamp	A water-saturated, very poorly drained area that is intermittently or permanently covered by water. Sedges, cattails, and rushes are the dominant vegetation in marshes, 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	An area that is lower than the soils in the surrounding map unit because of subsurface coal mining. Typically 0.25 acre to 3.0 acres.	MSA
Miscellaneous water	A small, constructed body of water that is used for industrial, sanitary, or mining applications and that 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

Name	Description	Label
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-l more than the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has an electrical conductivity of 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
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. The surface layer of the surrounding soils has 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

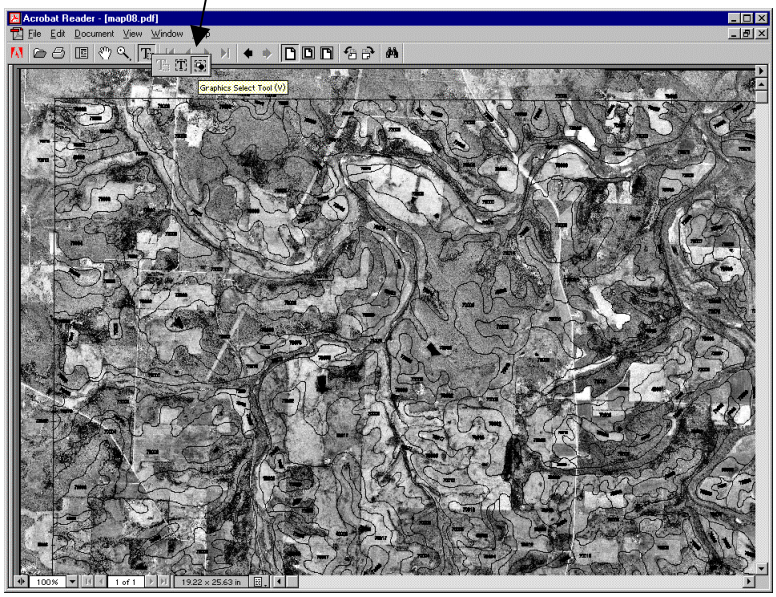
Name	Description	Label
Very stony spot	A spot where 0.1 to 3.0 percent of the surface cover is rock fragments that are more than 10 inches in diameter in areas where the surface cover of the surrounding soil is less than 0.01 percent stones. Typically 0.2 acre to 2.0 acres.	STV
Wet depression	A shallow, 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 acres to 2.0 acres.	WET

Printing Soil Survey Maps

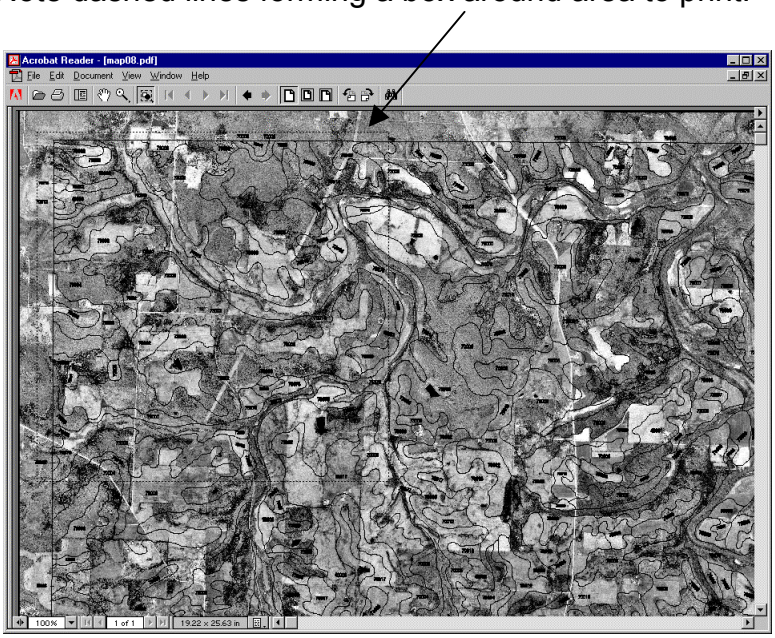
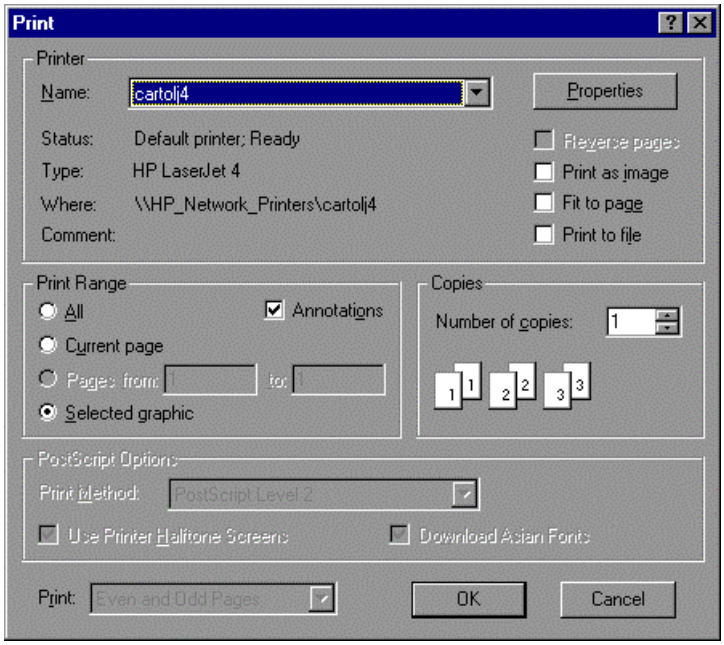
The soil survey maps were made at a scale of 1:12000 and were designed to be used at that scale. To print the maps at 1:12000 scale, set the view to Actual Size from the View pull down menu.



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.